IV. ENVIRONMENTAL IMPACT ANALYSIS
D. BIOLOGICAL RESOURCES

INTRODUCTION

This section of the Draft EIR addresses biological resource issues related to implementation of the proposed Stonegate Subdivision/General Plan Amendment/Rezone Project ("proposed project"). The information presented in this section is based on the following technical reports prepared by WRA, Inc. ("WRA") and Foothill Associates ("Foothill"). The reports are based on site surveys conducted by WRA on April 23 and 24, May 17 and 18, and July 12, 2016, and March 26 and 27, 2018; and by Foothill on February 15 and 23, March 3, 17, 18, and 30, April 30, and May 3, 2016 and March 28 and April 21, 2017. These reports are included in Appendix D of this Draft EIR.

- Biological Resources Assessment: Stonegate Subdivision. City of Chico, Butte County. Prepared by WRA. July 2017. (Appendix D-1)
- Rare Plant Survey Report: Stonegate Subdivision. City of Chico, Butte County. Prepared by WRA. June 2016 (Updated March 2018). (Appendix D-2)
- Aquatic Resources Delineation Report Stonegate Property. Prepared by Foothill Associates. Revised May 2017. (Appendix D-3)

ENVIRONMENTAL SETTING

The Study Area analyzed for the biological reports includes the project site as well as the north and west addenda areas, consisting of approximately 317 acres located east of State Highway 99 in the southeast region of the City of Chico, Butte County, California. The Study Area (317 acres) is inclusive of the project site, as well as the 0.80-acre North Addendum Area and the 1.00 acre West Addendum Area. The "project site" analyzed in the biological surveys was approximately 315 acres, slightly larger than the 313 acre project site referred to in the site plans and throughout this EIR. However, this 315-acre project site included in the Study Area refers to the same area as the 313-acre project site, and the discrepancy is due to boundary mapping differences. The project site is located in the northern portion of the Chico USGS 7.5-minute quadrangle map (USGS 2016). It is bounded by East 20th Street to the north, old Potter Road to the east (now the Steve Harrison Memorial Bike Path, a Class-I paved bike path maintained by the City of Chico), Skyway Road to the south, and adjacent development to the west; it is bisected by Bruce Road, which follows a north/south alignment through the project site.

The project site is generally level open space, gradually sloping up to the northeast from elevations of 225 feet at its south border along the Skyway to 267 feet on the north border along E. 20th Street. The site was historically used as rangeland, although little grazing has taken place over the past 25 years. All site parcels are currently vacant and undeveloped with the exception of dirt and gravel access roads. The Butte Creek Diversion Channel runs in a north-south direction through the eastern portion of the site, about midway between Bruce Road and the Steve Harrison Memorial Bike Path.

A 14.76-acre parcel (APN 018-510-002, hereafter referred to as the "Doe Mill-Schmidbauer Meadowfoam Preserve") is located on the south side of East 20th Street between the Butte Creek Diversion Channel and the Steve Harrison Memorial Bike Path, near the northeasterly corner of the project site. Although not considered part of the proposed project site, the Doe Mill-Schmidbauer Meadowfoam Preserve was dedicated in fee title to the City of Chico in 1989 by the owner of the Stonegate project site in anticipation of mitigation requirements for developing housing on adjacent lands, which comprise the proposed project site. The City prepared a Land Management Plan for the preserve parcel in 1996, however, no active management efforts have occurred at the site since a control burn was conducted in 1999.

The project site is located on the eastern edge of the City limits and is surrounded on three sides by urban development including single and multi-family residences to the north, single-family residences to the west, and commercial land to the south. To the east is privately owned rangeland and open space that slopes gently up in elevation to rolling foothill terrain. The adjacent land to the east is outside of the City limits.

Soil Characteristics

Five soil types are found on-site: Doemill-Jokerst complex, 3 to 8 percent slopes; Redtough-Redswale complex, 0 to 2 percent slopes; Redsluff gravelly loam, 0 to 2 percent slopes; Wafap-Hamslough complex, 0 to 2 percent slopes; and Clearhayes-Hamslough complex, 0 to 2 percent slopes (USDA 2006). Throughout much of the project site, soils are very thin and situated over a hardpan of cemented, cobbly, and gravelly alluvium derived from volcanic rocks.

Hydrology

The project site is entirely within the Butte Creek watershed (HUC 18020158). The Butte Creek Diversion Channel is the dominant drainage within the project site. The Butte Creek Diversion Channel is a named blue-line stream on the Chico USGS 7.5-minute quadrangle and supports intermittent flows in a roughly north to south direction. The Butte Creek Diversion Channel is bounded to the west by an approximately 20-foot tall levee throughout the project site. Two unnamed tributaries to the Butte Creek Diversion Channel flow through the property generally in an east to west direction in the northeast and southeast portions of the property. In addition, a dendritic network of vernal swales flows through the project site in a roughly northeast to southwest direction. The main vernal swale channel has a culverted crossing under Bruce Road, but many of the smaller swales are divided and hydrologically separated by the road

crossing. Hydrological conditions have likely been substantially altered over time by a combination of on- and off-site development including Bruce Road, the levee adjacent to the Butte Creek Diversion Channel, various small drainage ditches and berms throughout the project site, and residential development in the upstream watershed.

Precipitation within the region falls predominantly as rainfall with an annual average of 26.23 inches recorded at the nearest weather station, which is located approximately three miles west of the project site (USDA 2016). The majority of rainfall (21.12 inches) occurs during the typical wet season from November to March (USDA 2016).

Biological Communities

Biological communities found within the Study Area include developed land, annual grassland, seasonal wetlands (depressional and riverine), perennial marsh, vernal pools, ephemeral, intermittent, and perennial drainages, ditch/canal, excavated pits, riparian oak woodland, and mixed riparian woodland. Non-sensitive biological communities include developed land and annual grassland. Eleven sensitive biological communities are found in the project site: seasonal wetlands (depressional and riverine), perennial marsh, vernal pool, ephemeral, intermittent, and perennial drainage, ditch/canal, excavated pits, riparian oak woodland, and mixed riparian woodland. These biological communities and aquatic resources are summarized in Table IV.D-1, are shown on Figures IV.D-1 and IV.D-2, and are described in more detail below. The descriptions provided below are based on site the surveys conducted by WRA in 2016 and by Foothill in 2017.

Table IV.D-1. Summary of Biological Communities in the Study Area

Community Type	Study Area (acres) / Linear Feet
Non-Sensitive	
Developed land	26.00
Non-Native Annual grassland	269.18
Sensitive	
Depressional seasonal wetland	4.02
Perennial marsh	1.24
Vernal pool	3.83
Riverine seasonal wetland (vernal swale)	4.73 / 24,247
Ephemeral drainage	0.30 / 1,164
Intermittent drainage	0.54 / 1,776
Perennial drainage	5.12 / 6,212
Ditch/Canal	0.40 / 2,332
Excavated pit	0.07
Riparian oak woodland	0.56
Mixed riparian woodland	1.10
Study Area	**317.03**

West Addendum Area:
- 0.37 ac. Developed
- 0.47 ac. Annual Grassland
- 0.16 ac. Wetland

North Addendum Area:
- 0.80 ac. Annual Grassland

Study Area - 317.03 ac.

North Addendum Area - 0.80 ac.

West Addendum Area - 1.00 ac.

Developed - 26.00 ac.

Mixed Riparian Woodland - 1.10 ac.

Annual Grassland - 269.14 ac.

Riparian Oak Woodland - 0.56 ac.

Wetlands and Waters - 20.19 ac.

Figure IV.D-1 Biological Communities

N
W E
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ENVIRONMENTAL CONSULTANTS

Stonegate Vesting Tenative Subdivision
Map and GPA/Rezone
City of Chico, California

0 250 500 1,000
Feet

Map Prepared Date: 7/26/2017
Map Prepared By: mrochelle
Base Source: Esri Streaming - NAIP 2014
Data Source(s): WRA, Rolls Anderson & Rolls

Path: L:\Acad 2000 Files\26000\26061\GIS\ArcMap\CEQA\BioComm.mxd

Study Area - 317.03 ac.

North Addendum Area - 0.80 ac.

West Addendum Area - 1.00 ac.

Depressional Wetlands

Seasonal Wetland - 4.02 ac.

Perennial Marsh - 1.24 ac.

Vernal Pool - 3.83 ac.

Riverine Wetlands

Seasonal Wetland - 4.74 ac.

Other Aquatic Resources

Ephemeral Drainage - 0.30 ac.

Intermittent Drainage - 0.48 ac.

Perennial Drainage - 5.12 ac.

Ditch\Canal - 0.39 ac.

Excavated Pit - 0.07 ac.

Figure IV.D-2. Aquatic Resources

N W E S

ENVIRONMENTAL CONSULTANTS

Stonegate Vesting Tenative Subdivision
Map and GPA/Rezone
City of Chico, California

0 250 500 1,000

Feet

Map Prepared Date: 7/26/2017
Map Prepared By: mrochelle
Base Source: Esri Streaming - NAIP 2014
Data Source(s): WRA, Foothill Associates

Path: L:\Acad 2000 Files\26000\26061\GIS\ArcMap\CEQA\Aquatic Features.mxd

Non-Sensitive Biological Communities

Developed Land

Developed land occupies approximately 26.00 acres in the Study Area, with 25.63 acres located in the project site and 0.37 acre within the west addendum area. Developed land on the property includes dirt and gravel access roads as well as a raised gravel berm and paved bike path. These areas are largely un-vegetated, although the dirt roads support sparse cover of disturbance tolerant plant species such as purple sand spurry (*Spergularia rubra*), narrowleaf cottonrose (*Logfia gallica*), windmill pink (*Petrorhagia dubia*), shining pepper grass (*Lepidium nitidum*), coastal heron's bill (*Erodium cicutarium*), vinegarweed (*Trichostema lanceolatum*), and turkey-mullein (*Croton setiger*).

Developed areas typically provide minimal habitat for wildlife, particularly those that consist primarily of roads or similarly compacted substrates with little to no vegetation. Species that utilize these areas are generally common and adapted to disturbance. Wildlife species observed in developed areas of the property include western fence lizard (*Sceloporus occidentalis*) and killdeer (*Charadrius vociferous*); the latter is one of a few bird species that may nest in these portions of the project site.

Annual Grassland

Annual grassland comprises the vast majority of the Study Area (approximately 269.18 acres), with 267.87 acres located in the project site, 0.80 acre within the north addendum area, and 0.47 acre within the west addendum area. Annual grasslands are known throughout California on all aspects and topographic positions and are underlain by a variety of substrates. Annual grasslands are typically dominated by non-native and native annual grasses and forbs along with scattered native wildflowers. This community contains elements non-native grassland (element code 42200) as described by Holland (1986) and wild oats grassland (*Avena* spp. Semi-Natural Herbaceous Alliance as described by *A Manual of California Vegetation* (CNPS 2016a).

Plant species observed in annual grasslands in the project site include medusa head grass (*Elymus caput-medusae*), Italian ryegrass (*Festuca perennis*), oats (*Avena barbata* and *A. fatua*), ripgut brome (*Bromus diandrus*), soft chess (*B. hordeaceus*), foxtail barley (*Hordeum murinum*), yellow starthistle (*Centaurea solstitialis*), blow wives (*Achyrachaena mollis*), harvest brodiaea (*Brodiaea coronaria*), yellow mariposa (*Calochortus luteus*), soaproot (*Chlorogalum angustifolium*), purple clarkia (C*larkia purpurea* ssp. *quadrivulnera*), field bindweed (*Convolvulus arvensis*), frying pans (*Eschscholzia lobbii*), wild geranium (*Geranium dissectum*), rose clover (*Trifolium hirtum*), narrow leaved onion (*Allium amplectens*), and hairy vetch (*Vicia villosa*), among many other grasses and forbs.

Annual grasslands in the project site occur on both low floodplain terraces adjacent to seasonal wetlands and on high terraces characterized by mima mound topography. Mima mounds are natural mounds forming a conspicuous hummock pattern across the landscape. Mima mounds

are typically found in areas with shallow soils and are commonly associated with vernal pools in California (Keeler-Wolf *et al*. 1998). Soils are very thin throughout annual grasslands within the project site (approximately 2 to 10 inches) and are underlain by cemented, cobbly and gravelly alluvium derived from volcanic rocks. Within the project site, mounds are typically dominated by a dense cover of non-native annual grasses while depressions between the mounds are more sparsely vegetated and support more native plant species, especially native forbs.

Although annual grasslands are typically dominated by non-native herbaceous species, they often provide important habitat for native wildlife. Small mammals and herpetofauna (reptiles and amphibians) utilize subterranean refuge (burrows) and other types of cover within grasslands, and many native bird species nest and forage there. Wildlife species observed within annual grasslands on the property include black-tailed jackrabbit (*Lepus californicus*) and western meadowlark (*Sturnella neglecta*), as well the special-status white-tailed kite (*Elanus leucurus*), which uses grasslands for foraging. Common wildlife species that may also occur on-site in this community include western harvest mouse (*Reithrodontomys megalotis*), California vole (*Microtus californicus*), and gopher snake (*Pituophis catenifer*). Special-status wildlife species that may occur within this community include grasshopper sparrow (*Ammodramus savannarum*) and western spadefoot (*Spea hammondii*); the latter is potentially present in underground refugia.

Sensitive Biological Communities

The acreage of sensitive biological communities potentially subject to U.S. Army Corps of Engineers (Corps), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW) jurisdiction are provided in Table IV.D-2, below. Additional regulatory background regarding Corps, RWQCB, and CDFW jurisdiction is provided in the regulatory setting section.

Perennial Marsh

Perennial marsh comprises approximately 1.24 acres of the project site within the southeastern portion of the stream corridor (Foothill 2017). Perennial marshes can occur as the result of natural and/or artificial water flows associated with agricultural or residential water uses. Typically, depressional perennial marshes remain inundated or saturated throughout the year. The persistence of inundation/saturation throughout the year permits the growth of warm-season wetland grasses and perennial herbaceous plant species.

Table IV.D-2. Summary of Federal and State Potentially Jurisdictional Areas within the Study Area

Habitat Type	Extent of Potential Jurisdiction		
	Corps Jurisdiction (Section 404)	**RWQCB Jurisdiction (Section 401/ Porter-Cologne)**	**CDFW Jurisdiction (Section 1602)**
Riparian	**n/a**	**1.66 acres**	**1.66 acres**
Mixed riparian woodland	n/a	1.10 acres	1.10 acres
Riparian oak woodland	n/a	0.56 acre	0.56 acre
Wetlands	**14.29 acres**	**14.29 acres**	**1.24 acres**
Depressional seasonal wetlands	4.02 acres	4.02 acres	n/a
Vernal pools	3.83 acres	3.83 acres	n/a
Perennial marsh	1.24 acres	1.24 acres	1.24 acres
Riverine seasonal wetlands	4.73 acres	4.73 acres	n/a
Ditch/Canal	0.40 acre	0.40 acre	n/a
Excavated pit	0.07 acre	0.07 acre	n/a
Non-Wetland Waters	**5.96 acres**	**5.96 acres**	**5.96 acres**
Ephemeral drainage	0.30 acre [1,164 linear feet]	0.30 acre [1,164 linear feet]	0.30 acre [1,164 linear feet]
Intermittent drainage	0.54 acre [1,776 linear feet]	0.54 acre [1,776 linear feet]	0.54 acre [1,776 linear feet]
Perennial drainage	5.12 acres [6,212 linear feet]	5.12 acres [6,212 linear feet]	5.12 acres [6,212 linear feet]
TOTAL JURISDICTIONAL AREA	**20.25 acres**	**21.91 acres**	**8.86 acres**

Within the Great Central Valley, depressional perennial marshes typically occur in association with the lowland terminus of local riverine watersheds or as the result of artificial excavation activities in low-lying areas exhibiting historic hydric soils conditions, often resulting in artificially created impoundments, such as ponds or reservoirs. The perennial marsh in the project site contains elements of coastal and valley freshwater marsh as described by Holland (1986) and cattail marsh (*Typha* spp. Herbaceous Alliance) as described by as described by *A Manual of California Vegetation* (CNPS 2016a). Perennial marshes are known throughout California on all aspects and topographic positions, underlain by a variety of substrates, but are most frequently

associated with estuarine and/or riverine systems and contain substantial muck within the soils. Frequently, perennial marshes are situated in-channel, below the ordinary high water mark (OHWM), or on the fringe of the stream.

In the project site, the Corps verified delineation identifies a perennial marsh is located adjacent to the Butte Creek Diversion Channel in the southeastern portion of the site, near the mixed riparian woodland and seasonal wetlands. WRA identified perennial marsh habitat within the northern portion of the Butte Creek Diversion Channel. Due to perennial hydrology, marsh habitat is likely interspersed throughout the Butte Creek Diversion Channel. Dominant vegetation within the depressional perennial marsh includes: curly dock (*Rumex crispus*), Himalayan blackberry (*Rubus ameniacus*), narrow leaf cattail (*Typha angustifolia*), common rush (*Juncus effuses*), nut-sedge (*Cyperus sp*.), and spikerush (*Eleocharis macrostachya*), and other freshwater emergent vegetation. All areas mapped as perennial marsh support a prevalence or dominance of hydrophytic vegetation, hydric soils, and wetland hydrology sufficient to meet the requirements as jurisdictional features under Section 404 of the CWA. These features are potentially subject to Corps and RWQCB jurisdiction as Waters of the U.S. and State. Perennial marsh is also potentially subject to Section 1602 of the California Fish and Game Code ("CFGC"). See regulatory setting section below for more information.

The aquatic portions of perennial marsh often host a variety of invertebrate species as described for vernal pools above. Dependent upon the setting, marshes may also support fishes and breeding by common amphibians. Additionally, emergent wetland vegetation within marshes is typically used for foraging, shelter, and nesting by a variety of birds.

Vernal Pools

Vernal pools comprise approximately 3.68 acres of the project site and 0.15 acre of the west addendum area, for a total of 3.83 acres within the Study Area. Vernal pools are shallow, seasonally inundated depressional wetlands that form in soils with a subsurface layer that restricts the downward flow of water. The vernal pools within the Study Area are northern hardpan vernal pools (element code: 44110) as described by Holland (1986) and Fremont's goldfields – Downingia vernal pools (*Lasthenia fremontii – Downingia [bicornuta]* Herbaceous Alliance) as described by *A Manual of California Vegetation* (CNPS 2016a). Northern hardpan vernal pools occur within depressions on cemented soils such as the Corning, Red Bluff, Redding, and San Joaquin soil series within and around the Great Central Valley. Vernal pool soils in the project site are typically very thin (approximately 1 to 3 inches) and are underlain by a hardpan of cemented, cobbly and gravelly alluvium derived from volcanic rocks. These vernal pools are characterized by a low, amphibious, herbaceous community dominated by annual herbs and grasses. Germination and growth begin with winter rains, often continuing when inundated. Rising spring temperatures evaporate the pools, leaving concentric bands of vegetation that colorfully encircle the drying pool (Holland 1986). This community is found primarily on older geomorphic surfaces and on volcanic substrates (CNPS 2016a). Vernal pool features within the project site occur in topographic depressions that vary in size, depth, and hydroperiod.

Plant species observed in vernal pools onsite include bristled downingia (*Downingia bicornuta* var. *bicornuta*), horned downingia (*D. ornatissima* var. *ornatissima*), spikerush, coyote thistle (*Eryngium vaseyi*), vernal pool goldfields (*Lasthenia fremontii*), white headed navarretia (*Navarretia leucocephala* ssp. *leucocephala*), common vernal pool allocarya (*Plagiobothrys stipitatus* var. *micranthus*), woolly marbles (*Psilocarphus oregonus*), annual beard grass (*Polypogon monspeliensis*), and barley (*Hordeum marinum* ssp. *gussoneanum*). Hydrology sources include direct precipitation and sheet flow. All areas mapped as vernal pools contain a prevalence or dominance of hydrophytic vegetation, hydric soils, and wetland hydrology sufficient to meet the requirements as jurisdictional features under Section 404 of the Clean Water Act (CWA). These features are potentially subject to Corps and RWQCB jurisdiction as Waters of the U.S. and State as described in greater detail under the regulatory setting section below.

Vernal pools typically provide habitat for a variety of invertebrate species, including species that are wholly aquatic and others that are aquatic primarily during larval stages. They are used for breeding and foraging by common amphibian species such as Sierran chorus frog (*Pseudacris sierra*). Additionally, inundated vernal pools often provide important foraging and resting habitat for waterfowl and shorebirds. No wildlife species were observed within vernal pools on the property during the site visits, although the pools were only visually examined and no protocol-level surveys were completed. Special-status wildlife with the potential to occur in the site's vernal pools include western spadefoot (for aquatic breeding) and vernal pool branchiopods (fairy and tadpole shrimps), some of which are listed under the Endangered Species Act.

Seasonal Wetlands within the Study Area

Depressional Seasonal Wetlands

Depressional seasonal wetlands comprise approximately 4.01 acres of the project site and 0.01 acre of the west addendum area for a total of 4.02 acres within the Study Area. Depressional seasonal wetlands exhibit a hydrologic regime dominated by saturation, rather than inundation. Depressional seasonal wetlands within the site occur as depressions within the topography with a hydrologic regime dominated by saturation and capable of supporting hydrophytic plant species and hydric soils. Dominant vegetation within the depressional seasonal wetlands includes: spikerush, Italian ryegrass, rattail sixweeks grass (*Festuca myuros*), rabbitfoot grass (*Polypogon monspeliensis*), and Mediterranean barley.

Riverine Seasonal Wetlands

Riverine seasonal wetlands or vernal swales comprise 24,247 linear feet or 4.73 acres of the project site. Riverine seasonal wetlands are defined by a hydrologic regime dominated by unidirectional flow of water. Riverine seasonal wetlands typically occur in topographic folds or swales and represent natural drainages that convey sufficient water to support wetland vegetation. Riverine seasonal wetlands typically convey water during and shortly after storm events.

Riverine seasonal wetlands occur in the project site as dendritic networks of generally narrow, roughly linear depressions that convey channelized flow during the wet season. These riverine seasonal wetlands are an important component of the larger vernal pool complex and act as swales, which often provide hydrologic connections between multiple vernal pools. These wetlands are highly variable in plant composition, depending on the frequency and duration of inundation and/or saturation, as well as average flow velocities. For example, larger swales with higher flow velocities typically have large areas of bare bedrock and very sparse vegetative cover (~5%), while smaller swales typically have deeper soils (still less than 5 inches in depth) and higher vegetative cover.

Compared to vernal pools, vernal swales are typically more sparsely vegetated due to the presence of channelized flow and are dominated by a mix of generalist hydrophytic species, rather than the suite of vernal pool endemics that typically dominate vernal pools in the Study Area. These features are typically sparsely vegetated with hydrophytic grasses and forbs such as barley, Italian ryegrass, coyote thistle, and vernal pool goldfields. Vegetation composition is likely seasonally variable with upland species encroaching more into swale features during the dry season. Dominant vegetation within the riverine seasonal wetlands includes Italian ryegrass, spikerush, and Mediterranean barley.

Soils are very thin (approximately 0 to 5 inches) and are underlain by cemented, cobbly and gravelly alluvium derived from volcanic rocks. Hydrology sources include direct precipitation and runoff from the surrounding watershed. All areas mapped as riverine seasonal wetlands support a prevalence or dominance of hydrophytic vegetation, hydric soils, and wetland hydrology sufficient to meet the requirements as jurisdictional features under Section 404 of the Clean Water Act

In terms of providing habitat for wildlife, riverine seasonal wetlands are broadly similar to vernal pools, although periods of average continuous inundation are often shorter, and thus both species diversity and overall utilization may be lower. Swales may also provide hydrologic connectivity between vernal pools and other seasonal water features, facilitating the dispersal and movement of aquatic organisms. Within the Study Area, riverine seasonal wetlands that are inundated for relatively long periods and/or hold larger water volumes may be occupied by western spadefoot and vernal pool branchiopods.

Other Aquatic Resources within the Study Area

Ephemeral Drainage

Approximately 1,164 linear feet of ephemeral drainage comprises approximately 0.30 acres of the project site. Ephemeral drainages are features that do not meet the three-parameter criteria for vegetation, hydrology and soils, but do convey water and exhibit an “ordinary high water mark.” Ephemeral drainages are primarily fed by stormwater runoff. These features convey flows during and immediately after storm events but may stop flowing or begin to dry if the interval between storm events is long enough. Typically, these features exhibit a defined bed and bank and often show signs of scouring as a result of rapid flow events. Within ephemeral

drainages, topographic depressions in the bed of the feature may exhibit vegetation patterns commonly associated with vernal pools or depressional seasonal wetlands. Often these features are lightly vegetated due to seasonal rapid-flow events resulting in a scoured channel, bed, and bank. Dominant vegetation identified by Foothill within the bed and along the banks of the ephemeral drainages include upland species including common vetch, filaree, slender oat, wild oat, medusa head, and soft chess.

Areas mapped as ephemeral drainage include an un-named tributary to the Butte Creek Diversion Channel in the northeastern portion of the Study Area. Ephemeral drainages in the Study Area flow over partially exposed bedrock with cobbles. Plant species observed within the ephemeral drainage include gumweed (*Grindelia camporum*), coyote thistle, and spikerush, Mediterranean barley, and Italian ryegrass, among other species. During the site visit by WRA, surface water was observed in isolated pools within the Butte Creek Diversion Channel. Areas mapped as ephemeral drainages are jurisdictional under Section 401 and 404 of the Clean Water Act and Section 1602 of the CFGC.

When they are inundated, ephemeral drainages typically host invertebrate populations and may also be used by fishes (if connected to perennial waters) and breeding amphibians. Wildlife species observed in ephemeral drainages in the Study Area include bullfrog and western toad. In the Study Area, ephemeral drainages are unlikely to support special-status wildlife species.

Intermittent Drainage

Approximately 1,776 linear feet of intermittent drainage comprises approximately 0.54 acres of the project site. Intermittent drainages, as in ephemeral drainages, are features that do not meet the three-parameter criteria for vegetation, hydrology, and soils but do convey water and exhibit an "ordinary high water mark." Water flows within intermittent drainages are fed primarily by a seasonally perched groundwater table and supplemented by precipitation and stormwater runoff. After the initial onset of rains, these features have persistent flows throughout and past the end of the rainy season. Typically, these features exhibit a defined bed and bank and show signs of scouring as a result of rapid flow events. The bed of intermittent drainages consists of cobble often interrupted with bedrock. Water was present during the field delineations conducted by Foothill. Dominant vegetation observed along the banks of the intermittent drainages includes blue oak (*Quercus douglasii*), valley oak (*Quercus lobata*), American wild mint (*Mentha arvensis*), common rush, Italian ryegrass, wild oat, medusa head, and soft chess.

Areas mapped as intermittent drainage include an un-named tributary to the Butte Creek Diversion Channel, which runs generally in an east-west direction in the southeast portion of the project site. Plant species observed by WRA within the intermittent drainage include gumweed, coyote thistle, and spikerush, Mediterranean barley, and Italian ryegrass, among other species. A tributary in the southeast portion of the project site flows through a riparian oak woodland community (described below). The tributary was dry at the time of the site visit by WRA and encroached by Italian ryegrass. Areas mapped as intermittent drainage are jurisdictional under Section 401 and 404 of the Clean Water Act and Section 1602 of the CFGC.

When they are inundated, intermittent drainages typically host invertebrate populations and may also be used by fishes (if connected to perennial waters) and breeding amphibians. Wildlife species observed in intermittent drainages in the Study Area include bullfrog and western toad. In the project site, intermittent drainages are unlikely to support special-status wildlife species.

Perennial Drainage

Approximately 6,212 linear feet of perennial drainage comprises approximately 5.12 acres of the project site. Perennial drainages are features that may not meet the three-parameter criteria for vegetation, hydrology, and soils, but do convey water and exhibit an "ordinary high water mark." Perennial drainages generally convey unidirectional water flows throughout the entire year. Perennial drainages typically consists of a channel, bed, and bank and are devoid of vegetation due to the scouring effect of flowing water. Perennial drainages are often bordered by wetland vegetation communities of various composition and cover depending on flow rates, duration of flows, and soil types. Water was observed flowing during the Foothill wetland delineation. Dominant vegetation observed along the banks of the perennial drainage includes Italian ryegrass, arroyo willow (*Salix lasiolepis*), narrow leaf cattail, rabbitfoot grass, soft chess, and ripgut brome. Areas mapped as perennial drainage include the Butte Creek Diversion Channel, which runs generally in a north-south direction through the eastern portion of the site, and an un-named tributary, which runs generally in an east-west direction in the northeast portion of the Study Area. Perennial drainages in the Study Area flow over partially exposed bedrock with cobbles. Plant species observed within the Butte Creek Diversion Channel include gumweed, coyote thistle, and spikerush, Mediterranean barley, and Italian ryegrass, among other species. Scattered trees and shrubs adjacent to the Butte Creek Diversion Channel are described in the mixed riparian woodland community below. During the site visit by WRA, surface water was observed in isolated pools within the Butte Creek Diversion Channel. Areas mapped as perennial drainage are jurisdictional under Section 401 and 404 of the Clean Water Act and Section 1602 of the CFGC.

When they are inundated, perennial drainages typically host invertebrate populations and may also be used by fishes (if connected to perennial waters) and breeding amphibians. Wildlife species observed in perennial drainages in the Study Area include bullfrog and western toad. In the Study Area, perennial drainages are unlikely to support special-status wildlife species.

Ditch/Canal

Approximately 2,332 linear feet of ditch/canal comprising approximately 0.40 acre are located within the project site. Ditches/canals are man-made channels that have been excavated for the purpose of conveying water. At the time of the WRA May site visits, ditches/canals were dry and supported sparse to dense cover of annual grasses such as barley and Italian ryegrass as well as some vernal pool species such as white headed navarretia and coyote thistle. Soils are thin and rocky with cobbles. The ditches/canals contained water at the time of the field delineations by Foothill. Dominant vegetation along the banks of the ditches/canals are comprised of upland vegetation including soft chess, ripgut brome, and medusa head.

Ditch/canal features in the project site are potentially subject to Corps and RWQCB jurisdiction as Waters of the U.S. and State.

When they are inundated, ditches/canals may host invertebrate populations and be used by amphibians such as Sierran chorus frogs for breeding. Emergent wetland and other vegetation within ditches may provide foraging habitat and shelter for a variety of common wildlife species and nesting substrates for birds. No wildlife species were observed in the project site's ditches/canals during the WRA May site visits, and special-status wildlife are unlikely to occur there.

Excavated Pit

An excavated pit comprises approximately 0.07 acres of the project site. The pits were excavated to obtain information on soils within the Study Area. The excavated pits contained water at the time of the Foothill wetland delineations and lacked vegetation.

Riparian Oak Woodland

Riparian oak woodland comprises approximately 0.56 acre of the project site. Riparian oak woodland in the project site contains elements of valley oak woodland (element code: 71130) as described by Holland (1986) and valley oak woodland (*Quercus lobata* Woodland Alliance) as described by *A Manual of California Vegetation* (CNPS 2016a). Tree canopy in this community is intermittent and dominated by valley oak. Within the project site, this community is associated with an un-named tributary to the Butte Creek Diversion Channel, which runs in an east-west direction in the southeast region of the property. The tree canopy is dominated by valley oak with blue oak and interior live oak (*Q. wislizeni* var. *wislizeni*). Shrubs are largely absent and the herbaceous layer is grassy and dominated by oats and Italian ryegrass. Riparian oak woodland is considered a sensitive community under Section 1602 of the CFGC and may be regulated by the RWQCB and CDFW (as described in greater detail under regulatory setting section below).

Riparian oak woodland generally features structurally-complex trees in close proximity to water or otherwise mesic soils, and thus provides high-quality habitat for a wide variety of wildlife including terrestrial invertebrates, mammals, many types of birds, and herpetofauna. Wildlife species observed in riparian oak woodland in the project site include acorn woodpecker (*Melanerpes formicivorus*), mourning dove (*Zenaida macroura*), northern mockingbird (*Mimus polyglottos*), and western scrub jay (*Aphelocoma californica*), all of which may nest there. Special-status birds that may also utilize riparian oak woodland in the project site for foraging and nesting include oak titmouse (*Baeolophus inornatus*), white-tailed kite, loggerhead shrike (*Lanius ludovicianus*), yellow-billed magpie (*Pica nuttalli*), and Nuttall's woodpecker (*Picoides nuttallii*); special-status mammals that may occupy this habitat include pallid bat (*Antrozous pallidus*).

Mixed Riparian Woodland

Mixed riparian woodland comprises approximately 1.10 acres of the project site. This community is associated with the southern portion of the Butte Creek Diversion Channel. Scattered trees and shrubs include white alder (*Alnus rhombifolia*), California coffeeberry (*Frangula californica*), ash (*Fraxinus dipetala* and *F. latifolia*), cottonwood (*Populus fremontii* ssp. *fremontii*), Himalayan blackberry, blue elderberry (*Sambucus nigra* ssp. *caerulea*), poison oak (*Toxicodendron diversilobum*), and California wild grape (*Vitis californica*). The herbaceous layer is grassy and dominated by oats and Italian ryegrass. Mixed riparian woodland is considered a sensitive community under Section 1602 of the CFGC and may be regulated by the RWQCB and CDFW (as described in greater detail under regulatory setting section below).

Mixed riparian woodland generally provides high-quality habitat for wildlife as described for riparian oak woodland above. However, vegetative structure is more diverse within this community, so both species diversity and utilization may be higher. Wildlife species observed in mixed riparian woodland in the project site include red-winged blackbird (*Agelaius phoeniceus*) and house finch (*Haemorhous mexicanus*). The special-status birds named above under oak riparian woodland have the potential to occur within the project site's mixed riparian woodland, as does the Federal listed valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*).

Special-Status Plants and Animals

Special-status species include plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered under the Federal Endangered Species Act (FESA) or the California Endangered Species Act (CESA); animals listed as "fully protected" under the CFGC; animals designated as "Species of Special Concern" by CDFW; and plants listed as rare or endangered by California Native Plant Society (CNPS) [see regulatory setting section, below]. Collectively, these plants and animals are referred to as "special-status species."

The potential for occurrence of special-status species in the project site was evaluated by first determining which special-status species are known to occur in the vicinity of the project site through a literature and database search. For the purposes of this analysis, the "vicinity" of the project site was defined to include the Chico 7.5-minute USGS quadrangle in which the property is located and the eight surrounding USGS quadrangles. The following sources were reviewed to determine which special-status plant and wildlife species have been documented to occur in the vicinity of the project site:

- California Natural Diversity Database (CNDDB) records (CDFW 2017)
- USFWS quadrangle species lists (USFWS 2016)
- CNPS Inventory records (CNPS 2016b)
- CDFW publication "California's Wildlife, Volumes I-III" (Zeiner et al. 1990)

- CDFW publication, "Amphibians and Reptile Species of Special Concern in California" (Jennings and Hayes 1994);
- CDFW publication, *California Bird Species of Special Concern* (Shuford and Gardali 2008);
- *A Field Guide to Western Reptiles and Amphibians* (Stebbins 2003);
- *Fairy Shrimps of California's Puddles, Pools and Playas* (Eriksen and Belk 1999)

A site visit was conducted to evaluate to potential of the project site to support suitable habitats for special-status species. Habitat conditions observed at the project site were used to evaluate the potential for presence of special-status species based on these searches and the professional expertise of the investigating biologists. The potential for each special-status species to occur in the project site was then evaluated according to the following criteria:

- No Potential. Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- Unlikely. Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
- Moderate Potential. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- High Potential. All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- Present. Species is observed on the site or has been recorded (i.e. CNDDB, other reports) on the site recently.

Any special-status species observed during the site visit were documented and are discussed below. A protocol-level rare plant survey was conducted in April of 2016 for all plant species determined to have potential to occur in the project site. Protocol-level surveys have not been conducted for any special-status wildlife species with potential to occur in the project site. For some wildlife species, further studies may be necessary to determine presence or absence of a species to the specifications of regulatory agencies. In these cases, wildlife species may be assumed to be present or further protocol-level special-status species surveys may be necessary. Special-status wildlife species for which further protocol-level surveys may be necessary are described below.

Special-status Plant Species

Forty special-status plant species have been documented in the vicinity of the project site. The potential for each of these species to occur in the project site is summarized in Appendix D-1 (Biological Resources Assessment). Figure IV.D-3 displays CNDDB occurrences of special-status plant species that have been documented within a 5-mile radius of the project site (CDFW 2017). Twelve plant species were determined to have a moderate or high potential to occur onsite. Two rare plant species were observed in the project site during the site assessments: Butte County meadowfoam (*Limnanthes floccosa* ssp. *californica*) and Shield-bracted monkeyflower (*Mimulus glaucescens*).

The remaining 28 special-status plant species are unlikely or do not have the potential to occur within the project site due to one or more of the following reasons:

- Hydrologic conditions (e.g., marsh habitat, perennial streams) necessary to support the special-status plant(s) are not present in the project site;
- Edaphic (soil) conditions (e.g., serpentine, alkaline soils, clay soils) necessary to support the special-status plant(s) are not present in the project site;
- Associated vegetation communities (e.g., chaparral, coniferous forest) necessary to support the special-status plant(s) are not present in the project site;
- The project site is outside of the known elevation and/or localized distribution of the special-status plant(s).

Special-status plant species that have the potential to be present are discussed in detail below.

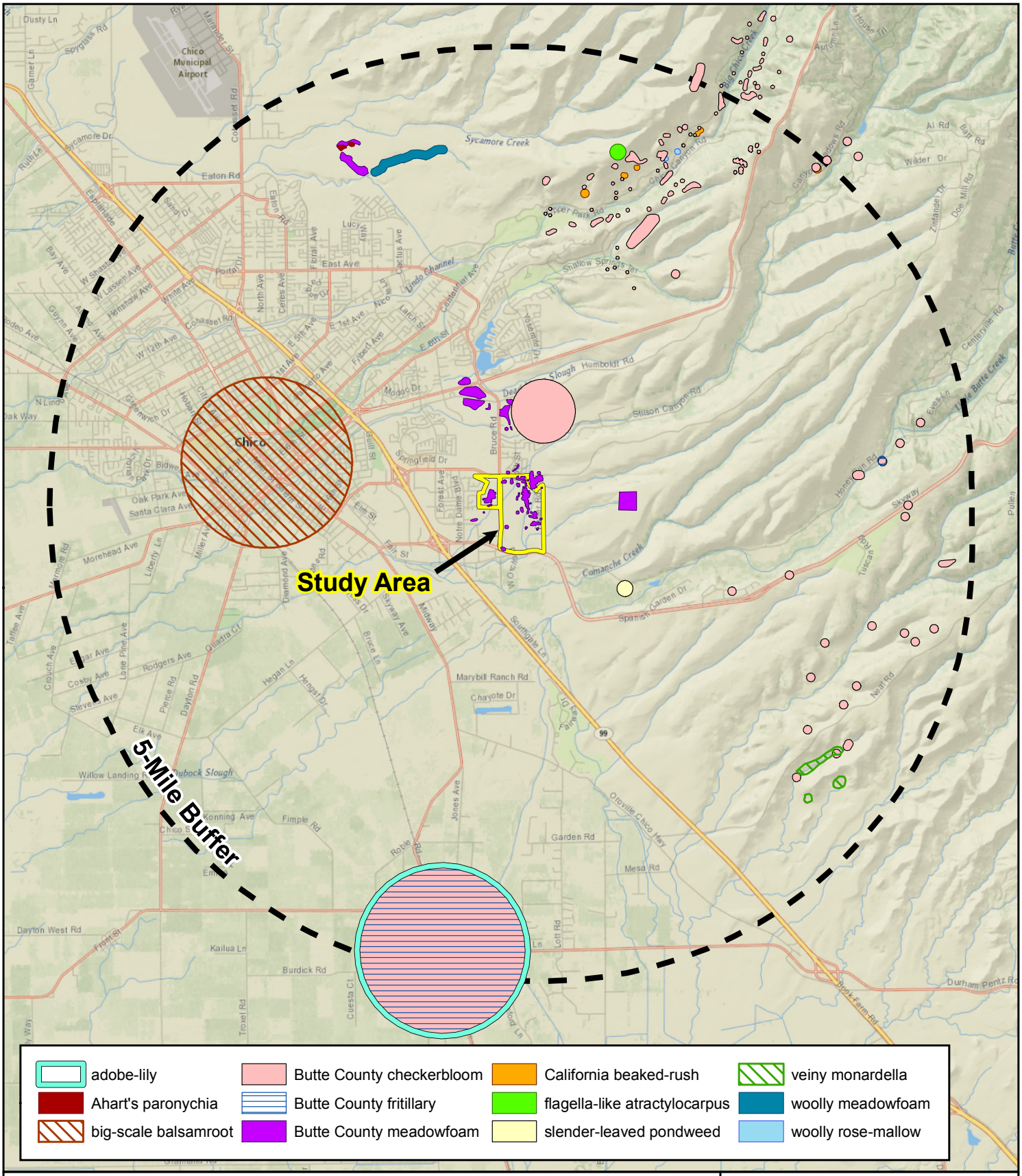

Figure IV.D-3 Special Status Plant Species within 5 Miles of the Project Site

Stonegate Vesting Tenative Subdivision
Map and GPA/Rezone
City of Chico, California

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ENVIRONMENTAL CONSULTANTS

Map Prepared Date: 5/13/2016
Map Prepared By: MRochelle
Base Source: Esri, National Geographic
Data Source(s): WRA, CNDDB (April 2016)

Path: L:\Acad 2000 Files\26000\26061\GIS\ArcMap\CNDDB_Plants.mxd

Depauperate milk-vetch (*Astragalus pauperculus*). Rank 4.3. Moderate Potential. Depauperate milk-vetch is an annual herb in the Fabaceae family that blooms from March to June. It typically occurs in vernally mesic areas within chaparral, cismontane woodland, or valley and foothill grassland communities, often on thin soils of volcanic origin, and at elevations ranging from approximately 200 to 3,990 feet (CNPS 2016b).

This species is known from 26 USGS 7.5-minute quadrangles in Butte, Placer, Shasta, Tehama, and Yuba counties. The nearest documented occurrence is from 1938 in former rocky pastureland, approximately 3.5 miles northwest of the project site (CCH 2016). The most recent documented occurrence in Butte County is from 2012 in Upper Bidwell Park, approximately 4 miles northeast of the project site (CCH 2016). Depauperate milk-vetch was considered to have a moderate potential to occur in vernally mesic grassland with stony, volcanically-derived soils in the project site. However, this species was not observed in the project site during the April or July 2016 rare plant surveys.

Hoover's spurge (*Euphorbia hooveri*). Federal-threatened, Rank 1B.2. Moderate Potential. Hoover's spurge is an annual herb in the Euphorbiaceae family that blooms from July to September. This species is found in vernal pools at elevations ranging from approximately 80 to 820 feet (CNPS 2016b). Observed associated species include coyote thistle, barley, annual hairgrass (*Deschampsia danthonioides*), white headed navarretia, Tehama navarretia (*Navarretia heterandra*), stalked popcornflower (*Plagiobothrys tenellus*), downingia, hairy waterclover (*Marsilea vestita*), and woolly marbles.

This species is known from 11 USGS 7.5-minute quadrangles in Butte, Colusa, Glenn, Merced, Stanislaus, Tehama, and Tulare counties. There are two reported occurrences of this species in the vicinity of the project site (CDFW 2017). One occurrence is from 1986 and is located approximately 7 miles southeast of the project site (CDFW 2017). The other occurrence is from 2011 and is located approximately 12 miles northwest of the project site (CDFW 2017). Hoover's spurge was considered to have a moderate potential to occur in vernal pools in the project site. However, this species was not observed during the April or July 2016 rare plant surveys.

Woolly rose-mallow (*Hibiscus lasiocarpos* var. *occidentalis*). Rank 1B.2. Moderate Potential. Woolly rose-mallow is a perennial herb in the Malvaceae family that blooms from June to September. This species is found in freshwater marshes and swamps, often in riprap on the side of levees, from sea level to 390 feet (CNPS 2016b). Observed associated species include valley oak, red buckthorn (*Frangula rubra*), California wild rose (*Rosa californica*), pennyroyal (*Mentha pulegium*), poison oak, California mugwort (*Artemisia douglasiana*), California grape, curly dock, rough cocklebur (*Xanthium strumarium*), willow (*Salix* sp.), and blackberry.

This species is known from 37 USGS 7.5-minute quadrangles in Butte, Contra Costa, Colusa, Glenn, Sacramento, San Joaquin, Solano, Sutter, and Yolo counties. There are 15 reported occurrences of this species in the vicinity of the project site (CDFW 2017). The nearest and most recent documented occurrence is from 2002, over four miles northeast of the project site in

Upper Bidwell Park (CDFW 2017). Woolly rose mallow was considered to have a moderate potential to occur along the banks of the intermittent stream channel that flows through the project site. However, this species was not observed during the April or July 2016 rare plant surveys.

Red Bluff dwarf rush (*Juncus leiospermus* var*. leiospermus*). Rank 1B.1. Moderate Potential. Red Bluff dwarf rush is an annual herb in the Juncus family that blooms from March to June. This species is found in vernal pools and vernally mesic areas in chaparral, cismontane woodland, meadows and seeps, and valley and foothill grassland communities, at elevations ranging from approximately 110 to 4,100 feet (CNPS 2016b). Observed associated species include Oregon woolly marbles, white meadowfoam (*Limnanthes alba*), micropus (*Micropus californicus*), leafybract dwarf rush (*Juncus capitatus*), toad rush (*J. bufonius*), great valley eryngo (*Eryngium castrense*), Sacramento mint (*Pogogyne zizyphoroides*), and Italian ryegrass.

This species is known from 28 USGS 7.5-minute quadrangles in Butte, Placer, Shasta, and Tehama counties. There are two reported occurrences of this species in the vicinity of the project site (CDFW 2017). One occurrence is from 1980 and is located approximately 10 miles north of the project site. The other occurrence is from 2002 and is located approximately 12 miles southeast of the project site. Red bluff dwarf rush was considered to have a moderate potential to occur in vernal pools and vernally mesic grassland within the project site. However, this species was not observed during the April or July 2016 rare plant surveys.

Butte County meadowfoam (*Limnanthes floccosa* ssp. *californica*). Federal Endangered, State Endangered, Rank 1B.1. Present. Butte County meadowfoam is an annual herb in the Limnanthaceae family that blooms from March to May. This species is found in vernal pools and vernally mesic areas in valley and foothill grassland communities, at elevations ranging from approximately 150 to 3,050 feet (CNPS 2016b). Observed associated species include peppergrass, vernal pool goldfields, big heron bill (*Erodium botrys*), common stickyseed (*Blennosperma nanum*), stalked popcorn flower, Fremont's tidy tips (*Layia fremontii*), butter 'n' eggs (*Triphysaria eriantha*), white headed navarretia, soft blow wives, common meadowfoam (*Limnanthes douglasii*), typical white meadowfoam, woolly meadowfoam (*L. floccosa* ssp. *floccosa*), Sacramento mint, great valley eryngo, California goldfields (*Lasthenia californica* ssp. *californica*), pacific foxtail (*Alopecurus saccatus*), stalked popcorn flower, Italian ryegrass, and barley.

This species is known from six USGS 7.5-minute quadrangles in Butte county CNPS (2016b). This species was documented in vernally mesic areas in the project site during the April 2016 survey and has previously been documented on the property (CDFW 2017). Approximately 5.14 acres (16,542 individuals) of Butte County meadowfoam were observed in annual grasslands and along the fringes of a few vernal pool and swale features in the project site. Figure IV.D-4 displays occurrences of Butte County meadowfoam documented during the multiple rare plant surveys used in this analysis (Appendix D-3). Species associated with Butte County meadowfoam observed in the project site include narrow leaved onion, barley, Italian

ryegrass, narrow boisduvalia (*Epilobium torreyi*), low brodiaea (*Brodiaea minor*), California plantain (*Plantago erecta*), Sierra mock stonecrop (*Sedella pumila*), Padre's shooting star (*Primula clevelandii*), vernal pool goldfields, and rose clover.

Shield-bracted monkeyflower (*Mimulus glaucescens*). Rank 4.3. Present. This species was observed during surveys conducted by Foothill Associates in March, April and July 2016 (Foothill 2016). Shield-bracted monkeyflower is an annual herb found on serpentine seeps, and sometimes on streambanks, in chaparral, cismontane woodland, lower montane coniferous forest, and valley and foothill grassland from 197 to 4,068 feet (CNPS 2016b). The blooming period for this species is from February through September (CNPS 2016b). There are no CNDDB occurrences documented for this species within a five-mile radius of the Site (Figure IV.D-4). This species was observed along the banks of the perennial drainage; the non-native annual grassland, riverine seasonal wetlands, and drainages (perennial, intermittent, and ephemeral) provide habitat for this species on Site (Foothill 2016).

Woolly meadowfoam (*Limnanthes floccosa* ssp. *floccosa*). Rank 4.2. High Potential. Woolly meadowfoam is an annual herb in the Limnanthaceae family that blooms from March to May. This species is found in vernal pools and vernally mesic areas in chaparral, cismontane woodland, and valley and foothill grassland communities, at elevations ranging from approximately 200 to 4,380 feet (CNPS 2016b). Observed associated species include Butte County meadowfoam, padre's shooting star, butter 'n' eggs, rusty popcorn flower (*Plagiobothrys nothofulvus*), cowbag clover (*Trifolium depauperatum*), and Fremont's tidy tips.

This species is known from 39 USGS 7.5-minute quadrangles in Butte, Lake, Lassen, Napa, Shasta, Siskiyou, Tehama, and Trinity counties. There are five reported occurrences of this species in the vicinity of the project site (CDFW 2017). The nearest and most recent documented occurrence is from 1991 and is located approximately 4 miles north of the project site. Woolly meadowfoam was considered to have a high potential to occur in vernal pools and vernally mesic grassland in the project site. However, this species was not observed during the April or July 2016 rare plant surveys.

Tehama navarretia (*Navarretia heterandra*). Rank 4.3. High Potential. Tehama navarretia is an annual herb in the Polemoniaceae family that blooms from April to June. This species in found in vernal pools in valley and foothill grassland communities, at elevations ranging from approximately 100 to 3,310 feet (CNPS 2016b).

Study Area

Doe Mill-Schmidbauer Meadowfoam Preserve

Project Footprint

Indirect Impacts

shieldbract monkeyflower (Foothill) - 67x preserved

Impacts to Observed Butte County meadowfoam

Direct Impacts (5,713 plants, 2.33 ac.)

Indirect (847 plants, 0.24 ac.)

Preserved (9,982 plants, 2.57 ac.)

Figure IV.D-4. BCM Map/Rare Plant Survey

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Stonegate Vesting Tenative Subdivision Map and GPA/Rezone
City of Chico, California

0 250 500 1,000
Feet

Map Prepared Date: 4/2/2018
Map Prepared By: pkobylarz
Base Source: Esri Streaming - NAIP 2014
Data Source(s): WRA, Rolls Anderson & Rolls, Foothill

Path: L:\Acad 2000 Files\26000\26061\GIS\ArcMap\CEQA\2018\Rare Plants Impacts 20180328.mxd

This species is known from 17 USGS 7.5-minute quadrangles in Butte, Colusa, Lake, Napa, Shasta, Tehama, Trinity, and Yuba counties. The nearest documented occurrence is from 1988, within a quarter of a mile of the project site on the north side of E. 20th Street in an area that has since been developed (CCH 2016). The most recent occurrence in Butte County is from 2011, approximately 17 miles northwest of the project site (CCH 2016). Tehama navarretia was considered to have a high potential to occur in vernal pools and vernally mesic grasslands in the project site. However, this species was not observed during the April or July 2016 rare plant surveys.

Hairy orcutt grass (*Orcuttia pilosa*). Federal Endangered, State Endangered, Rank 1B.1. Moderate Potential. Hairy orcutt grass is an annual grass in the Poaceae family that blooms from May to September. This species is found in vernal pools at elevations from 150 to 655 feet (CNPS 2016b). Observed associated species include Hoover's spurge, swamp grass (*Crypsis schoenoides*), awnless spiralgrass (*Tuctoria greenei*), alkali weed (*Cressa truxillensis*), saltgrass (*Distichlis spicata*), alkali heath (*Frankenia salina*), and coyote thistle.

This species is known from 16 USGS 7.5-minute quadrangles in Butte, Glenn, Madera, Merced, Stanislaus, and Tehama counties. There are five documented occurrences of this species in the vicinity of the project site (CDFW 2017). The nearest and most recent documented occurrence was observed at the Vina Plains Preserve, approximately 16 miles northwest of the project site in 2011 (CDFW 2017). Hairy orcutt grass was considered to have a moderate potential to occur in vernal pools in the project site. However, this species was not observed during the April or July 2016 rare plant surveys.

Ahart's paronychia (*Paronychia ahartii*). Rank 1B.1. High Potential. Ahart's paronychia is an annual herb in the Caryophyllaceae family that blooms from February to June. This species is found in vernal pools in cismontane woodland and valley and foothill grassland communities, at elevations from 100 to 1,670 feet (CNPS 2016b). Observed associated species include Fremont's tidy tips, California goldfields, California plantain, Tehama navarretia, white brodiaea (*Triteleia hyacinthina*), and annual hairgrass.

This species is known from 21 USGS 7.5-minute quadrangles in Butte, Shasta, and Tehama counties. There are three documented occurrences of this species in the vicinity of the project site (CDFW 2017). The nearest documented occurrence is from 1986 and is located approximately 4 miles northwest of the project site (CDFW 2017). The most recent documented occurrence is over 15 miles southeast of the project site (CDFW 2017). Ahart's paronychia was considered to have a high potential to occur in vernal pools and vernally mesic grasslands in the project site. However, this species was not observed during the April or July 2016 rare plant surveys.

Bidwell's knotweed (*Polygonum bidwelliae*). Rank 4.3. High Potential. Bidwell's knotweed is an annual herb in the Polygonaceae family that blooms from April to July. This species is found in volcanic soils in chaparral, cismontane woodland, and valley and foothill grassland communities, at elevations from approximately 200 to 3,940 feet (CNPS 2016b).

This species is known from 17 USGS 7.5-minute quadrangles in Butte, Shasta, and Tehama counties. The nearest documented occurrence is from 2005, within approximately one quarter mile of the project site to the north (CNPS 2016b). The most recent occurrence in Butte County is from 2010, approximately 5 miles northeast of the project site (CCH 2016). Bidwell's knotweed was considered to have a high potential to occur in grasslands in the project site. However, this species was not observed during the April or July 2016 rare plant surveys.

California beaked-rush (*Rhynchospora californica*). Rank 1B.1. Moderate Potential. California beaked rush is a perennial herb in the Cyperaceae family that blooms from May to July. This species is found in bogs and fens, lower montane coniferous forest, meadows and seeps, and freshwater marshes and swamps, at elevations from approximately 150 to 3,310 feet (CNPS 2016b). Observed associated species include deergrass (*Muhlenbergia rigens*), dense sedge (*Carex densa*), spike rush, shortspike hedgenettle (*Stachys pycnantha*), arroyo willow, creeping St. John's wort (*Hypericum anagalloides*), little quaking grass (*Briza minor*), and Italian ryegrass.

This species is known from eight USGS 7.5-minute quadrangles in Butte, Marin, Napa, and Sonoma counties. There are four reported occurrences of this species in the vicinity of the project site (CDFW 2017). The nearest and most recent documented occurrence is from 2002 and is located approximately four miles northeast of the project site (CDFW 2017). California beaked-rush was considered to have a moderate potential to occur in or around the large vernal pool habitat in the southeast portion of the project site. However, this species was not observed during the April or July 2016 rare plant surveys.

Brownish beaked-rush (*Rhynchospora capitellata*). Rank 2B.2. Moderate Potential. Brownish beaked rush is a perennial herb in the Cyperaceae family that blooms from July to August. This species is found in mesic areas of lower montane coniferous forest, meadows and seeps, marshes and swamps, upper montane coniferous forest communities, at elevations from approximately 150 to 6,560 feet (CNPS 2016b). Observed associated species include spikerush, rushes, bulrushes (*Scirpus* spp.), sedges, and California pitcherplant (*Darlingtonia californica*).

This species is known from 18 USGS 7.5-minute quadrangles in nine counties. There is one reported occurrence of this species in the vicinity of the project site (CDFW 2017). The occurrence is from 1988 and is located approximately eight miles east of the project site (CDFW 2017). Brownish beaked-rush was considered to have a moderate potential to occur in or around the large vernal pool habitat in the southeast portion of the project site. However, this species was not observed during the April or July 2016 rare plant surveys.

Special-status Wildlife Species

Forty-one special-status species of wildlife have been recorded in the vicinity of the project site. The potential for each of these species to occur in the project site is summarized in Appendix D-1 (Biological Resources Assessment). Figure IV.D-5 displays CNDDB occurrences of special-status wildlife species documented within 5 miles of the project site. Only one special-status wildlife species was observed in the project site during the site assessment: white-tailed kite. Twelve additional special-status wildlife species have a high or moderate potential to occur in the project site.

The remaining 28 special-status wildlife species are unlikely or do not have the potential to occur within the project site due to one or more of the following reasons:

- Aquatic habitats necessary to support the special-status wildlife species (e.g., perennial streams) are not present.
- Vegetation habitats (e.g., coniferous forest, riparian woodland/forest, chaparral) that provide nesting and/or foraging resources necessary support the special-status wildlife species are not present.
- Structures or vegetation (e.g., caves, old-growth trees) necessary to provide nesting or cover habitat to support the special-status wildlife species are not present in the project site.
- The project site is outside (e.g., north of, west of) the special-status wildlife species local documented range, or specifically nesting range (generally applies to birds).

Special-status wildlife species that have the potential to be present are discussed in detail below.

Pallid bat (*Antrozous pallidus*), CDFW Species of Special Concern, WBWG High Priority. Pallid bats are distributed from southern British Columbia and Montana to central Mexico, and east to Texas, Oklahoma, and Kansas. This species occurs in a number of habitats ranging from rocky arid deserts to grasslands, and into higher elevation coniferous forests. They are most abundant in the arid Sonoran life zones below 6,000 feet, but have been found up to 10,000 feet in the Sierra Nevada. Pallid bats often roost in colonies of between 20 and several hundred individuals. Roosts are typically in rock crevices, tree hollows, mines, caves, and a variety of man-made structures, including vacant and occupied buildings. Tree roosting has been documented in large conifer snags (e.g., ponderosa pine), inside basal hollows of redwoods and giant sequoias, and within bole cavities in oak trees. They have also been reported roosting in stacks of burlap sacks and stone piles. Pallid bats are primarily insectivorous, feeding on large prey that is usually taken on the ground but sometimes in flight. Prey items include arthropods such as scorpions, ground crickets, and cicadas (WBWG 2016).

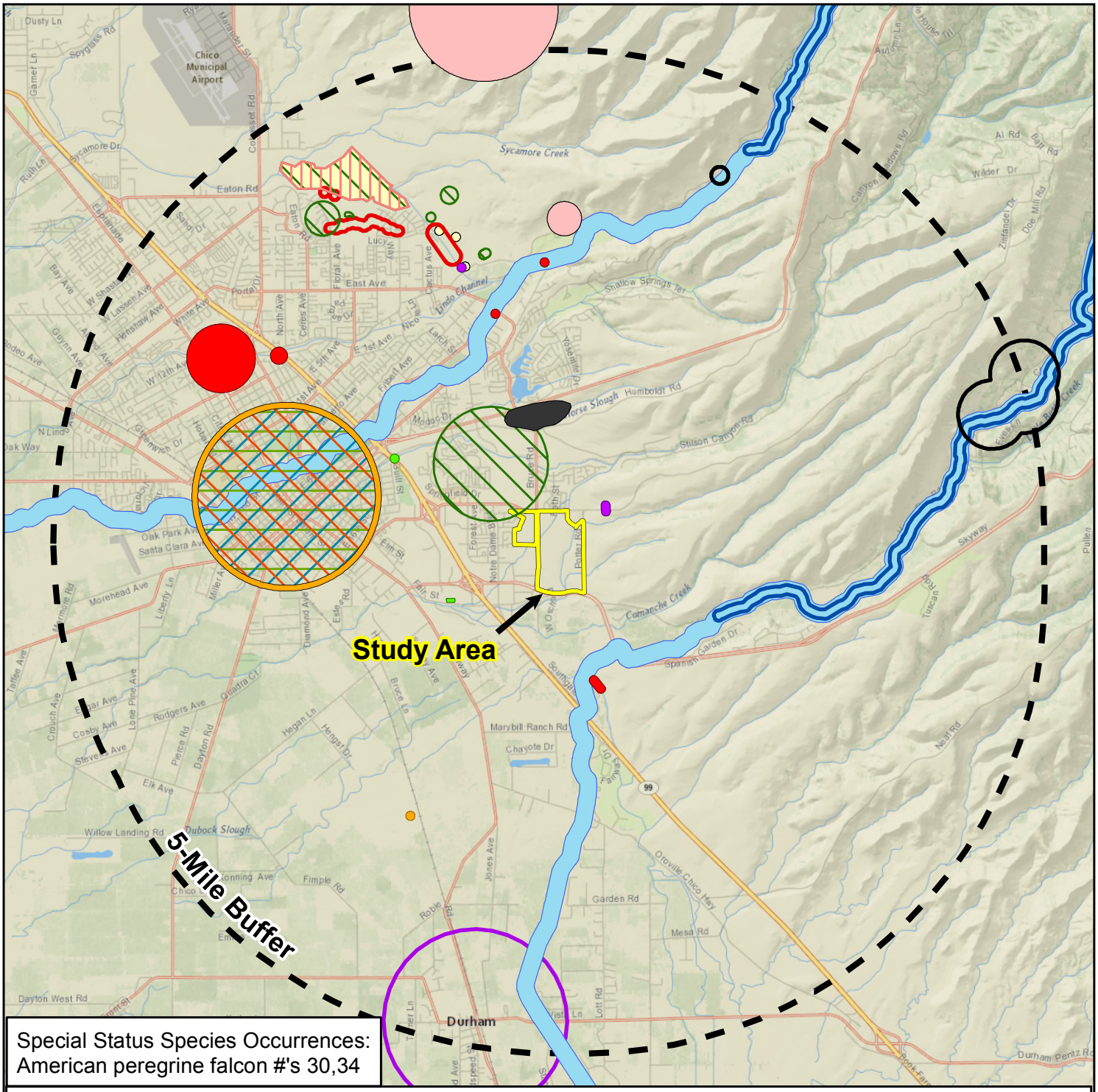

Figure IV.D-5. Special Status Wildlife Species within 5 Miles of the Project Site

Stonegate Vesting Tenative Subdivision Map and GPA/Rezone
City of Chico, California

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wra
ENVIRONMENTAL CONSULTANTS

Map Prepared Date: 5/13/2016
Map Prepared By: MRochelle
Base Source: Esri, National Geographic
Data Source(s): WRA, CNDDB (April 2016)

Path: L:\Acad 2000 Files\26000\26061\GIS\ArcMap\CNDDB_Wildlife.mxd

The project site contains several tree cavities that may provide suitable roost habitat for this species, particularly in the riparian oak woodland in the southeast. Open annual grassland and aquatic features may also provide suitable foraging habitat for this species.

Grasshopper sparrow (*Ammodramus savannarum*). CDFW Species of Special Concern. Moderate Potential. The grasshopper sparrow is a summer resident in California, wintering in Mexico and Central America. This species occurs in open grassland and prairie-like habitats with short- to moderate-height vegetation, and often scattered shrubs. Both perennial and annual (non-native) grasslands are used. Nests are placed on the ground and well concealed, often adjacent to grass clumps (Shuford and Gardali 2008). Grasshopper sparrows are secretive and generally detected by voice. Insects comprise the majority of the diet.

The project site is within this species' nesting range as per a monograph in Shuford and Gardali (2008). Open annual grassland areas there provide suitable nesting habitat.

Oak titmouse (*Baeolophus inornatus*). USFWS Bird of Conservation Concern. High Potential. This relatively common species is a year-round resident throughout much of California including most of the coastal slope, the Central Valley and the western Sierra Nevada foothills. Its primary habitat is woodland dominated by oaks. In addition, the species may also occur in riparian areas, as well as residential settings where landscaping and/or preserved trees provide suitable habitat. The oak titmouse nests in tree cavities, usually natural cavities or those excavated by woodpeckers, though they may partially excavate their own (Cicero 2000). Seeds and arboreal invertebrates make up the birds' diet.

Oaks and other trees within the project site provide suitable year-round habitat for this species, including nesting. There are numerous recent observations of this species within 1.0 mile of the project site, including in directly adjacent areas (eBird 2016).

White-tailed kite (*Elanus leucurus*). CDFW Fully Protected Species. Present. The white-tailed kite is resident in open to semi-open habitats throughout the lower elevations of California, including grasslands, savannahs, woodlands, agricultural areas and wetlands. Vegetative structure and prey availability seem to be more important habitat elements than associations with specific plants or vegetative communities (Dunk 1995). Nests are constructed mostly of twigs and placed in trees, often at habitat edges. Nest trees are highly variable in size, structure, and immediate surroundings, ranging from shrubs to trees greater than 150 feet tall (Dunk 1995). This species preys upon a variety of small mammals, as well as other vertebrates and invertebrates.

The project site provides typical habitat for this this species, with open annual grassland for foraging and trees for nesting. Kites have been recently observed in adjacent areas (eBird 2016), and one was observed foraging over the site during the May 18, 2016 site visit.

Loggerhead shrike (*Lanius ludovicianus*). CDFW Species of Special Concern, USFWS Bird of Conservation Concern. Moderate Potential. The loggerhead shrike is a year-round resident and winter visitor in lowlands and foothills throughout California. This species is associated with open country with short vegetation and scattered trees, shrubs, fences, utility lines and/or other perches. Although they are songbirds, shrikes are predatory and forage on a variety of invertebrates and small vertebrates. Captured prey items are often impaled for storage purposes on suitable substrates, including thorns or spikes on vegetation, and barbed wire fences. Nests are usually placed three to ten feet off the ground in trees and large shrubs (Shuford and Gardali 2008).

The project site provides open annual grassland areas with scattered trees and shrubs for foraging and nesting. There are recent observations of this species within 5.0 miles of the project site (eBird 2016).

Yellow-billed magpie (*Pica nuttalli*). USFWS Bird of Conservation Concern. Moderate Potential. The yellow-billed magpie is endemic to California, occurring year-round in the Central Valley and associated foothills, and the central Coast Ranges. This species inhabits open park-like areas including oak savanna and woodland, the margins of stream courses, and some agricultural areas (e.g., orchards). Breeding typically occurs in loose colonies. The large, dome-shaped nests are placed high in trees, usually oaks, and often in clumps of mistletoe (Koenig and Reynolds 2009). This species is an omnivore and an opportunistic feeder.

The project site provides open annual grassland with trees for nesting; this species has been recently observed in several nearby areas (eBird 2016).

Nuttall's woodpecker (*Picoides nuttallii*). USFWS Bird of Conservation Concern. Moderate Potential. Nuttall's woodpecker, common in much of its range, is a year-round resident throughout most of California west of the Sierra Nevada. Typical habitat is oak or mixed woodland, and riparian areas (Lowther 2000). Nesting occurs in tree cavities, principally those of oaks and larger riparian trees. Nuttall's woodpecker also occurs in older residential settings and orchards where mature trees provide suitable foraging and nesting habitat. This species forages on a variety of arboreal invertebrates.

Oaks and other trees within the project site provide year-round habitat for this species, including for nesting. There are numerous observations of this species within 1.0 mile of the project site (eBird 2016).

Western spadefoot (*Spea hammondii*). CDFW Species of Special Concern. Moderate Potential. The western spadefoot (also called "spadefoot toad") ranges throughout California's Central Valley and adjacent foothills. Suitable habitat for this amphibian consists of open areas with sandy or gravelly soils, and includes grassland, scrubland, woodland, washes, and alluvial fans. Spadefoots spend most of the year underground in burrows and similar refugia, and often constructs their own burrows. Breeding occurs in shallow, temporary pools formed by heavy winter rains; at least four weeks of continuous inundation are required for successful larval metamorphosis.

The project site provides open annual grassland with friable soil and gopher burrows. Additionally, seasonal water features (vernal pools and swales) that appear relatively short-lived are also present, and may be used for spadefoot breeding. There are recent documented occurrences of this species within 4.4 miles to the north, at a similar elevation range to that of the project site (CDFW 2017).

Vernal pool fairy shrimp (*Branchinecta lynchi*). Federal Threatened, CDFW Special-Status Invertebrate. High Potential. The vernal pool fairy shrimp ("VPFS") was listed in 1994 and is nearly endemic to California. Populations are known from Stillwater Plain in Shasta County through most of the length of the Central Valley to Pixley in Tulare County; additional distinct populations exist at various other locations, including in the central and southern Coast Ranges. Overall, this species is widespread but generally not abundant in occupied areas. VPFS occurs primarily in vernal pools but is also found in a variety of both natural and artificial temporary wetland habitats including alkali pools, ephemeral drainages, stock ponds, vernal swales, rock outcrop pools, and even roadside ditches (Helm 1997). Occupied features are typically small (ranging from 0.1 to 0.05 acre in size), and pond for a relatively short duration (e.g., as little as 3 to 4 weeks; Eriksen and Belk 1999). Soil types associated with VPFS vary greatly with geography and influence the ecology of the species. Known water quality tolerances are 48 to 481 ppm for salinity, and 6.3 to 8.5 for pH (Eriksen and Belk 1999).

Vernal pools within the project site appear to be relatively small in area and shorter-lived, and thus provide potential habitat for VPFS. Longer-ponding vernal swales also have the potential to be occupied. There are several documented occurrences at a similar elevation range within 5.0 miles to the north (as well as another cluster of occurrences located between approximately 10.5 and 15.5 miles to the southeast; CDFW 2017). For these reasons, VPFS has a high potential to be present within the project site. VPFS have been previously documented in the project site, according to a Corps Public Notice for a previously proposed project, although the source of the occurrence data is not reported (Corps 2000).

Midvalley fairy shrimp (*Branchinecta mesovallensis*). CDFW Special-status Invertebrate. Moderate Potential. This relatively recently-described fairy shrimp is endemic to California's Central Valley. It typically occurs in small, grass-bottomed vernal pools and puddles that are highly ephemeral (Eriksen and Belk 1999). Vernal pools and possibly other seasonal aquatic features within the project site provide potential habitat. The nearest documented occurrence is located approximately 11.8 miles northwest of the project site, at a similar elevation range (CDFW 2017).

Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*). Federal Threatened, CDFW Special-status Invertebrate. Moderate Potential. The valley elderberry longhorn beetle ("VELB") was listed in 1980. It is found throughout much of the Central Valley in elderberry shrubs, on which it is completely dependent for larval development, and to a lesser degree, adult feeding. Typical habitat is characterized as large stands of mature elderberry shrubs in riparian or floodplain areas, with a variety of other riparian-affiliated trees and shrubs also present in the canopy.

Elderberry shrubs within the project site are large enough to support VELB. The nearest documented occurrences are within 2.6 miles to the north of the project site (in association with riparian forest along Big Chico Creek), and within 1.0 miles to the south (in association with Butte Creek; CDFW 2017).

Vernal pool tadpole shrimp (*Lepidurus packardi*). Federal Endangered, CDFW Special-Status Invertebrate. High Potential. The vernal pool tadpole shrimp ("VPTS") was listed in 1994 and is virtually endemic to the Central Valley, with the majority of known populations occurring in the Sacramento Valley. Like other branchiopod shrimps, VPTS inhabits pools/wetlands that dry down seasonally. Suitable habitats vary considerably and include vernal pools, clay flats, alkaline pools, ephemeral stock ponds, roadside ditches, and deeper road ruts (Rogers 2001, CDFW 2017). Occupied vernal pools may range in size from small, clear, and well-vegetated to highly turbid, alkali scald pools to large winter "lakes" (Rogers 2001). They may be seasonal or ephemeral, and may exhibit a wide range of salinity levels. However, VPTS survival requires that water bodies be deeper than five inches, pond for a minimum of 40 days, and not experience wide daily temperature fluctuations (Rogers 2001). VPTS cysts (resting eggs) must have the opportunity to dry out completely before they can hatch.

Vernal pools and other seasonal aquatic features (e.g., swales) within the project site may support VPTS. Features that tend to have longer average inundation periods and/or deeper water are the most likely to be occupied. There are several documented occurrences within 5.0 miles to the north, the nearest being 0.6 mile away (CDFW 2017). VPTS have been previously documented in the project site, according to a Corps Public Notice for a previously proposed project, although the source of the occurrence data is not reported (Corps 2000).

California linderiella (*Linderiella occidentalis*). CDFW Special-Status Invertebrate. Moderate Potential. This fairy shrimp is widely distributed and relatively common in the Central Valley and Coast Ranges (Eriksen and Belk 1999). Linderiellas occur primarily in vernal pools in unplowed grasslands with old alluvial soils, but may also be found in sandstone depressions as well as more turbid, mud-bottomed pools. Occupied features must be continuously inundated for a minimum of 31 days for successful reproduction to occur. This species is relatively tolerant of higher water temperatures. Vernal pools and other seasonal aquatic features within the project site provide potential habitat for California linderiella; the nearest documented occurrences are respectively located 4.6 and 5.2 miles to the north within a similar elevation range to that of the project site (CDFW 2017).

REGULATORY SETTING

There are a number of federal, state, and local regulations designed to protect biotic resources that are recognized as sensitive or of special importance. The following is a description of those regulations and how they apply to the biotic resources within the proposed project site.

Federal Regulations

Federal Endangered Species Act of 1973

The FESA and implementing regulations are codified in the United States Code (16 USC §§ 1531 et. seq.) and the Code of Federal Regulations (CFR) (50 CFR Section 17.1 et. seq.), respectively. These regulations include provisions for the protection of plant and animal species (and their associated critical habitats), which are formally listed, proposed for listing, or candidates for listing as endangered or threatened under the FESA. The FESA has the following four major components: (1) provisions for listing species, (2) requirements for consultation with the USFWS and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service), (3) prohibitions against "taking" (meaning harassing, harming, hunting, shooting, wounding, killing, trapping, capturing, or collecting, or attempting to engage in any such conduct) of listed species, and (4) provisions for permits that allow incidental "take".

The FESA also addresses recovery plans and the designation of critical habitat for listed species, defined as a specific geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. The FESA requires federal agencies to consult with the USFWS and/or NOAA Fisheries Service to protect listed species and to ensure that any activities or projects they fund, authorize, or carry out will not jeopardize the survival of a threatened or endangered species. In consultation for those species with critical habitat, federal agencies must also ensure that their activities or projects do not adversely modify critical habitat to the point that it will no longer aid in the species' recovery. In many cases, this level of protection is similar to that already provided to species by the FESA "jeopardy standard." However, areas that are currently unoccupied by the species but which are needed for the species' recovery, are protected by the prohibition against adverse modification of critical habitat.

Project Applicability: A federally endangered plant, Butte County meadowfoam, occurs on the project site and is protected by the FESA. The recovery criteria identified in the Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon (2005) are to protect 100 percent of all known occurrences of the species and to protect 95 percent of suitable habitat within the Chico region. With regard to critical habitat, the project site was not included in the areas designated critical habitat for Butte County meadowfoam, last updated in 2008. The project includes creation of an on-site preserve (approximately 108 acres), that would maintain the occurrence of Butte County meadowfoam at the site, however the proposed development would result in take of this species and loss of suitable habitat.

Migratory Bird Treaty Act & Bald and Golden Eagle Protection Act

The federal Migratory Bird Treaty Act ("MBTA") (16 U.S.C. 703 et. seq.), and implementing regulations, title 50 CFR Parts 20 and 21, prohibits taking, killing, possessing, transporting, and importing of migratory birds, parts of migratory birds, and their eggs and nests, except when specifically authorized by the Department of the Interior. As used in the act, the term "take" is defined as meaning, "to pursue, hunt, capture, collect, kill or attempt to pursue, hunt, shoot, capture, collect or kill, unless the context otherwise requires." With a few exceptions, most birds are considered migratory under the MBTA. In the absence of a permit, disturbances that causes nest abandonment and/or loss of reproductive effort or loss of habitat upon which these birds depend may violate the MBTA.

The Bald Eagle Protection Act (16 USC 668) was passed in 1940 to protect bald eagles and was later amended to include golden eagles. Under the Act it is unlawful to import, export, take, sell, purchase, or barter any bald eagle or golden eagle, their parts, products, nests, or eggs. Take includes pursuing, shooting, poisoning, wounding, killing, capturing, trapping, collecting, molesting, or disturbing eagles.

Project Applicability: The vast majority of birds found on the project site are protected under the MBTA and by the CFGC. The project has the potential to take nests, eggs, young or individuals of these protected species. Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to the abandonment of nests.

Clean Water Act Section 404 & 401

The Corps and the U.S. EPA regulate the discharge of dredged or fill material into waters of the U.S., including wetlands, under Section 404 of the CWA (33 USC 1344). Waters of the U.S. are defined in Title 33 CFR Part 328.3(a) and include a range of wet environments such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds. The lateral limits of jurisdiction in those waters may be divided into three categories – territorial seas, tidal waters, and non-tidal waters – and is determined depending on which type of waters is present (Title 33 CFR Part 328.4(a), (b), (c)). Activities in waters of the United States regulated under Section 404 include fill for development, water resource projects (e.g., dams and levees), infrastructure developments (e.g., highways, rail lines, and airports) and mining projects. Section 404 of the CWA requires a federal permit before dredged or fill material may be discharged into waters of the United States, unless the activity is exempt from Section 404 regulation (e.g., certain farming and forestry activities).

Under a Memorandum of Agreement between the Corps and the U.S. EPA, the U.S. EPA may request that certain Section 404 permit applications receive a higher level of review within the Department of Army. In these cases, the U.S. EPA determines that issuance of the permit will result in unacceptable adverse effects to Aquatic Resources of National Importance (ARNI). An ARNI is a resource-based threshold based on factors such as economic importance of the

aquatic resource, rarity or uniqueness, and/or importance of the aquatic resources to the protection, maintenance, or enhancement of the quality of the Nation's waters.

Section 401 of the CWA (33 USC 1341) requires an applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the United States to obtain a water quality certification from the state in which the discharge originates The discharge is required to comply with the applicable water quality standards. A certification obtained for the construction of any facility must also pertain to the subsequent operation of the facility. The responsibility for the protection of water quality in California rests with the State Water Resources Control Board (State Water Board) and its nine RWQCBs.

Project Applicability: The project site contains approximately 20.25 acres of Waters of the U.S. subject to the jurisdiction of the Corps pursuant to Section 404 of the CWA. In a letter dated December 4, 2000 regarding a previously proposed development at the project site, the U.S. Fish and Wildlife Service (USFWS) determined that the aquatic features located on the project site constitute ARNIs, thus the proposed project will require a higher level of review within the Department of Army. An additional 1.66 acres (for a total of 21.91 acres) are potential Waters of the State subject to the jurisdiction of the RWQCB pursuant to Section 401 of the CWA and the Porter Cologne Act. These areas are based on a wetland delineation conducted by WRA in May of 2016 and a jurisdictional determination made by the Corps in July of 2017. Any impacts to Waters of the U.S. and State will require Corps and RWQCB authorization.

State Regulations

California Endangered Species Act

California enacted the California Native Plant Protection Act (NPPA) in 1977 and the CESA in 1984. The CESA expanded upon the original NPPA and enhanced legal protection for plants, but the NPPA remains part of the CFCG Code. To align with the FESA, CESA created the categories of "threatened" and "endangered" species. It converted the classification of all "rare" animals into the CESA as threatened species, but did not do so for rare plants. These laws provide the legal framework for protection of California-listed rare, threatened, and endangered plant and animal species. CDFW implements NPPA and CESA, and its Wildlife and Habitat Data Analysis Branch maintains the CNDDB, a computerized inventory of information on the general location and status of California's rarest plants, animals, and natural communities.

Project Applicability: As noted previously, Butte County meadowfoam occurs on the project site. This plant is state endangered and protected by the CESA. The project has the potential to result in take of this species and loss of suitable habitat.

The Natural Community Conservation Planning Act

The Natural Community Conservation Planning (NCCP) Act of 1991 represents an unprecedented effort by the State of California, and numerous private and public partners, to broaden its orientation and objectives beyond those of the CESA and FESA. The primary

objective of the NCCP Act is to conserve natural communities at the ecosystem scale while accommodating compatible land use. The NCCP seeks to anticipate and prevent the controversies and gridlock caused by species' listings by focusing on the long-term stability of wildlife and plant communities and including key interests in the process.

Project Applicability: See results for CESA and FESA, above.

Fully Protected Species & Species of Special Concern

The classification of "fully protected" was the CDFW's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, amphibian and reptiles, birds, and mammals. Most of the species on these lists have subsequently been listed under CESA and/or FESA. The CFGC sections (fish at §5515, amphibian and reptiles at §5050, birds at §3511, and mammals at §4700) dealing with "fully protected" species states that these species "…may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected species,"[1] although take may be authorized for necessary scientific research. This language makes the "fully protected" designation the strongest and most restrictive regarding the "take" of these species. In 2003, the code sections dealing with fully protected species were amended to allow the CDFW to authorize take resulting from recovery activities for state-listed species.

"Species of special concern" are broadly defined as animals not listed under the FESA or CESA, but which are nonetheless of concern to the CDFW because they are declining at a rate that could result in listing or historically occurred in low numbers and known threats to their persistence currently exist. These designations are intended to result in special consideration for these animals by the CDFW, land managers, consulting biologist, and others, and are intended to focus attention on the species to help avert the need for costly listing under FESA and CESA and cumbersome recovery efforts that might ultimately be required. These designations are also intended to stimulate collection of additional information on the biology, distribution, and status of poorly known at-risk species, and focus research and management attention on them. Although these species generally have no special legal status, they are given special consideration during project review.

Project Applicability: White-tailed kite is a CDFW fully protected species that has been observed at the project site.

[1] *California Department of Fish and Wildlife (CDFW) (2003). List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database Wildlife and Habitat Data Analysis Branch. Vegetation Classification and Mapping Program, Sacramento, CA.*

California Fish and Game Code Sections 3503 & 3513

According to Section 3503 of the CFGC it is generally unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 specifically protects birds in the orders Falconiformes and Strigiformes (birds-of-prey). Section 3513 essentially overlaps with the MBTA, prohibiting the take or possession of any migratory non-game bird. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "take" by the CDFW.

Project Applicability: As stated above under the MBTA description, the vast majority of birds found on the project site are protected under the MBTA and the CFGC.

Other Sensitive Plants - California Native Plant Society

CNPS, a non-profit plant conservation organization, publishes and maintains an Inventory of Rare and Endangered Vascular Plants of California in both hard copy and electronic version (www.cnps.org/rareplants/inventory/). The Inventory assigns plants to the following categories:

- Rank 1A – Presumed extinct in California;
- Rank 1B – Rare, threatened, or endangered in California and elsewhere;
- Rank 2A: – Plants presumed extirpated in California, but more common elsewhere;
- Rank 2B: – Rare, threatened, or endangered in California, but more common elsewhere;
- Rank 3 – Plants for which more information is needed – A review list; and
- Rank 4 – Plants of limited distribution – A watch list.

Additional threat ranks are assigned to each taxon or group as follows:

- .1 – Seriously endangered in California (over 80% of occurrences threatened/high degree of immediacy of threat).
- .2 – Fairly endangered in California (20-80% occurrences threatened).
- .3 – Not very endangered in California (<20% of occurrences threatened or no current threats known).

Plants on Rank 1A, 1B, 2A, 2B of the CNPS Inventory consist of plants that may qualify for listing, and the CDFW, as well as other state agencies (e.g., California Department of Forestry and Fire Protection), and the CNPS recommends these plants be given special consideration during project review. In addition, the CDFW and CNPS recommend, and local governments may require, consideration of plants on List 3 and 4 during project review.

Project Applicability: Forty plant species listed by the CNPS have been documented in the vicinity of the project site; however, the majority of these species are unlikely to occur within the project site. Of the forty species, one species is present within the project site (Butte County meadowfoam) and eleven species have a moderate or high potential to occur onsite.

Porter-Cologne Water Quality Control Act

"Waters of the State" are defined by the Porter-Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." The State Water Resources Control Board and the nine RWQCBs protect all state and federal waters. For projects that require a Corps (§ 404) permit for a proposed discharge of dredged or fill material, the applicable RWQCB is required to issue a certification under the Section 401 of the CWA that the discharge will not violate state water quality standards.

Project Applicability*:* As discussed above, the project site contains 21.91 acres of potential Waters of the State subject to the jurisdiction of the RWQCB pursuant to Section 401 of the CWA and the Porter-Cologne Act. The actual extent of Waters of the State may vary depending on the results of a jurisdictional determination to be conducted by the Corps. Any impacts to Waters of the State will require RWQCB authorization.

California Fish and Game Code Section 1600

Streams, lakes, and riparian vegetation as habitat for fish and other wildlife species, are subject to CDFW jurisdiction under Section 1602 of the CFGC. A 1602 Lake and Streambed Alteration Agreement is generally required for any activity that will have one or more of the following effects: (1) substantially obstruct or divert the natural flow of a river, stream, or lake; (2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake. The term "stream", which includes creeks and rivers, is defined in the California Code of Regulations (CCR) as follows: "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life". This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation" (14 CCR 1.72). In addition, the term stream can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife.[2] Riparian is defined as "on, or pertaining to, the banks of a stream;" therefore, riparian vegetation is defined as, "vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself".[3] Removal of riparian vegetation also requires a Section 1602 Lake and Streambed Alteration Agreement from the CDFW.

Project Applicability: Approximately 8.86 acres of the project site, including intermittent streams, non-wetland swales, and riparian woodland communities, are potentially subject to CDFW

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2 *California Department of Fish and Wildlife, Environmental Services Division (CDFW ESD) (1994). A Field Guide to Lake and Streambed Alteration Agreements, Sections 1600-1607, California Fish and Wildlife Code. Sacramento, CA.*

3 *Ibid*.

jurisdiction under Section 1600 of the CFGC. Any impacts to these areas will require a Streambed Alteration Agreement from CDFW.

Sensitive Vegetation Communities

Sensitive vegetation communities are natural communities and habitats that are either unique, of relatively limited distribution in the region, or of particularly high wildlife value. However, these communities may or may not necessarily contain special-status species. Sensitive natural communities are usually identified in local or regional plans, policies or regulations. The CDFW ranks sensitive communities as 'threatened' or 'very threatened' and keeps records of their occurrences in the CNDDB. Sensitive plant communities are also identified by CDFW on their List of California Natural Communities Recognized by the CNDDB. Impacts to sensitive natural communities identified in local or regional plans, policies, regulations, or by the CDFW or the USFWS must be considered and evaluated under the CEQA.

Project Applicability: The CNDDB (2011) lists four sensitive habitat types as occurring within the vicinity of the project site: valley needlegrass grassland, serpentine bunchgrass, Northern maritime chaparral, and Northern coastal salt marsh. None of these habitat types are present within the project site. In addition, upon review of the CDFW list of sensitive plant communities (2009) none of the community types are state or globally imperiled. However, the statewide loss of riparian, wetland, and aquatic habitat types has been significant and further discussion of these habitat types occurs below.

Local Regulations

Butte Regional Conservation Plan

The Butte County Association of Governments initiated development of the Butte Regional Conservation Plan (BRCP) in 2007, which has not yet been formally approved or implemented. The proposed BRCP would function as a Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) with the goal of streamlining state and federal environmental permitting for covered activities. The Plan Area for the proposed BRCP includes approximately 560,000 acres in the western half of Butte County, and includes the entire extent of vernal pool landscapes within Butte County. The BRCP would include 38 covered species, including Butte County meadowfoam, valley elderberry longhorn beetle, vernal pool fairy shrimp, western spadefoot, and white-tailed kite, among others. The BRCP would allow for the removal of approximately 24,500 acres of habitat under federal and state permits, and would protect and restore 90,417 acres.

Since 2007, the development of the BRCP has been coordinated with numerous individuals, groups, and entities including 47 meetings with the BRCP stakeholder committee, numerous meetings with state and federal agency staff, city and county planning and public works staff, and special interest groups throughout the Plan Area. The first administrative draft of the BRCP was completed and reviewed by the stakeholder committee and wildlife agencies, and made

available on the BRCP website in June 2011. A "preliminary public draft" of the BRCP was released in December 2012 and a "formal public draft" was completed and submitted to the U.S. USFWS in July 2015. In June 2016, following a public comment period for the environmental review documents, it was announced that the draft BRCP would undergo substantial revisions with the goal of building consensus among the various permittees and stakeholders in the Plan area. Development of a final BRCP is currently pending.

Project Applicability: In a letter dated March 16, 2017, Butte County Association of Governments staff advised City staff that: "A revised draft of the BRCP is currently under development and is expected to include the removal of the project listed above [Vesting Tentative Subdivision Map S 15-05 and GPA/RZ 15-02 (Stonegate)] from the BRCP permit area. This change will eliminate any conflict between the BRCP and the project, and will allow the project to move forward separately via the existing state and federal permitting processes. As such, there are no expected conflicts between the project and the BRCP." Therefore, for the purposes of this EIR it is assumed that the proposed project would not be subject to the policies listed within the Draft BRCP.

City of Chico General Plan

The Chico 2030 General Plan establishes the following goals, policies, and actions relevant to biological resources:

Goal OS-1: Protect and conserve native species and habitats.

Policy OS-1.1 (Native Habitats and Species): Preserve native species and habitat through land use planning, cooperation, and collaboration.

> Action OS-1.1.1 (Development/Preservation Balance): Direct development to appropriate locations consistent with the Land Use Diagram, and protect and preserve areas designated Open Space and areas that contain sensitive habitat and species.

Policy OS-1.2 (Regulatory Compliance): Protect special-status plant and animal species, including their habitats, in compliance with all applicable state, federal, and other laws and regulations.

> Action OS-1.2.1 (State and Federal Guidelines): Ensure that project-related biological impacts are considered and mitigated, and require applicants to obtain all necessary local, state, and federal permits for projects that may affect special-status species or their habitat.

The General Plan identifies a Resource Constraint Overlay that encompasses the project site. This designation acknowledges a reduced development potential in areas with known significant environmental constraints compared to allowable development potential based upon the underlying land use designation. The most significant environmental constraints at these locations are vernal pools, populations of Butte County meadowfoam, and habitat for Butte County meadowfoam.

Project Applicability: The project is subject to an evaluation of consistency with the City of Chico General Plan.

City of Chico Municipal Code

The City of Chico municipal code requires that a permit be obtained prior to removing any tree from any property. Tree removal permits are issued upon consideration of the overall condition and health of the tree, proximity to existing or proposed structures, interference with utility services, the necessity to remove the tree, feasible alternatives, the effect of tree removal on erosion, soil retention, and diversion or increased stream flow. Tree replacement requirements may be met onsite or in the form of an in-lieu fee payment.

The City of Chico municipal code requires a minimum 25-foot setback from the top of creek banks to development and associated above-ground infrastructure as a part of project review. Larger setbacks may be necessary to mitigate environmental impacts.

Project Applicability: The project is subject to the City of Chico municipal code, including tree removal and creek setback requirements.

ENVIRONMENTAL IMPACTS

Thresholds of Significance

This section describes potential impacts to biological resources that may occur as a result of the construction and operation of the proposed project. The project would have a number of impacts on the area's biological resources, which may constitute significant adverse effects. CEQA and the CEQA Guidelines provide guidance in evaluating project impacts and determining which impacts will be significant. CEQA defines "significant effect on the environment" as "a substantial adverse change in the physical conditions which exist in the area affected by the proposed project." Under CEQA Guidelines section 15065, a project's effects on biotic resources are deemed significant where the project would:

- "substantially reduce the habitat of a fish or wildlife species"
- "cause a fish or wildlife population to drop below self-sustaining levels"
- "threaten to eliminate a plant or animal community"
- "substantially reduce the number or restrict the range of an endangered, rare or threatened species"

In addition to the section 15065 criteria that trigger mandatory findings of significance, Appendix G of the CEQA Guidelines provides a checklist of other potential impacts to consider when analyzing the significance of project effects. The impacts listed in Appendix G may or may not be significant, depending on the level of the impact. For biological resources, these impacts include whether the project would:

- 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 CDFW or USFWS?
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS?
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA?
- 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?
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

This section describes the assumptions and thresholds of significance developed to evaluate impacts on the biological resources of the project site that would result from the proposed project. Two general assumptions that influence the assessment of impacts to the project site's biotic resources are as follows:

1. Direct impacts to plant and wildlife species are assumed to be correlated with the loss of habitats with which these species are associated. These losses would result from site excavation, grading, filling, infrastructure construction, or other damage to habitats such that they can no longer sustain a species, or so that the number of individuals that they sustain is reduced, and direct loss due to death or injury or disturbance by construction activities and human uses to the extent that the species cannot continue their lifecycle activities. The conversion of these natural communities to structures, landscaping, and infrastructure may therefore result in the loss of or reduction of use for some plant and animal species. The existing species are usually eliminated, but may be replaced with a suite of species that tolerate these development activities, but may not be as desirable, if suitable habitat is still available. Removal of a sensitive habitat, such as wetlands, that is replaced by the development would be a permanent, direct impact. Direct impacts may also be temporary if they disturb a habitat that is subsequently restored or displace individuals of a given species that later return to the site.
2. Indirect impacts could also occur. If remaining fragments of undeveloped habitat are isolated from larger areas of contiguous habitat, the remaining habitats are expected to have lower biological values than those prevailing before development. Some species can no longer subsist in these smaller fragments, the fragments may be heavily influenced by surrounding stressors, or species may not reproduce successfully without exchange with other populations. Indirect impacts can occur in portions of the site not directly impacted, or to off-site habitats and species, due to such factors as degraded water quality; changes in hydrology; noise or dust from transport of soil or materials; disturbance of wildlife from human activities and domestic animals; predation by domestic and urban-adapted species; competition by introduced plant species; and other factors.

Project Impacts and Mitigation Measures

Impact BIO-1 Special-Status Wildlife Species

Impact BIO-1A: Impacts to Special-Status and Nesting Bird Species

The proposed project has the potential to significantly impact nesting birds documented to occur near the project site, including: white-tailed kite (observed during the April 23, April 24, and May 18, 2016 site visits), grasshopper sparrow, oak titmouse, loggerhead shrike, yellow-billed magpie, Nuttall's woodpecker, and non-special-status birds protected by MBTA and CFGC (CDFW 2017, USFWS 2016). Impacts may occur by modifying nesting habitat or by causing disturbance of a sufficient level to cause abandonment of an active nest. As stated above, the majority of the project site is comprised of annual grasslands, which serves as either foraging or nesting habitat for both special-status and non-special-status nesting birds. Approximately 180.48 acres of annual grasslands would be directly impacted by project activities. In addition to these annual grasslands, both the riparian oak woodland and mixed riparian woodland provide foraging and nesting habitat for special-status and non-special-status nesting birds. The proposed project would directly impact approximately 0.02 acres and indirectly 1.08 acres of mixed riparian woodland. Impacts to these species and their habitats would occur during the removal of vegetation or other major ground disturbance (i.e. via heavy machinery). These activities have the potential to result in the direct removal or destruction of active nests, as well as generate indirect impacts from audible, vibratory and/or visual disturbances that may result in nest abandonment.

The direct removal or destruction of active nests due to project activities, or disturbance to breeding birds sufficient to result in the abandonment of active nests are considered potentially significant impacts under CEQA. Implementation of *Mitigation Measure BIO-1A* would reduce potentially significant impacts to nesting birds to a less than significant level.

Mitigation Measure BIO-1A:

Prior to the issuance of a grading permit, the Applicant shall implement the following measures to reduce impacts to nesting birds, including white-tailed kite, grasshopper sparrow, oak titmouse, loggerhead shrike, yellow-billed magpie, Nuttall's woodpecker, and other nesting bird species protected by the MBTA and CFGC.

- If ground disturbance or vegetation removal is initiated in the non-breeding season (August 16 through January 31), no pre-construction surveys for nesting birds are required and no adverse impact to nesting birds would result.
- If ground disturbance or removal of vegetation is initiated during the breeding bird season (February 1 through August 15), pre-construction surveys shall be performed by a qualified biologist no more than 14 days prior to commencement of ground disturbing activities to determine the presence and location of nesting bird species within and adjacent to the proposed project footprint. The results of the survey shall be compiled

into a report and submitted to the City for review and approval prior implementation of the following measures if nesting birds are present:

- If active nests are present, temporary no-work buffers shall be placed around active nests to prevent adverse impacts to nesting birds. Appropriate buffer distance shall be determined by a qualified biologist and is dependent on species and subsequent foraging requirements, legal status of species, surrounding vegetation, and topography. Typical buffer distances vary from 25 feet for common passerines to 500 feet for larger raptors and/or CDFW fully protected species. Work may continue within the buffer area once an active nest becomes inactive due to natural causes (i.e. young fledging the nest, the nest being otherwise depredated, etc.) and no adverse impact to birds would result from the proposed project.

Impact BIO-1B: Impacts to Pallid Bat

The project site contains riparian oak woodland near the RS-20 lots with trees with foliage and cavities that may provide sufficient roost habitat to pallid bat. Development of the RS-20 lots would result in direct impacts to 0.02 acre of riparian oak woodland and 1.08 acres of indirect impacts, which may provide pallid bat habitat, though no trees are proposed for removal. However, indirect impacts to pallid bats and pallid bat roost habitats may occur during construction activities from audible, vibratory and/or visual disturbances that cause maternity roosting bats to abandon their roost site.

Activities that result in the disturbance to maternity roosting bats sufficient to result in the abandonment of the roost are considered potentially significant impacts under CEQA. Implementation of *Mitigation Measure BIO-1B* for impacts to pallid bat would reduce potentially significant impacts to a less than significant level.

Mitigation Measure BIO-1B:

Prior to the issuance of a grading permit associated with the RS-20 lots east of the Diversion Channel, the Applicant shall implement the following measures to reduce impacts to pallid bat:

- Pre-construction roost assessment survey: A qualified biologist shall conduct a roost assessment survey of trees located within the project site. The survey shall assess use of the trees and cavities for roosting as well as potential presence of bats. If the biologist finds no evidence of bat roosting, no further measures are recommended. The results of the survey shall be compiled into a report and submitted to the City for review and approval prior implementation of the following measures if evidence of bat roosting is present:

- Work activities outside the maternity roosting season: If evidence of bat roosting is discovered during the pre-construction roost assessment and construction activities are planned August 1 through February 28 (outside the bat maternity roosting season), a qualified biologist shall implement passive exclusion measures to prevent bats from re-

entering the tree cavities. After sufficient time to allow bats to escape and a follow-up survey to determine that bats have vacated the roost, construction activities may continue and impacts to special-status bat species would be avoided.

- Work activities during the maternity roosting season: If a pre-construction roost assessment discovers evidence of bat roosting in the trees during the maternity roosting season (March 1 through July 31), and determines maternity roosting bats are present, a no disturbance shall be established around these roost sites until they are determined to be no longer active by the qualified biologist. The size of the no distance buffer shall be determined by the qualified bat biologist in coordination with CDFW and would depend on existing screening around the roost site (such as dense vegetation), the roost type, species present, as well as the type of construction activity which would occur around the roost site.

Impact BIO-1C: Impacts to Western Spadefoot

Western spadefoot has a moderate potential to occur within the project site and has potential to be significantly impacted through disturbance and/or removal of aquatic habitat including vernal pools, seasonal wetlands, drainages, and/or upland habitat (i.e., mammal burrows and similar refugia within annual grassland and riparian woodland). Activities resulting in the injury and/or mortality of western spadefoot would be considered a potentially significant impact under CEQA. The proposed project would result in 9.35 acres of direct impacts to aquatic resources and 4.51 acres of indirect impacts on the project site that may serve as habitat for western spadefoot. However, implementation of *Mitigation Measure BIO-1C* for impacts to western spadefoot would reduce potentially significant impacts to a less than significant level.

Mitigation Measure BIO-1C:

Prior to issuance of a grading permit, the Applicant shall implement the following measures to reduce impacts to western spadefoot:

- Prior to initial ground disturbance, a pre-construction presence/absence survey shall be conducted by a qualified biologist using appropriate site-specific methodology (e.g., visual surveys for adult spadefoots during or immediately following the first heavy rains of the fall/winter period). A qualified biologist may also survey aquatic habitat for breeding adults, eggs, and/or larvae. If western spadefoot is not present, impacts to this species would be avoided. The results of the survey shall be compiled into a report and submitted to the City for review and approval prior implementation of the following measures if western spadefoot is present:

- If western spadefoots individuals are found within or adjacent to the Study Area, the Applicant shall retain a qualified biologist to consult with CDFW to determine appropriate mitigation for impacts to western spadefoot habitat and individuals.

- In addition to consultation with CDFW, construction activities shall take place during the dry season (generally June 1 through September 30) within two kilometers of aquatic habitats. If construction activities extend into the wet season (generally October 1 through May 31), temporary exclusion fencing shall be installed 100 feet from work areas to prevent western spadefoot from entering construction areas. In addition, the following BMPs shall be implemented during construction:
    - Escape ramps shall be installed in all trenches or excavations to allow western spadefoot to escape.
    - Biological monitoring shall be provided by an agency-approved biologist during construction in all areas within two kilometers of aquatic habitats. The biological monitor shall identify, capture, and relocate western spadefoot present in the work area to a pre-approved location, if necessary.
    - Water quality of western spadefoot habitat shall be maintained through implementation of appropriate erosion-control measures to reduce siltation and contaminated runoff from the project by maintaining vegetation within buffers and/or through the use of hay bales, filter fences, vegetative buffer strips, or other accepted equivalents.
- In addition, the proposed project shall be required to mitigate for impacts to 9.35 acres (Direct impacts) and 4.51 acres (Indirect Impacts) of aquatic resources that shall result in the creation, preservation, restoration, or purchase of mitigation bank credits for wetlands (see *Mitigation Measure BIO-4* below).

Impact BIO-1D: Special-Status Vernal Pool Crustaceans

The proposed Project would impact vernal pools and other aquatic resources with the potential to support vernal pool fairy shrimp, vernal pool tadpole shrimp, midvalley fairy shrimp, and California linderiella. The proposed project would result in direct impacts to 9.35 acres and 4.51 acres of indirect impacts of aquatic resources on the project site. If the City declines the proposed one-acre Land Transfer (see Project Description page III-19), then an additional 0.16 acres of wetlands would be impacted by the project. Project activities within these habitats may cause mortality and/or other adverse impacts to populations of vernal pool crustaceans present within the Study Area. Activities resulting in injury and/or mortality of special-status vernal pool crustaceans would be considered a potentially significant impact under CEQA. *Mitigation Measure BIO-1D* for impacts to vernal pool crustaceans is discussed below. With implementation of *Mitigation Measure BIO-1D*, potentially significant impacts to special-status vernal pool crustaceans would be reduced to less than significant after mitigation.

Mitigation Measure BIO-1D:

Prior to issuance of a grading permit, the Applicant shall implement the following measures to reduce impacts to special-status vernal pool crustaceans:

- Unless a protocol-level presence/absence survey prepared by a qualified biologist demonstrates a lesser amount of occupied habitat within the development area, it shall be assumed that the project will result in the loss of 9.35 acres of occupied special-status vernal pool crustacean habitat.
- If VPFS and/or VPTS are either presumed present or determined by surveys to be present, and avoidance is not feasible, then impacts to their habitat shall be mitigated at a 2:1 ratio (two acres mitigated for every one acre lost) through preservation, restoration, and/or creation of suitable vernal pool crustacean habitat or purchase of vernal pool mitigation bank credits. However, final habitat acreages, mitigation ratios and other project-specific compensatory requirements shall be determined through consultation between USFWS and the Corps as part of the Section 404 permitting process.

Impact BIO-1E: Impacts to Valley Elderberry Longhorn Beetle

The proposed utility crossing from Street A to the RS-20 lots on the easterly side of the project site would directly impact 0.02 acre and indirectly impact 1.08 acre of mixed riparian woodland that contains elderberry habitat suitable for VELB. Indirect impacts to VELB may occur at the habitat-level through a variety of proposed Project-related activities such as trimming elderberry shrubs, which may reduce the health and vigor of the shrub, and may remove or destroy VELB eggs and/or larvae. Direct impacts may occur through the removal of elderberry shrubs with VELB present. Activities resulting in injury and/or mortality of VELB would be considered a potentially significant impact under CEQA. *Mitigation Measure BIO-1E* for impacts to VELB is discussed below. With implementation of *Mitigation Measure BIO-1E*, potentially significant impacts to VELB would be reduced to a less than significant level.

Mitigation Measure BIO-1E:

Prior to the issuance of improvement plans or grading permits for the extension of utilities from Street A to serve the RS-20 lots located east of the Diversion Channel, the Applicant shall implement the following to avoid impacts to VELB (adapted from USFWS 2017):

- Avoidance and Minimization: To the extent feasible, project activities within 165 feet of elderberry shrubs shall be avoided. For all activities that occur within 165 feet of elderberry shrubs, the following measures shall be implemented to ensure that avoidance activities completely avoid impacting elderberry shrub habitat for VELB:
    - Fencing: All areas to be avoided during project activities shall be fenced and/or flagged near project activity limits.

- Avoidance area: Trenching, paving, or similar activities that may damage or kill elderberry shrubs shall have an avoidance area of at least 20 feet from the drip-line of the shrub.
- Worker education: A qualified biologist shall provide training for all contractors, work crews, and any onsite personnel on the status of the VELB, its host plant and habitat, the need to avoid damaging the elderberry shrubs, and the possible penalties for non-compliance.
- Construction monitoring: A qualified biologist shall monitor the project at appropriate intervals to ensure all avoidance and minimization measures are implemented.
- Timing: As feasible, all activities that would occur within 165 feet of an elderberry shrub shall be conducted outside of VELB flight season (March - July).
- Trimming: Trimming of elderberry shrubs shall occur between November and February and shall avoid removing any branches or stems that are ≥ 1 inch in diameter. Measures to address regular and/or large-scale maintenance (trimming) shall be established in consultation with the Service.
- Chemical Usage: Herbicides shall not be used within the drip-line of an elderberry shrub. Insecticides shall not be used within 98 feet of an elderberry shrub. All chemicals shall be applied using a backpack sprayer or similar direct application method.
- Mowing: Mechanical weed removal within the drip-line of an elderberry shrub shall be limited to the season when adults are not active (August - February) and shall avoid damaging the elderberry shrub.

- Transplanting: Where elderberry shrubs cannot be avoided or indirect impacts nearby will result in the death of stems or entire shrubs, the Applicant shall transplant all elderberry shrubs with stems greater than 1 inch in diameter, where feasible, to protect VELB larvae. In addition, the Applicant shall use the following guidelines when transplanting elderberry shrubs to a USFWS-approved location:
  - Monitor: A qualified biologist shall be on-site for the duration of transplanting activities to ensure compliance with avoidance and minimization measures, in addition to other conservation measures.
  - Exit holes: Exit-hole surveys shall be completed immediately before transplanting. Details of the survey including number of exit holes observed, the GPS location of the plant to be transplanted, and the GPS location of the final position of the transplanted shrub shall be recorded and reported to the Service and to CNDDB.
  - Timing: Elderberry shrubs shall be transplanted while shrubs are dormant (from November through the first two weeks in February) and after shrubs have lost their leaves to reduce shock to the shrub and increase transplantation success.

- Transplanting Procedure: Transplanting shall follow the most current version of ANSI A300 (Part 6) guidelines for transplanting.
- Trimming Procedure: Any trimming of elderberry shrubs shall occur between November and February and should minimize removal of branches and/or stems that exceed one (1) inch in diameter.

Impact BIO-2: Special-Status Plant Species

Impact BIO-2A: Impacts to Butte County Meadowfoam and Shield-bracted Monkeyflower

According to Rare Plant Surveys conducted for the proposed project (Appendix D-3), approximately 5.14 acres of occupied Butte County meadowfoam (BCM) habitat, were observed in annual grasslands and along the fringes of a few vernal pool and swale features in the project site. Although approximately one-half of the occupied BCM habitat (2.57 acres) occurs within the on-site open space preserve, approximately 2.33 acres of occupied BCM habitat is located within the proposed development footprint. Of the 2.33 acres that would be directly impacted, 1.13 acres is located west of the Diversion Channel and 1.20 acres coincide with the RS-20 lots located east of the Diversion Channel.

Shield-bracted monkeyflower individuals were observed on the project site, however, all of these individuals were found well outside of the project development footprint and would be avoided. The proposed project would directly impact federal and state endangered Butte County meadowfoam present within the development footprint through removal of individuals.

Indirect impacts could also occur to occupied BCM habitat located within the 108 acre on-site preserve as a result of changes in hydrology from development. The USFWS has in the past used a 250-foot buffer as a starting point for determining potential indirect impacts to vernal pool-dependent species from nearby development. Alternatively, a site-specific hydrologic analysis can be used to justify a smaller buffer from the edge of the development footprint. The topography shown on the tentative map indicates that most of the storm water runoff within on-site open space preserve area drains toward the Butte Creek Diversion Channel, however no detailed hydrologic analysis has been provided to justify using a buffer of less than 250 feet for determining potential indirect impacts to vernal pool habitat within the preserve. One exception exists, where the presence of the Butte Creek Diversion Channel and levee clearly establish a hydrologic separation between biological resources located east of the channel and development areas west of the channel. Therefore, using a default 250-foot buffer, potential indirect impacts to BCM could be 0.09 acres on the west side of the Diversion Channel and 0.15 acres associated with development of the RS-20 lots on the east side of the Diversion Channel.

Activities resulting in damage to individual plants or populations of BCM would be potentially significant impacts under CEQA unless mitigated to: (1) avoid a net loss of occupied habitat, or (2) provide a 19:1 ratio of preserved occupied habitat relative to the occupied habitat that would be directly impacted by the project and a 5:1 ratio of the same for indirect impacts. The applicant proposes to include the 15-acre Doe Mill-Schmidbauer Meadowfoam Preserve

(discussed on page IV.D-2, above) as part of the long-term management plan for the 108-acre Stonegate preserve, providing an active management regime for both preserve areas. The applicant also proposes to conduct on-site restoration BCM habitat within the combined preserve areas using seed stock from occupied BCM habitat impacted by the project. On-site restoration of BCM habitat is preferable to off-site preservation because it avoids an overall reduction in occupied habitat for the species and increases the potential long-term success of healthy BCM populations at the site.

Any restoration efforts would have to be carefully crafted and negotiated with State and Federal Trustee agencies (CDFW and USFWS). It is the intent of *Mitigation Measure BIO-2A*, below, to effectively mitigate for impacts to BCM habitat while also providing flexibility for on-site restoration and/or creation efforts. Implementation of *Mitigation Measure BIO-2A* would reduce impacts to special-status plant species through compensatory mitigation to a less than significant level.

Mitigation Measure BIO-2A:

Prior to the issuance of a grading permit, the Applicant shall consult with both the USFWS and the CDFW to obtain authorization for project implementation and develop appropriate type and amount of compensatory mitigation for project impacts to Butte County meadowfoam (BCM) occupied habitat.

To compensate for project impacts to occupied BCM habitat the Applicant shall:

(1) Preserve and enhance BCM habitat within the on-site preserve areas pursuant to a habitat mitigation and monitoring plan approved by the USFWS and the CDFW at a minimum 1:1 ratio for temporary impacts (1.0 acres enhanced over pre-project conditions for every one acre of temporarily impacted habitat). Enhancement activities will be detailed in the habitat mitigation and monitoring plan and will include vegetation management for non-native, annual grasses. In addition, in areas not previously documented to support BCM, but which consist of the same mapped soils association, BCM habitat will be created through a site-specific restoration plan to mitigate at a 1.5:1 ratio for permanent impacts (1.5 acres created over pre-project conditions for every one acre of permanently impacted habitat). Because successful creation of the microhabitat required by BCM cannot be guaranteed, a performance bond shall be established prior to restoration activities taking place, to purchase BCM credits at an approved mitigation bank at ratios outlined in (2). Creation of BCM habitat will consist of scraping topsoil to mimic the soil depth suitable for BCM (~4-6 inch depth of soil over bedrock) adjacent to swale habitat. Topsoil from known locations of BCM in the impact area will be salvaged and transplanted to these created areas and observed for three years. Performance will be met only when density of BCM in created habitat matches reference population density in preserved habitat. The success of the on-site preserve for BCM habitat (enhancement and creation) shall be documented with before-and-after protocol-level, floristic, rare plant surveys that compare pre-project baseline BCM acreage and stem counts to post-restoration BCM acreage and stem counts. The plan shall

detail methods, locations, and goals for re-locating soils from impacted areas to the preserve, and include contingency measures that address the potential that creation efforts could fall short of stated goals (including a performance bond posted by the Applicant during the restoration period matching the funding required to purchase credits at a 19:1 ratio); or,

(2) Preserve habitat for BCM at a 19:1 ratio (19 acres of preservation for every one acre impacted) for direct impacts and at a 5:1 ratio (five acres of preservation for every one acre impacted) for indirect impacts. However, final habitat acreages, mitigation ratios, and other project-specific compensatory requirements for direct and indirect impacts shall be finalized during consultation between USFWS and the Corps as part of the Section 404 permitting process.This compensatory mitigation may include one or a combination of the following options:

- Purchase BCM credits from an approved mitigation bank within the service area. The actual fee paid shall be that in effect at the time of payment.
- Preserve and enhance BCM habitat at an existing site where long-term protections encumbering the property are currently not in place. This would likely include habitat within the 108 acre on-site open space preserve as well as the adjacent 14.76 acre Doe Mill-Schmidbauer Preserve (APN 018-510-002), which was dedicated to the City by the owner of the Stonegate project in 1989 in anticipation of mitigation requirements for a previous project that did not move forward at that time. This option would require the preparation of a long-term management plan, subject to approval by USFWS and the City, prior to the start of construction, along with an endowment for the long-term management of the property and a USFWS-approved conservation easement to ensure that the population of BCM is protected in perpetuity.

Final habitat acreages, mitigation ratios, and other project-specific compensatory requirements shall be determined through consultation between USFWS and the Corps as part of the Section 404 permitting process. The exact cost to purchase preservation credits for project-related impacts shall be determined at the time of purchase. Mitigation credits shall be purchased and/or a conservation area and management plan shall be established prior to any grading or other ground-disturbing activities on the project site. Consultation shall also include requesting a consistency determination from CDFW concerning Butte County meadowfoam.

Impact BIO-2B: Invasive Weeds from Project Development

Clearing, grading and other site disturbance associated with developing the project near the on-site preserve could introduce invasive species that then migrate into the preserve and degrade the value of habitat for existing and potential special-status plants and animals. Implementation of *Mitigation Measure BIO-2B* would require the Applicant to establish a weed control program prior to construction, thereby minimizing the potential for habitat degradation as a result of construction activities and reducing this impact to a less-than-significant level.

Mitigation Measure BIO-2B:

Prior to the issuance of a grading permit, the Applicant shall prepare a Weed Control Plan for review and approval by the City. Prior to the start of construction activities, the Applicant shall implement a comprehensive, adaptive Weed Control Plan for pre-construction and construction invasive weed abatement. The long-term Weed Control Plan, shall include, but is not limited to, the following:

- A pre-construction weed inventory shall be conducted by surveying all areas subject to ground-disturbing activity, including but not limited, to staging areas, access roads, and areas subject to grading.
- Weed populations that (1) are rated High or Moderate for negative ecological impact in the California Invasive Plant Database (Cal-IPC) and (2) aid and promote the spread of wildfires (such as cheatgrass, Saharan mustard, and medusa head) shall be mapped and described according to density and area covered.
- In areas subject to ground disturbance, weed infestations shall be treated prior to construction according to control methods and practices for invasive weed populations.
- The Weed Control Plan shall be updated and utilized for eradication and monitoring post-construction.
- Weed control treatments shall include all legally permitted herbicide, manual, and mechanical methods. The application of herbicides shall be in compliance with all state and federal laws and regulations under the prescription of a Pest Control Advisor and implemented by a Licensed Qualified Applicator.
- The timing of weed control treatment shall be determined for each plant species in consultation with USFWS with the goal of controlling populations before they start producing seeds.
- Surveying and monitoring of the identified and treated populations shall be require at all sites impacted by construction and shall occur annually for years one to five and bi-annually for years six to ten.

- During project preconstruction and construction, vehicles and all equipment shall be washed (including wheels, undercarriages, and bumpers) prior to commencing work in off road areas.

Impact BIO-3: Have a Substantial Adverse Effect on any Riparian Habitat or Other Sensitive Natural Community

Impact BIO-3A: Disturbance to Riparian Habitat

Riparian habitat associated with the Butte Creek Diversion Channel and associated tributaries is present on the site, and portions of the Mixed Riparian Woodland are located within the project footprint. The proposed utility crossing from Street A to the RS-20 lots on the easterly side of the project would directly impact approximately 0.02 acre of Mixed Riparian Woodland. The proposed project would also indirectly impact approximately 1.08 acre of Mixed Riparian Woodland as well as 0.56 acre of Riparian Oak Woodland. As stated in the Regulatory Setting above, the City of Chico municipal code requires a minimum 25-foot setback from the top of creek banks to development and associated above-ground infrastructure as a part of project review. The vast majority of the proposed project would be located outside of the 25-foot setback from the top of creek banks. Minimizing areas of disturbance and restoring the 0.02 acre of affected Mixed Riparian Woodland through implementation of *Mitigation Measures BIO-3A* and *BIO-4* would reduce these potentially significant impacts to less than significant levels.

Mitigation Measure BIO-3A:

Prior to issuance of a grading permit for the RS-20 lots located east of the Diversion Channel, the Applicant shall implement the following measures to reduce impacts to riparian habitat:

The Applicant shall restore riparian habitat at a minimum ratio of 1:1 for temporary loss and 3:1 for permanent loss. For the current anticipated temporary loss of riparian habitat, the restoration amount shall be 0.02 acre. Restoration shall occur within the temporarily disturbed area in order to return the temporary impact area to pre-construction conditions. In addition, silt fencing or other appropriate erosion control BMPs shall be installed down grade of construction activities to minimize the transport of sediments. Other water quality protection measures shall be implemented to reduce impacts to riparian habitat including:

- Prior to construction, the contractor shall be required to prepare an Accidental Spill Prevention and Cleanup Plan. This plan shall include required spill control absorbent material, for use beneath stationary equipment, to be present on-site and available at all times.
- To minimize fluid leaks during operation, refueling, and maintenance of stationary equipment spill control absorbent material shall be in place underneath this equipment at all times to capture potential leaks.

- All stockpiling of construction materials, equipment, and supplies, including storage of chemicals, refueling and maintenance, shall occur outside the Butte Creek diversion channel. No equipment shall be washed where runoff could enter the channel.
- All refueling and maintenance of equipment, other than stationary equipment, shall occur outside the channel's top-of-bank. Receptacles containing fuel, oil, or any other substance that may adversely affect aquatic resources shall be stored outside of the channel. Any hazardous chemical spills shall be cleaned immediately.

Additionally, the Applicant shall implement MM-BIO 4 below to reduce impacts to wetlands and waters and riparian habitats.

Impact BIO-3B: Disturbance to Other Sensitive Natural Communities

As described in Table IV.D-1 above, in addition to the riparian communities discussed in Impact BIO-3A above, the project site contains nine other sensitive natural communities including depressional seasonal wetlands, vernal pools, perennial marsh, riverine seasonal wetlands, ephemeral, intermittent, and perennial drainages, ditches/canals, and excavated pits. Proposed grading on the site would occur largely within non-sensitive biological communities including the development of 180.48 acres of non-native annual grassland and 15.35 acres of developed land. However, in addition to impacts to 0.02 acre of Mixed Riparian Woodland, the proposed project would directly impact a total of 9.35 acres of wetlands and waters on the project site. If the City declines the proposed one-acre Land Transfer (see Project Description page III-19), then an additional 0.16 acres of wetlands would be impacted by the project. Table IV.D-3 through IV.D-6 below show the potential impacts of the proposed project within the Total Study Area on biological communities and specific aquatic resources.

Table IV.D-3. Direct Impacts to Biological Communities within the Study Area

Resources	Impacted (acres)	Preserved (acres)	**Total (acres)**
Developed	15.35	6.77	**22.12**
Non-native Annual Grassland	180.48	52.45	**232.93**
Wetlands and Waters	9.35*	6.39	**15.74**
Mixed Riparian Woodland	0.02	0	**0.02**
Study Area & Addenda Areas	205.2	65.61	**270.81**

Table IV.D-4. Indirect Impacts to Biological Communities within the Study Area

Resources	**Total (acres)**
Developed	**3.88**
Mixed Riparian Woodland	**1.08**
Non-native Annual Grassland	**36.22**
Riparian Oak Woodland	**0.56**
Wetlands and Waters	**4.51**
Study Area & Addenda Areas	**42.52**

Table IV.D-5. Direct Impacts to Aquatic Resources

Resources	Impacted (acres)	Preserved (acres)	**Total (acres)**
Depressional Wetlands			
Seasonal Wetland	3.07	0.64	**3.71**
Perennial Marsh	0	0.36	**0.36**
Vernal Pool	2.93	0.50	**3.43**
Riverine Wetlands			
Seasonal Wetland	2.96	0.55	**3.51**
Other Aquatic Resources			
Ephemeral Drainage	0	0.30	**0.30**
Intermittent Drainage	0.01	0.05	**0.06**
Perennial Drainage	0.01	3.98	**3.99**
Ditch/Canal	0.30	<0.01	**0.31**
Excavated Pit	0.07	0	**0.07**
Study Area	9.35	10.84	**15.74**

Table IV.D-6. Indirect Impacts to Aquatic Resources

Resources	**Total (acres)**
Depressional Wetlands	
Seasonal Wetland	**0.31**
Perennial Marsh	**0.88**
Vernal Pool	**0.40**
Riverine Wetlands	
Seasonal Wetland	**1.22**
Other Aquatic Resources	
Intermittent Drainage	**0.48**
Perennial Drainage	**1.13**
Ditch/Canal	**0.09**
Study Area	**4.51**

Direct impacts to 9.37 acres of sensitive natural communities within the project site, including 0.02 acres of Mixed Riparian Woodland and 9.35 acres of wetlands and waters, would be considered a potentially impact under CEQA. Indirect impacts to 6.15 acres of sensitive natural communities within the project site, including 1.64 acres of Mixed Riparian Woodland and 4.51 acres of wetlands and waters, would also be considered a potentially impact under CEQA.

Implementation of *Mitigation Measure BIO-3A* and *MM-BIO-4* would reduce impacts to sensitive natural communities that contain Mixed Riparian Woodland, wetlands and waters to a level of less than significant.

Impact BIO-4: Have a Substantial Adverse Effect on Federally Protected Wetlands and Waters

As described in Table IV.D-5 above, the proposed project would directly impact approximately 9.35 acres of wetlands and indirectly impact 4.51 acres of waters subject to Corps jurisdiction under Section 404 of the CWA. If the City declines the proposed one-acre Land Transfer (see Project Description page III-19), then an additional 0.16 acres of wetlands would be impacted by the project. Potential impacts to wetlands would include direct modifications to scattered seasonal wetlands and unvegetated drainages to accommodate improvements, and indirect changes associated with the increased potential for erosion and water quality degradation, and alteration of the hydrology through increase in impervious surfaces within the project site. Soils exposed during grading and construction would contribute to increased sediment loads if adequate erosion control measures are not implemented. Increased urban pollutants, such as petroleum products from automobiles, and fertilizers, herbicides, and pesticides associated with the suburban development may contribute to long-term degradation of water quality. These indirect impacts and appropriate mitigation are discussed in detail in Section IV.I, Hydrology and Water Quality, of this Draft EIR.

Project activities resulting in direct impacts to 9.35 acres wetlands and indirectly impact 4.51 acres of jurisdictional features would result in a potentially significant impact. If the City declines the proposed one-acre Land Transfer (see Project Description page III-19), then an additional 0.16 acres of wetlands would be impacted by the project. Modifications to the wetlands and other waters on the site would be subject to jurisdictional review and approval by the Corps, RWQCB, and CDFW. The City recognizes that subsequent permitting processes with resource agencies could result in additional mitigation beyond that required by the City in the CEQA process. Any additional mitigation required by the agencies would be incorporated as conditions of their permit authorization, but could provide additional measures addressing wetland resources. *Mitigation Measure BIO-4* would reduce impacts to jurisdictional wetlands and waters through compensatory mitigation to a less than significant level.

Mitigation Measure BIO-4:

Prior to issuance of any City permits for construction, grading, or other site-disturbing activities, the Applicant shall provide proof to the Chico Community Development Department that all necessary authorizations from the USACE and RWQCB for the discharge of dredged or fill material into the waters of the U.S. identified on the project site have been obtained.

Prior to any work affecting the bed or bank of the Butte Creek Diversion Channel, tributaries, or associated riparian areas, the Applicant shall obtain a Lake or Streambed Alteration (LSA) Agreement from the CFW, as required under Section 1602 of the Fish and Game Code. The LSA Agreement shall detail the authorized activities affecting the Butte Creek Diversion Channel, tributaries, and associated riparian areas, and provide specific terms and conditions necessary to protect fish and wildlife resources in the project site. The Applicant shall comply with all requirements of the LSA agreement, including any compensatory mitigation such as replacement of impacted trees. A copy of the fully executed LSA Agreement shall be submitted to the Chico Community Development Department prior to initiation of any work impacting riparian habitats on the project site.

To mitigate for the permanent loss of 9.35 acres and temporal impact to 4.51 acres of aquatic resources resulting from the project, the Applicant shall provide a USACE-approved compensatory mitigation plan for impacts to waters of the U.S. The plan shall provide for replacement of waters of the U.S. at a 3:1 ratio (three acres replaced for every one acre removed), or as required by the USACE. The plan shall describe the specific methods for replacement of impacted waters on site, and provide a monitoring plan, including a reporting schedule and success criteria over a specific amount of time. In the event the USACE determines that compensatory mitigation for impacts to waters of the U.S. cannot be fully accomplished on site, the Applicant may purchase credits at a USACE-approved mitigation bank whose service area includes the project site. The type and amount of credits shall be determined in coordination with the USACE. Proof of the purchase of any required mitigation bank credits shall be provided to the Chico Community Development Department prior to initiation of any work impacting waters of the U.S. on the project site.

Impact BIO-5: Disturbance of Movement, Migration Corridors, and Nursery Sites

The Butte Creek Diversion Channel and its tributaries traverse the eastern portion of the project site from north to south. In addition, a series of vernal pools and seasonal wetlands are interspersed and connected by seasonal wetland swales generally running from north to south throughout the project site. The diversion channel and seasonal wetland swales provide movement corridors for common and special-status species as described above. In addition, the areas could provide habitat for other wildlife species, such as egrets and other waterfowl. The riparian habitat along the Butte Creek Diversion channel and its tributaries provide important shelter, nesting and foraging habitat for both common and special-status wildlife species in the region. Proposed project activities would preserve the Butte Creek Diversion channel, associated tributaries and riparian habitats along the eastern portion of the project site.

Approximately 9.35 acres of vernal pool and seasonal wetland habitats located centrally in the project area would be directly impacted by project activities. The project would further indirectly impact 4.51 acres of vernal pool and seasonal wetland habitats. These aquatic features act as nurseries to special-status species including the western spadefoot and vernal pool crustaceans. The loss of connected vernal pool and seasonal wetland habitat within the project site would represent a potentially significant impact under CEQA. As described above, *Mitigation Measure BIO-4* would result in the creation, preservation, or restoration of seasonal wetland habitats. Therefore, implementation of *Mitigation Measure BIO-4* would also reduce impacts to loss of these nursery areas to a less than significant level.

Impact BIO-6: Conflict with Local Policies or Ordinances Protecting Biological Resources

As described in the in the Regulatory Setting above, the proposed project is subject to the City of Chico Municipal Code which includes the City's requirements for tree removal and for riparian setbacks. The proposed project does not include the removal of any trees and therefore would not conflict with tree removal permit requirements. The City of Chico municipal code also requires a minimum 25-foot setback from the top of creek banks to development and associated above-ground infrastructure as a part of project review. The vast majority of the proposed project would be located outside of the 25-foot setback from the top of creek banks. Utilities to serve the RS-20 lots would run underneath the Butte Creek Diversion Channel, however these would utilize directional boring and would not represent any above-ground infrastructure within the creek setback. Therefore, the proposed project would have a less than significant impact related to local policies and ordinances protecting biological resources.

Impact BIO-7: Conflict with the Provisions of an Adopted Habitat Conservation Plan, Natural Community Conservation Plan, or Other Approved Local, Regional, or State Habitat Conservation Plan

As stated above in the Regulatory Setting, the Butte County Association of Governments initiated development of the Butte Regional Conservation Plan (BRCP) in 2007, which has not yet been formally approved or implemented. As currently being revised, the BRCP is expected to exclude the Stonegate project from the BRCP permit area, which will eliminate any conflict between the BRCP and the project, and will allow the project to move forward separately via the existing state and federal permitting processes as anticipated in the foregoing analysis. As such, the proposed project would not conflict with any adopted or approved plans and no impact would occur.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

All project impacts related to biological resources are ***less-than-significant*** after implementation of *Mitigation Measures BIO-1* through *BIO-4.*