

1440 FOUNDATION — EDUCATIONAL CAMPUS

City of Scotts Valley, CA

Biological Report



Biotic Resources Group

Biotic Assessments ♦ Resource Management ♦ Permitting

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I440 FOUNDATION —CENTER PROJECT

City of Scotts Valley, CA

Biological Report

Prepared for

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1.0 INTRODUCTION

Biotic Resources Group, with Dana Bland & Associates, documented and evaluated the biotic resources of a proposed renovation and re-use of the former Bethany University in the City of Scotts Valley in Santa Cruz County.

Specific tasks conducted for this study include:

- Characterize and map the major plant communities within the proposed project area.
- Identify sensitive biotic resources, including habitats, plant or wildlife species of concern.
- Evaluate the potential effects of the proposed project activities on sensitive biotic resources and recommend measures to avoid or reduce such impacts.

1.1 PROPOSED PROJECT

The project is located along the eastern edge of the City of Scotts Valley, north of Highway 17 and east of Tabor Drive as shown on Figure 1. The site is located on the former Bethany University campus.

The 1440 Foundation's proposed project (1440 Center or Center) would redevelop the existing Bethany University into an education, training, and personal enrichment facility that caters to individuals and businesses. The development plan calls for the construction of an integrated campus that incorporates new and remodeled buildings constructed around an extensive network of pedestrian pathways, all set within a forested landscape of redwoods and other native plantings. Extensive re-grading, particularly on and around the existing Swanson Hall (which would be demolished), would create a more walkable campus and both spatially and visually integrate the campus. The 1440 Center would be developed in two phases.

In Phase 1, the Center is proposed to accommodate up to 360 overnight guests, including faculty and faculty assistants, and employ approximately 150 full-time equivalent employees. Phase I would include the demolition of approximately 72,191 square feet of administrative and classrooms and residence halls and 10 single-family homes around Gaston Circle. Seven existing buildings totaling approximately 94,339 square feet would be remodeled. These include the main administration building, the chapel, the auditorium and several residence halls. Three new buildings totaling approximately 55,500 square feet would be constructed including a new spa, dining hall and lodging. Upon completion, Phase I of the project would consist of a total of approximately 149,839 gross square feet of new and remodeled buildings. Parking for Phase 1 would accommodate a total of 423 stalls. The existing parking lot on Gaston Circle would be reconfigured to accommodate 120 parking spaces. The existing athletic field would be re-graded and a new West Field surface parking lot would be constructed to accommodate 190 spaces. Additional parking would be provided adjacent to the Redwood Auditorium, and Burnett, Harp, and Gerhart residence halls. To improve circulation, Bethany Drive would be realigned further south and straightened between Bethany Way and Bethany Loop. A newly constructed bridge will be constructed off Bethany Drive connecting to Stowell Center. Guests would self-park, typically at the Gaston Circle or at the proposed West Field parking lot. A new road would be constructed along the hillside on the northern side of the project site connecting Gaston Circle to the new West Field parking lot. This roadway would be 20 feet wide and include retaining walls along some portions. Additionally, a new roadway would be constructed from the West Field parking lot to the terminus of Bethany Way. Bethany

Way would be widened to accommodate new sidewalks and gutters. To facilitate on-site pedestrian circulation, an extensive network of pedestrian paths would be constructed.

Phase 2 proposes to increase the amount and type of on-site accommodations by approximately 98,000 square feet of additional habitable space to accommodate 140 additional guests, faculty and faculty assistants (for a total of 500). A new parking garage (two-story, three-level garage to accommodate 544 parking spaces over a covered building area of approximately 125,094 square feet) is proposed on the West Field surface parking lot. A new 18,000 square foot lodging facility would be constructed on the site of the existing Swanson Hall that would accommodate 44 guests and faculty. The existing Gaston Circle parking lot would be removed and replaced with up to 12 new buildings (approximately 80,000 square feet). Referred to as Gaston Village, this new housing complex is proposed to accommodate 96 guests and faculty. As part of Phase 2, the surface parking lot at Gaston Circle would be removed. At full-build out, the proposed project would accommodate up to 500 guests and faculty, and employ approximately 225 employees.

The proposed Center project requires the removal of forest trees and understory vegetation to accommodate new buildings and roadways. The total existing and proposed developed area encompasses approximately 26 acres, within the approximately 80-acre property.

1.2 INTENDED USE OF THIS REPORT

The findings presented in this biological report are intended for the sole use of Kimley-Horn and Associates, Inc. and the City of Scotts Valley in evaluating the proposed project. The findings presented in this report are for information purposes only; they are not intended to represent the interpretation of any State, Federal or City law or ordinance pertaining to permitting actions within sensitive habitat or endangered species. The interpretation of such laws and/or ordinances is the responsibility of the applicable governing body.

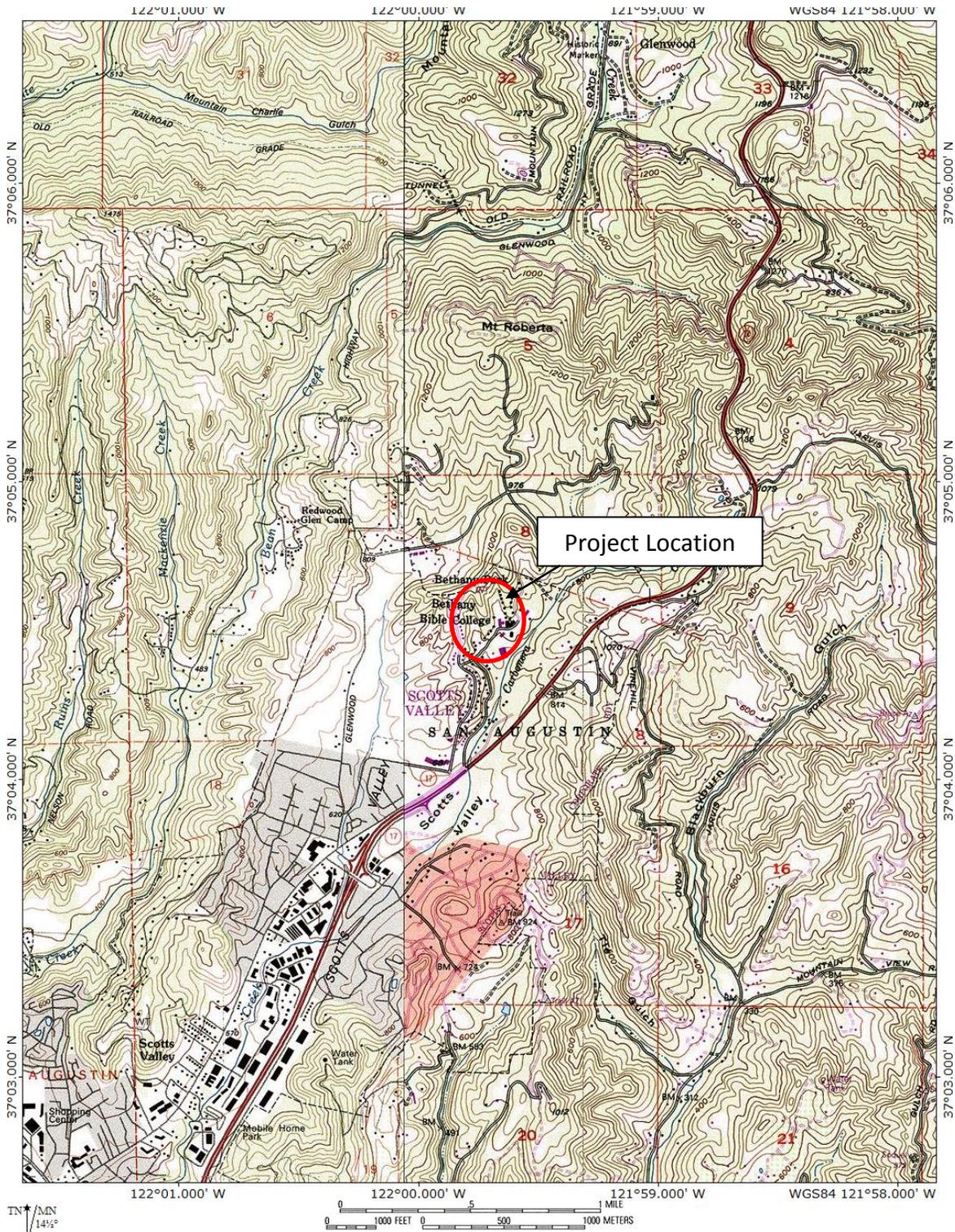


Figure 1. Location of Project Site on USGS Topographic Map
(USGS Laurel Quadrangle)

2.0 EXISTING BIOTIC RESOURCES

2.1 METHODOLOGY

The biotic resources of the 1440 Foundation – Center Project site were assessed through literature review and field observations. Site observations were made on March 12, 2014 by Kathleen Lyons (plant ecologist) and Dana Bland (wildlife biologist) and on May 16 and July 5, 2014 (Kathleen Lyons).

Vegetation mapping of the project site was conducted from review of aerial photos, a topographic map, and field observations. The major plant communities within the project area, based on the classification system developed by *California Terrestrial Natural Communities* (California Department of Fish and Game, 2003 and 2007) and *A Manual of California Vegetation* (Sawyer and Keeler-Wolf 1995) and as amended to reflect site conditions, were identified during the field surveys. Modifications to the classification system's nomenclature were made, as necessary, to accurately describe the site's resources. The plant communities were mapped onto an aerial image (Source County of Santa Cruz GIS). All plant species observed were recorded and identified to a level sufficient to determine their rarity; all species observed are listed in the narrative section of this report. Plant nomenclature follows *The Jepson Manual Vascular Plants of California* (2012); the *An Annotated Checklist of the Vascular Plants of Santa Cruz County, California* (CNPS, 2013) was also reviewed.

To assess the potential occurrence of special status biotic resources, two electronic databases were accessed to determine recorded occurrences of sensitive plant communities and sensitive species. Information was obtained from the California Native Plant Society's (CNPS) Electronic Inventory (2014), and California Department of Fish & Wildlife (CDFW) RareFind database (CDFW, 2014) for the Laurel USGS quadrangle and eight surrounding quadrangles. The arborist report (*1440 Center Construction Project Tree Resource Analysis/Construction Impact Assessment/Protection Plan*, James P. Allen & Associates, dated June 11, 2014) was also reviewed.

This report summarizes the findings of the biotic assessment for the proposed project. The potential impacts of the proposed project on sensitive biological resources are discussed below. Measures to reduce significant impacts to a level of less-than-significant are recommended, as applicable.

2.2 ENVIRONMENTAL SETTING

2.2.1 Geographic Setting

The project is located on the western edge of the Laurel USGS quadrangle (see Figure 1). The project is located north of State Highway 17 and adjacent to residential development; undeveloped forest lands occur north and east of the site. The existing and proposed campus/center project is located north of Carbonera Creek, a perennial tributary to the Branciforte Creek; the creek flows to the San Lorenzo River in the City of Santa Cruz, approximately 7 miles downstream of the project site. No other watercourses with defined bed or bank features were observed within the Center Project area. Man-made drainage features, such as concrete-lined ditches and culverts were observed in the project area; however these appear have been constructed in otherwise upland areas to direct storm runoff from roads and buildings.

The Santa Cruz County Soil Survey (USDA, 1980) identifies four soil types within the Center Project area. They include Bonny Doon loam, 30-50% slopes (117), Nisene-Aptos complex, 15-30% slopes (156), Nisene-Aptos complex, 50-75% slopes (158), and Soquel loam, 2-9% slopes (171).

The project site supports coast redwood forest, mixed evergreen forest, annual grassland, and developed and landscaped areas. Each vegetation type, its California vegetation code, and state ranking (rarity, is listed in Table 1. The distribution of vegetation types within the project area is depicted on Figure 2.

Table 1. Vegetation Types at 1440 Center Project Area

CaCode ¹	Vegetation Type	Plant Association	State Ranking ²
86.100.14	Coast Redwood Forest	Coast Redwood/Tan Oak/ California Bay – Sword Fern/California Blackberry/French Broom	S3
82.200.71	Mixed Evergreen Forest	Douglas Fir. Coast Live Oak/Madrone/ California Bay – California Blackberry/ Poison Oak/French Broom	S4
42.026.09	Annual Grassland	Soft Chess/Rattail Fescue/ Filaree	None

¹ – California vegetation code as per CDFG/CNDDB (2010); ² - Vegetation types are ranked between S1 and S5. For vegetation types with ranks of S1-S3, all associations within the type are considered to be highly imperiled.

2.2.2 Vegetation and Wildlife Habitats

Coast Redwood Forest

The majority of the vegetation around the developed campus area is redwood forest. The forest is dominated by second-growth coast redwood (*Sequoia sempervirens*). Associated trees species include coast live oak (*Quercus agrifolia*), tan oak (*Notholithocarpus densiflorus*), Douglas fir (*Pseudotsuga menziesii*), and planted non-native landscape trees. The understory supports some native shrubs and forbs, such as flowering currant (*Ribes sanguineum var. glutinosum*) and wood strawberry (*Fragaria vesca*); however, most of the understory is comprised of planted native and non-native shrubs and groundcovers. Commonly observed species include toyon (*Heteromeles arbutifolia*), cotoneaster (*Cotoneaster sp.*), English ivy (*Hedera helix*), Bermuda buttercup (*Oxalis pes-caprae*), and irrigated turf. English ivy and cotoneaster are invasive, non-native species. A man-made concrete ditch traverses the central portion of the campus and the redwood forest; this concrete feature was dry during the March 2014 field survey. The redwood forest also grows along Carbonera Creek, which is located south of the campus. The character of the redwood forest within the central portion of the campus property is depicted in Figure 3.

The wildlife value of the redwood forest at this site is moderate because the habitat is fragmented by the campus development, with associated high human use, sparse native understory plants, and dominance of non-native plants. However, native understory plants present (e.g., currant) provide some forage for wildlife, and the natural cavities in redwood forest trees provide opportunities for nesting by birds, cover for small mammals such as raccoons, and roosting by bats. The cool, damp microclimate of the redwoods attracts more amphibians than the drier climates of oak woodland. Common wildlife that may inhabit this redwood forest include California newt (*Taricha torosa*), acorn woodpecker (*Melanerpes formicivorus*), Pacific-slope flycatcher (*Empidonax difficilis*), Steller’s jay (*Cyanocitta stelleri*), American crow (*Corvus brachyrhynchos*), and several species of bats.

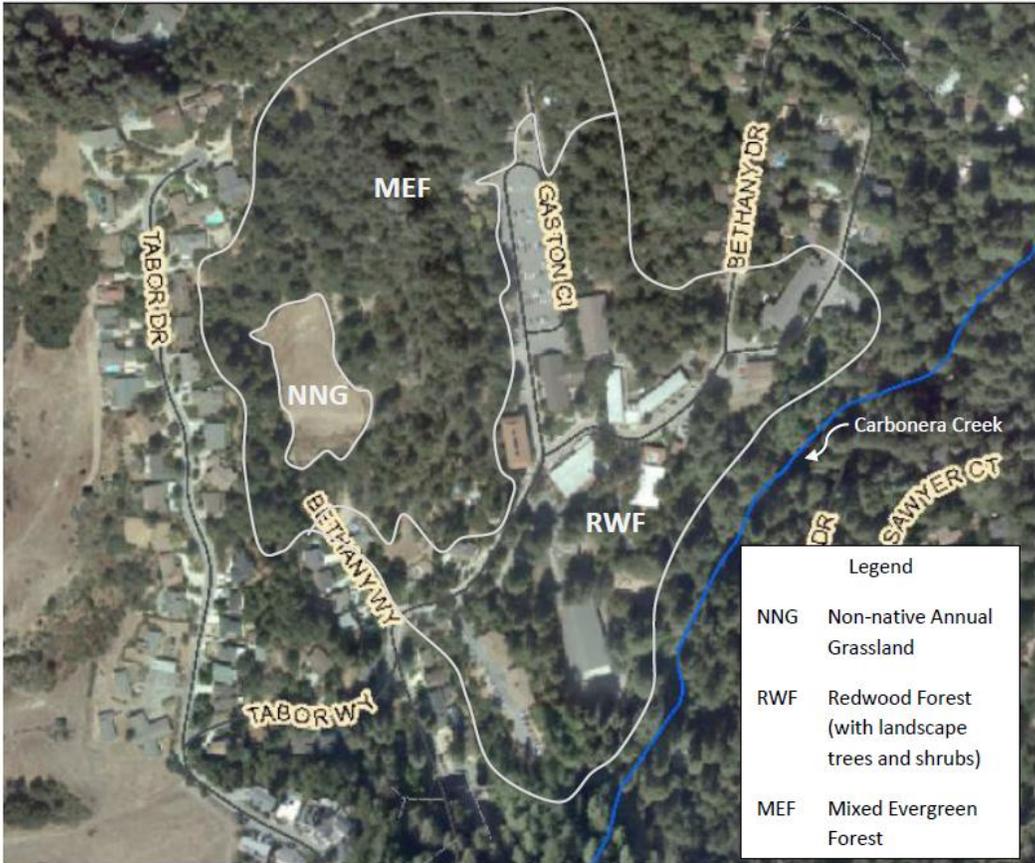


Figure 2. Distribution of Vegetation Types, 1440 Center Project Area



Figure 3. Coast Redwood Forest in Central Portion of 1440 Center Project

Mixed Evergreen Forest

The mixed evergreen forest inhabits the northern portion of the campus property, including the drier slopes further away from Carbonera Creek. The tree cover is dense with a mixture evergreen trees, including Douglas fir, coast live oak, and California bay (*Umbellularia californica*). Other tree species include madrone (*Arbutus menziesii*), hazel nut (*Corylus cornuta*) and scattered occurrences of blue elderberry (*Sambucus nigra* spp. *caerulea*). The understory includes a relatively high diversity of shrubs, including toyon, snowberry (*Symphoricarpos mollis*), poison oak (*Toxicodendron diversilobum*), French broom (*Genista monspessulana*), and coyote brush (*Baccharis pilularis*). Sub shrubs and herbaceous cover are dominated by California blackberry (*Rubus ursinus*), sword fern (*Polystichum munitum*), hairy honeysuckle (*Lonicera hispidula*), bedstraw (*Galium* sp.) and bracken fern (*Pteridium aquilinum*). Other herbaceous species observed include blue wild rye (*Elymus glaucus*), miner's lettuce (*Claytonia perfoliata*), spreading rush (*Juncus patens*), periwinkle (*Vinca major*), and purple needlegrass (*Stipa pulchra*). Both French broom and periwinkle are invasive, non-native plant species. The character of the mixed evergreen forest within the northwestern portion of the campus property is depicted in Figure 4.

The mixed evergreen forest at this site provides forage, nesting, roosting and cover for a variety of wildlife species. The acorns from the oaks provide important forage, natural cavities in the trees provide nesting and roosting habitat, and downed decaying logs provide moist microclimate and invertebrate food supply. Common wildlife species expected to inhabit the mixed evergreen forest at this site include California slender salamander (*Batrachoseps attenuatus*), western fence lizard (*Sceloporus occidentalis*), red-tailed hawk (*Buteo jamaicensis*), western scrub-jay (*Aphelocoma coerulescens*), California quail (*Callipepla californica*), several species of bats, western gray squirrel (*Sciurus griseus*), and Black-tailed deer (*Odocoileus hemionus*).



Figure 4. Mixed Evergreen Forest in Northwestern Portion of 1440 Center Project

Annual Grassland

A former baseball/play field is located in the northwest portion of the campus property. This man-made field supports annual grassland. The field is non-irrigated, yet has been periodically mowed and the vegetation reflects this periodic maintenance. Plant cover at the March field survey was co-dominated by annual grasses, such as soft chess (*Bromus hordeaceus*), rattail fescue (*Festuca myuros*), and farmer's foxtail (*Hordeum leporinum*). Other herbaceous species include redstem filaree (*Erodium botrys*), cutleaf geranium (*Geranium dissectum*), dandelion (*Taraxacum officinale*), cat's ear (*Hypochaeris spp.*), wild lettuce (*Lactuca sp.*), bull thistle (*Cirsium vulgare*), Italian or slender thistle (*Carduus spp.*), milk thistle (*Silybum marianum*), popweed (*Cardamine oligosperma*), young seedlings of French broom, and fennel (*Foeniculum vulgare*). Bull thistle, Italian and slender thistle, milk thistle, fennel, and French broom are invasive, non-native plant species. The character of the annual grassland at the former ball field is depicted in Figure 5.

The value of the grassland habitat at this site is moderated by the relative small habitat size, predominance of non-native plants, and regular mowing. The grasses and forbs provide seeds for wildlife forage, and the presence of small mammals attracts predators such as snakes and hawks. Common wildlife that may inhabit or forage in the grassland habitat at this site includes gopher snake (*Pituophis melanoleucus*), red-tailed hawk, American robin (*Turdus migratorius*), white-crowned sparrow (*Zonotrichia leucophrys*), American goldfinch (*Carduelis tristis*), California meadow vole (*Microtus californicus*), Botta's pocket gopher (*Thomomys bottae*), and deer.



Figure 5. Non-native Annual Grassland at Former Ball Field/Play Area

Campus Landscaping

Areas around the existing buildings supported planted and/or volunteer trees, shrubs, and groundcovers, most of which are non-native species. In addition, several mature redwood and oak trees occur in close proximity of buildings and facilities. Commonly observed plants include young coast live oaks, toyon (*Heteromeles arbutifolia*), young madrone, cotoneaster (*Cotoneaster sp.*), phormium (*Phormium sp.*),

English ivy (*Hedera helix*), Bermuda buttercup (*Oxalis pes-caprae*), St. Johns wort (*Hypericum sp.*) and irrigated turf. Other landscape plants also occur in planter boxes around the buildings. A large, mature coast live oak trees with building landscaping in depicted in Figure 6.

The landscaping habitat is of modest value to wildlife, and common wildlife species that may utilize these plants are similar to those described above for the redwood forest.



Figure 6. Mature Native Oak amid Campus Landscaping Adjacent to Existing Buildings

2.3 SENSITIVE BIOTIC RESOURCES

2.3.1 Regulated Habitats

The project area is located within the City of Scotts Valley. The field survey and literature review found that the 1440 Center project area does not support sensitive habitat, except for a section of Carbonera Creek. Carbonera Creek is a sensitive habitat as per City General Plan, yet all 1440 Center project activities are located outside of the creek corridor.

California Department of Fish and Wildlife (CDFW) is a trustee agency that has jurisdiction under Section 1600 et seq. of the CDFW Code. Under Sections 1600-1603 of the California Fish and Game Code, CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel or bank of any river, stream or lake which supports fish or wildlife. CDFW also regulates alterations to ponds and impoundments; CDFW jurisdictional limits typically extend to the top of bank or to the edge of riparian habitat if such habitat extends beyond top of bank (outer drip line), whichever is greater. The 1440 Center project area is located up slope (north) of Carbonera Creek and all renovation activities will occur outside the active channel and outside of the creek's riparian zone.

Water quality in California is governed by the Porter-Cologne Water Quality Control Act and certification authority under Section 401 of the Clean Water Act, as administered by the Regional Water

Quality Control Board (RWQCB). The Section 401 water quality certification program allows the State to ensure that activities requiring a Federal permit or license comply with State water quality standards. Water quality certification must be based on a finding that the proposed discharge will comply with water quality standards which are in the regional board's basin plans. The Porter-Cologne Act requires any person discharging waste or proposing to discharge waste in any region that could affect the quality of the waters of the state to file a report of waste discharge. The RWQCB issues a permit or waiver that includes implementing water quality control plans that take into account the beneficial uses to be protected. Waters of the State subject to RWQCB regulation extend to the top of bank, as well as isolated water/wetland features and saline waters. Should there be no Section 404 nexus (i.e., isolated feature not subject to USACE jurisdiction); a report of waste discharge (ROWD) is filed with the RWQCB. The RWQCB interprets waste to include fill placed into water bodies. The 1440 Center project area facilities are not located within the RWQCB's jurisdiction as per the Section 401 water quality certification program, because no work will occur within the creek channel.

The US Army Corps of Engineers (USACE) regulates activities within waters of the United States pursuant to congressional acts: Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act (1977, as amended). Section 10 of the Rivers and Harbors Act requires a permit for any work in, over, or under navigable waters of the United States. Navigable waters are defined as those waters subject to the ebb and flow of the tide to the Mean High Water mark (tidal areas) or below the Ordinary High Water mark (freshwater areas). The 1440 Center project area facilities are not located within the USACE's jurisdiction along Carbonera Creek and no other waterways or wetland features were observed within the campus property that would be subject to USACE jurisdiction.

2.3.2 Sensitive Habitats

Sensitive habitats are defined by local, State, or Federal agencies as those habitats that support special status species, provide important habitat values for wildlife, represent areas of unusual or regionally restricted habitat types, and/or provide high biological diversity.

CDFW classifies and ranks the State's natural communities to assist in the determining the level of rarity and imperilment. Vegetation types are ranked between S1 and S5. For vegetation types with ranks of S1-S3, all associations within the type are considered to be highly imperiled. If a vegetation alliance is ranked as S4 or S5, these alliances are generally considered common enough to not be of concern; however, it does not mean that certain associations contained within them are not rare (CDFG, 2007 and 2010). The proposed project area supports coast redwood forest which is considered to have imperiled status (S3) (see Table 1).

The City has requirements for the protection of tree resources. The arborist report (*1440 Center Construction Project Tree Resource Analysis/Construction Impact Assessment/Protection Plan*, James P. Allen & Associates, dated June 11, 2014) includes a survey of trees within the proposed project area. Five hundred and eighteen (518) trees/tree groups were inventoried; 273 trees are slated for removal or which 184 tree meet the protected tree criteria. The arborist report identifies measures to avoid, minimize and compensate for the expected tree removal.

2.3.3 Special Status Plant Species

Plant species of concern include those listed by either the Federal or State resource agencies as well as those identified as rare by CNPS (List 1B). The search of the CNPS and CNDDDB inventories for the Laurel and

eight surrounding quadrangles identified the special status plant species with potential to occur in the project area. Species evaluated for potential occurrence within the proposed project area as per CNDDDB and CNPS records are listed on Table 2. This evaluation included a review of the habitat requirements for each species, the presence of specialized microhabitats required for such species within the project site, and field observations. The spring and summer 2014 field survey was sufficient in determining presence or absence of special status species as these species would be identifiable during this survey period. The field survey was also sufficient to determine the presence or absence of specialized microhabitats required by several special status species (i.e., Zayante sandhills, coastal prairie/grassland, limestone outcrops, pine forest, rocky outcrops, or serpentine substrate).

The project site was not observed to support any special status plant species. In addition, due to the existing developed condition of the majority of the project area and disturbed condition of the ball field/play area (i.e., periodically mowed and subject to active play) and the lack of specialized microhabitats (i.e., lack of serpentine, rocky outcrops, and grassland), the campus property has a very low likelihood of supporting special status species. In summary, no special status plant species were observed, or are expected to occur, in the project work area.

Table 2. Special Status Plant Species Evaluated for Potential Presence at 1440 Center Project Area, July 2014

Scientific Name	Common Name	Lifeform	CNPS Rare Plant Rank	CESA	FESA	Nearest Record Potential to Occur on Site
<i>Amsinckia lunaris</i>	bent-flowered fiddleneck	annual herb	1B.2	None	None	Polo Ranch, Scotts Valley; rich soils in grassland No suitable habitat; not observed, presumed absent
<i>Arctostaphylos andersonii</i>	Anderson's manzanita	perennial evergreen shrub	1B.2	None	None	Nisene Marks SP, N end of Redwood Drive, Aptos No suitable habitat; not observed
<i>Arctostaphylos hookeri ssp. hookeri</i>	Hooker's manzanita	perennial evergreen shrub	1B.2	None	None	Mar Monte Road area, Aptos No suitable habitat; not observed
<i>Arctostaphylos pajaroensis</i>	Pajaro manzanita	perennial evergreen shrub	1B.1	None	None	Monterey County No suitable habitat; not observed
<i>Arctostaphylos silvicola</i>	Bonny Doon manzanita	perennial evergreen shrub	1B.2	None	None	N of Redwood Glen Camp in Zayante sandhills No suitable habitat; not observed
<i>Arenaria paludicola</i>	marsh sandwort	perennial stoloniferous herb	1B.1	CE	FE	Rich marsh area; historic record from Camp Evers, Scotts Valley No suitable habitat; not observed, presumed absent
<i>Calyptidium parryi var. hesseae</i>	Santa Cruz Mountains pussypaws	annual herb	1B.1	None	None	Zayante sandhills No suitable habitat; not observed, presumed absent
<i>Campanula californica</i>	swamp harebell	perennial rhizomatous herb	1B.2	None	None	Rich seasonally marshy area; historic record from Camp Evers, Scotts Valley No suitable habitat; not observed, presumed absent
<i>Carex saliniformis</i>	deceiving sedge	perennial rhizomatous herb	1B.2	None	None	Historic record from Camp Evers, Scotts Valley; Forested area in UCSC No suitable habitat; not observed
<i>Ceanothus ferrisiae</i>	Coyote ceanothus	perennial evergreen shrub	1B.1	None	FE	Serpentine chaparral, Santa Clara Co. No suitable habitat; not observed
<i>Centromadia parryi ssp. congdonii</i>	Congdon's tarplant	annual herb	1B.1	None	None	Mesic grassland, Watsonville region No suitable habitat; not observed, presumed absent
<i>Chorizanthe pungens var. hartwegiana</i>	Ben Lomond spineflower	annual herb	1B.1	None	FE	Zayante sandhills No suitable habitat; not observed, presumed absent
<i>Chorizanthe pungens var. pungens</i>	Monterey spineflower	annual herb	1B.2	None	FT	Mar Monte area, Aptos Sandy soils on oak woodland, scrub, maritime chaparral

Table 2. Special Status Plant Species Evaluated for Potential Presence at 1440 Center Project Area, July 2014

Scientific Name	Common Name	Lifeform	CNPS Rare Plant Rank	CESA	FESA	Nearest Record Potential to Occur on Site
						No suitable habitat; not observed, presumed absent
<i>Chorizanthe robusta</i> var. <i>hartwegii</i>	Scotts Valley spineflower	annual herb	1B.1	None	FE	Scotts valley grassland/sandstone outcrops No suitable habitat; not observed, presumed absent
<i>Chorizanthe robusta</i> var. <i>robusta</i>	robust spineflower	annual herb	1B.1	None	FE	Freedom Blvd area, Aptos, sandy soils No suitable habitat; not observed, presumed absent
<i>Cirsium fontinale</i> var. <i>campylon</i>	Mt. Hamilton thistle	perennial herb	1B.2	None	FE	Serpentine seeps, Sierra Azul No suitable habitat; not observed
<i>Collinsia multicolor</i>	San Francisco collinsia	annual herb	1B.2	None	None	Moist, shady slopes; found in north coast /Swanton and Scotts Creek Shady hillside present yet too dry; not observed, presumed absent
<i>Dacryophyllum falcifolium</i>	tear drop moss	perennial herb	1B.3	None	None	Moist bedrock outcrops No suitable habitat; not observed, presumed absent
<i>Dudleya abramsii</i> ssp. <i>setchellii</i>	Santa Clara Valley dudleyi	perennial herb	1B.2	None	None	Serpentine chaparral No suitable habitat; not observed
<i>Eriogonum nudum</i> var. <i>decurrens</i>	Ben Lomond buckwheat	perennial herb	1B.1	None	None	Zayante sandhills No suitable habitat; not observed
<i>Erysimum ammophilum</i>	sand-loving wallflower	perennial herb	1B.2	None	None	Dunes, Monterey Bay dunes No suitable habitat; not observed, presumed absent
<i>Erysimum teretifolium</i>	Santa Cruz wallflower	perennial herb	1B.1	CE	FE	Zayante sands No suitable habitat; not observed, presumed absent
<i>Fissidens pauperculus</i>	minute pocket moss	moss	1B.2	None	None	Nisene Marks SP, redwood forest Redwood forest not suitable due to high use as school campus; not observed, presumed absent
<i>Fritillaria liliacea</i>	Fragrant fritillary	perennial herb	1B.2	None	None	Moist areas ,serpentine grassland No suitable habitat; not observed
<i>Gilia tenuiflora</i> ssp. <i>arenaria</i>	Monterey gilia	annual herb	1B.2	CT	FE	Dune sands, Monterey Bay dunes No suitable habitat; not observed, presumed absent
<i>Hesperocyparis abramsiana</i> var. <i>abramsiana</i>	Santa Cruz cypress	perennial evergreen tree	1B.2	CE	FE	Pine forest on sandstone outcrops, sandy soils; Majors Creek, Boulder Creek No suitable habitat; not observed
<i>Hoita strobilina</i>	Loma Prieta hoita	perennial herb	1B.1	None	None	Serpentine chaparral, Loma Prieta No suitable habitat; not observed
<i>Holocarpha macradenia</i>	Santa Cruz tarplant	annual herb	1B.1	CE	FT	Coastal terrace grassland; Soquel area, Twin Lakes, Arana Gulch, Watsonville No suitable habitat; not observed, presumed absent

Table 2. Special Status Plant Species Evaluated for Potential Presence at 1440 Center Project Area, July 2014

Scientific Name	Common Name	Lifeform	CNPS Rare Plant Rank	CESA	FESA	Nearest Record Potential to Occur on Site
<i>Horkelia cuneata</i> var. <i>sericea</i>	Kellogg's horkelia	perennial herb	1B.1	None	None	Sandy soil, UCSC grassland No suitable habitat; not observed, presumed absent
<i>Horkelia marinensis</i>	Point Reyes horkelia	perennial herb	1B.2	None	None	Coastal prairie, UCSC grassland No suitable habitat; not observed, presumed absent
<i>Lessingia micradenia</i> var. <i>glabrata</i>	smooth lessingia	annual herb	1B.2	None	None	Serpentine chaparral, Loma Prieta No suitable habitat; not observed, presumed absent
<i>Malacothamnus aboriginum</i>	Indian Valley bush mallow	perennial evergreen shrub	1B.2	None	None	Sandy washes, scrub, chaparral No suitable habitat; not observed
<i>Malacothamnus arcuatus</i>	arcuate bush-mallow	perennial evergreen shrub	1B.2	None	None	Mt. Bache Road area, chaparral No suitable habitat; not observed
<i>Malacothamnus hallii</i>	Hall's bush-mallow	perennial evergreen shrub	1B.2	None	None	Serpentine chaparral No suitable habitat; not observed
<i>Microseris paludosa</i>	marsh microseris	perennial herb	1B.2	None	None	Moist areas in coastal prairie, Graham Hill Road area No suitable habitat; not observed, presumed absent
<i>Monardella sinuata</i> ssp. <i>nigrescens</i>	northern curly-leaved monardella	annual herb	1B.2	None	None	Zayante sandhills No suitable habitat; not observed, presumed absent
<i>Monolopia gracilens</i>	woodland woollythreads	annual herb	1B.2	None	None	Sandy openings in chaparral, Quail Hollow County park No suitable habitat; not observed, presumed absent
<i>Pedicularis dudleyi</i>	Dudley's lousewort	perennial herb	1B.2	CR	None	Redwood forest; extirpated from County; historic record from headwaters of Aptos Creek Marginal habitat is redwood forest due to long-term school use and landscaping; not observed, presumed absent
<i>Penstemon rattanii</i> var. <i>kleei</i>	Santa Cruz Mountains beardtongue	perennial herb	1B.2	None	None	Burned or disturbed areas in chaparral and woodland; historic record from Empire Grade area No suitable habitat; not observed, presumed absent
<i>Pentachaeta bellidiflora</i>	white-rayed pentachaeta	annual herb	1B.1	CE	FE	Beach cliffs near Santa Cruz (historic) No suitable habitat; not observed, presumed absent
<i>Piperia candida</i>	White-flowered rein orchid	perennial herb	1B.2	None	None	Open to shady site in coniferous forests Shady hillside present yet unlikely due to dry conditions on slope; not observed, presumed absent

Table 2. Special Status Plant Species Evaluated for Potential Presence at 1440 Center Project Area, July 2014

Scientific Name	Common Name	Lifeform	CNPS Rare Plant Rank	CESA	FESA	Nearest Record Potential to Occur on Site
<i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i>	Choris' popcorn-flower	annual herb	1B.2	None	None	Moist depressions in grassland; Polo Ranch Scotts Valley, Watsonville area No suitable habitat; not observed, presumed absent
<i>Plagiobothrys diffusus</i>	San Francisco popcorn-flower	annual herb	1B.1	CE	None	Seasonally moist grassland on coastal terrace, Moore Creek area, Fairway Drive area, Polo Ranch Scotts Valley, Pogonip No suitable habitat; not observed, presumed absent
<i>Plagiobothrys glaber</i>	Hairless popcorn-flower	annual herb	1A	CE	None	Seasonally moist alkaline soils in marshes, meadows, swamps No suitable habitat; not observed, presumed absent
<i>Polygonum hickmanii</i>	Scotts Valley polygonum	annual herb	1B.1	CE	FE	Grasslands with sandstone outcrops, Scotts Valley No suitable habitat; not observed, presumed absent
<i>Rosa pinetorum</i>	pine rose	perennial shrub	1B.2	None	None	Pine woodland, Big Basin No suitable habitat; not observed
<i>Silene verecunda</i> ssp. <i>verecunda</i>	San Francisco campion	perennial herb	1B.2	None	None	Exposed mudstone in north part of County No suitable habitat; not observed, presumed absent
<i>Streptanthus albidus</i> ssp. <i>albidus</i>	Metcalf Canyon jewel flower	annual herb	1B.2	None	FE	Serpentine chaparral and grassland No suitable habitat; not observed, presumed absent
<i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	most beautiful jewel flower	annual herb	1B.2	None	None	Serpentine chaparral and grassland, No suitable habitat; not observed, presumed absent
<i>Trifolium buckwestiorum</i>	Santa Cruz clover	annual herb	1B.1	None	None	Moist depressions in grassland; Soquel area, UCSC No suitable habitat; not observed, presumed absent

CNPS Status: List 1B: These plants (predominately endemic) are rare through their range and are currently vulnerable or have a high potential for vulnerability due to limited or threatened habitat, few individuals per population, or a limited number of populations. List 1B plants meet the definitions of Section 1901, Chapter 10 of the CDFW Code.

2.3.4 Special Status Wildlife Species

Special status wildlife species include those listed, proposed or candidate species by either the Federal or the State resource agencies as well as those identified as State species of special concern. In addition, all raptor nests are protected by Fish and Game Code, and all migratory bird nests are protected by the Federal Migratory Bird Treaty Act. Special status wildlife species were evaluated for their potential presence in the project area as described in Table 3 below.

The only sensitive wildlife species that may occur within the project area are roosting bats and woodrats; both may occur along the proposed new road to the west field parking garage within the mixed evergreen forest. Measures are given below to avoid or minimize potential impacts to these species. There is no suitable habitat for the remaining special status wildlife species listed in Table 3.

Table 3. Special Status Wildlife Species and Their Predicted Occurrence at 1400 Center Project Area, July 2014.

SPECIES	STATUS ¹	HABITAT	POTENTIAL OCCURRENCE ON SITE
Invertebrates			
Ohlone tiger beetle <i>Cicindela ohlone</i>	FE	Coastal terrace prairie with sparse vegetation and openings, Watsonville loam soils	None, no suitable habitat on site.
Mt. Hermon June beetle <i>Polyphylla barbata</i>	FE	Chaparral and ponderosa pine with Zayante sandy soils	No suitable habitat on site.
Zayante band-winged grasshopper <i>Trimerotropis infantilis</i>	FE	Openings in sand hills parkland habitat with Zayante sandy soils	No suitable habitat on site.
Smith's blue butterfly <i>Euphilotes enoptes smithi</i>	FE	Coastal dunes and coastal sage scrub with buckwheat plants	No suitable habitat on site.
Fish			
Coho salmon <i>Oncorhynchus kisutch</i>	FE, SE	Perennial creeks and rivers with gravels for spawning	Believed to be extirpated from the San Lorenzo River watershed. No suitable habitat in project area.
Steelhead <i>Oncorhynchus mykiss</i>	FT	Perennial creeks and rivers with gravels for spawning	No suitable habitat in project area.
Amphibians			
California red-legged frog <i>Rana aurora draytonii</i>	FT, CSC	Riparian, marshes, estuaries and ponds with still water at least into June.	No suitable habitat in project area.
Foothill yellow-legged frog <i>Rana boylei</i>	CSC	Creeks and rivers with cobble substrate	No suitable habitat on site.
Reptiles			
Western pond turtle <i>Actinemys marmorata</i>	CSC	Creeks and ponds with water of sufficient depth for escape cover, and structure for basking; grasslands or bare areas for nesting.	No suitable habitat in project area.
Birds			
Osprey <i>Pandion haliaetus</i>	None	Nests in tall trees adjacent to reservoirs and rivers	None, no suitable habitat on site.
White-tailed kite <i>Elanus leucurus</i>	FP	Nests in tall riparian trees adjacent to open lands for foraging	None, no suitable habitat on site.
Mammals			
Pallid bat <i>Antrozous pallidus</i>	CSC	Roosts in caves, hollow trees, mines, buildings, bridges, rock outcroppings	Possible in mixed evergreen forest if suitable tree hollows present, but not within project area due to high

Table 3. Special Status Wildlife Species and Their Predicted Occurrence at 1400 Center Project Area, July 2014.

SPECIES	STATUS ¹	HABITAT	POTENTIAL OCCURRENCE ON SITE
			human use.
Santa Cruz kangaroo rat <i>Dipodomys venustus venustus</i>	None	Manzanita chaparral with sandy soils	None. No suitable habitat on site.
San Francisco dusky-footed woodrat <i>Neotoma fuscipes annectens</i>	CSC	Woodlands including oaks, willow riparian, Eucalyptus	May occur within mixed evergreen habitat.
American badger <i>Taxidea taxus</i>	CSC	Grasslands with friable soils	None, no suitable habitat on site.

¹ Key to status: FE=Federally listed as endangered species; FT=Federally listed as threatened species; SE=State listed endangered; FP=Fully protected species by State; CSC=California species of special concern

3.0 IMPACT AND MITIGATION DISCUSSION

The following items from the CEQA checklist were used to evaluate the proposed project:

BIOLOGICAL RESOURCES. Would the project:

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?
- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?
- c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or State habitat conservation plan?

Impact Discussion

- a) Special Status Plant Species: No special status species have been recorded for the project area and none were observed during surveys in March, May, and July 2014. An evaluation of site habitats and growing conditions concluded that there is very low potential for species status species to occur on site. No impact to species status plant species will occur because no individuals of these species were observed.

Special Status Animal Species: Roosting bats or woodrats may occur in the mixed evergreen forest. Nesting birds (protected by the MBTA) may occur within the redwood and mixed evergreen forests. Removal of trees and understory vegetation has the potential to injure or kill roosting bats, woodrats or nesting birds.

Impact BIO-1: Roosting Bats. The applicant shall hire a qualified bat biologist to assess the trees scheduled for removal for the presence of roosting bats no more than 30 days prior to removal. If roosting bats are observed, the biologist will prepare a plan in coordination with the CDFW, to allow bats to leave the roost, but not return by use of exclusion devices if necessary.

Impact BIO-2: Nesting Birds. Schedule the tree removal, and grading for the west field parking garage and access road to occur between August 15 and February 1 of any given year to avoid the bird nesting season. If this schedule is not practical, the applicant shall hire a qualified biologist to conduct preconstruction nesting bird surveys no more than two weeks prior to removal of trees and grading for the west field parking garage and access road. If nesting birds are observed, the biologist will establish a buffer zone where no tree removal or grading will occur until the biologist confirms that all chicks have fledged. The buffer zone may vary from 50 to 250 feet, depending upon the species of bird and exposure of the nest site.

Impact BIO-3: Woodrats. The applicant shall hire a qualified biologist to survey the mixed evergreen forest along the route of the proposed parking garage access road for the presence of woodrat nests. If woodrat nests are observed along the alignment, the biologist will prepare a plan in coordination with CDFW to minimize impacts to woodrats. For example, the nest may be disassembled by hand to allow any woodrats present to escape, the nest may be relocated (if possible), or man-made woodrat nests may be constructed well outside the impact area to replace nests affected by the construction.

- b) The project area does not support any riparian habitat, drainages or creeks subject to California Department of Fish and Wildlife jurisdiction. No regulated habitats would be affected by the proposed project; however, the project would involve building and other campus renovations within coast redwood forest, an imperiled habitat as defined by CDFW. Approximately 273 trees from the redwood forest and mixed evergreen forest would be removed to accommodate the project, as per the arborist report. Construction may also occur within the drip line of trees to remain.

Impact BIO-4: Implement all measures contained within the arborist report for the avoidance and mitigation for tree removal. Measures include implementing a tree protection plan, maintenance of trees to remain, and implementing a tree replacement program.

- c) The project area does not include any water or wetland features subject to the California Regional Water Quality Control Board or US Army Corps of Engineers jurisdiction. No impacts to protected wetlands would occur.
- d) The project will not interfere with the movement of any native resident or migratory fish or wildlife species, interfere with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. The project is located within a largely developed site, and therefore, would not create significant impacts to these wildlife habitats.
- e) The project would not conflict with area plans or policies. Measures are outlined to minimize and compensate for impacts to native trees, which is consistent with local plans.
- f) The project area is not within the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other habitat conservation plan.

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