
IV. ENVIRONMENTAL IMPACT ANALYSIS

E. BIOLOGICAL RESOURCES

INTRODUCTION

This section of the Revised Draft EIR provides a description of the biological and wetland resources within the City of Healdsburg, information on regulations that serve to protect sensitive resources within the Project area, proposed General Plan policies relevant to biological resources, and an analysis of potential impacts related to biology resulting from implementation of the proposed General Plan. The 2007 California Natural Diversity Data Base (CNDDDB) and the California Native Plant Society (CNPS) on-line electronic Inventory of Rare and Endangered Plants of California were reviewed for known and potential occurrences of special status plants and animals in the Healdsburg area. Information used to prepare this section was taken from the *Healdsburg 2030 General Plan Background Report* –(January 2009 Draft), *Opportunities and Constraints Analysis of Specific Plan Area A and C, Saggio Hills EIR* (2008), and *A Field Guide to Lake and Streambed Alteration Agreements*.

ENVIRONMENTAL SETTING

Physical Setting

Regional and Local Setting

The city is located within Section 20, of Township 9 north, Range 9 west, of the Healdsburg, California U.S. Geologic Survey (USGS) 7.5-minute topographic quadrangle map. The city lies at the intersection of three rich agricultural valleys – Russian River Valley, Dry Creek Valley and Alexander Valley – and is elevated between 100 and 430 feet above sea level. East and west beyond the agricultural lands rise subsystems of the Coastal Mountain Range. Wet winters and dry summers characterize the Healdsburg region’s inland Mediterranean-type climate. Rainfall totals can vary widely over a short distance; windward mountain areas west of the city can receive more than 60 inches of rain, while shadow areas, such as the city, receive approximately 40 inches annually.

Habitats

The County is part of the “North Coast and Montane” Ecological Province as defined in CALVEG, a classification system of California vegetation developed cooperatively by the U.S. Forest Service, the U.S. Bureau of Land Management, and the California Department of Fish and Game (CDFG).

Much of the Planning Area within the Healdsburg city limits has been urbanized. As a result, natural habitat conditions have been altered and consist of buildings, paved areas, and landscaping with mostly non-native ornamental trees, shrubs, lawn and other ground cover vegetation. Individual and groves of native trees and pockets of relatively natural habitat are present in some areas within the city, particularly in the lower density and hillier areas on the north and east sides, such as east of Tayman Park, in the vicinity of Fitch Mountain, and in parts of Sub-Area A (see Figure III-3). The largest areas of relatively

undisturbed habitat in the Planning Area remain outside of city limits, such as in Sub-Areas B and C, and in the vicinity of Fitch Mountain. The Planning Area also contains a limited amount of land still used for agriculture, as well as various vacant lands comprised mostly of non-native grassland.

While the Planning Area is representative of regional biological resources, the diversity of habitats in the remaining undeveloped areas makes this area unique. At least nine distinct habitat types and natural communities exist within the Planning Area. These include: 1) riparian corridors, 2) pond or river (open water communities), 3) serpentine chaparral, 4) serpentine bunchgrass 5) perennial bunchgrass, 6) oak woodland/forest, 7) mixed evergreen forest, 8) seasonal wetland, and 9) non-native grassland. This diversity of habitats and natural communities in relatively close proximity results in a large number of plant and wildlife species being present.

The following is a description of these habitats and where they are generally found in the Planning Area:

Riparian Corridors

Riparian habitat consists of mostly deciduous trees such as willow, cottonwood, alder and Oregon ash as well as evergreen trees such as California bay laurel along the Russian River, Foss Creek and Norton Slough. Valley and coast live oak can also occur as part of the riparian habitat in more upland portions of these drainages and along tributary creeks. A portion of Foss Creek is underground beneath buildings and parking areas in the vicinity of downtown Healdsburg. Additionally, many of the smaller creeks that are tributaries to Foss Creek were routed underground into subterranean storm drains during the city's earlier period of development.

Pond/River

Pond and river open water communities include Fox Pond in Sub-Area C, and the Russian River itself. The Sonoma County Agricultural Preservation and Open Space District has recently acquired the area around Fox Pond, ensuring that it will be protected as permanent open space.

Serpentine Chaparral

Serpentine chaparral habitat consists of low, dense vegetation of evergreen shrubs and some small trees such as bay and oak. This habitat is limited to a long ridge in Sub-Area B extending into Sub-Area A. This habitat is restricted to areas with serpentine soils, derived from gray or bluish green parent rock that is rich in heavy metals. Serpentine soils are hostile to most plant species that are not adapted to the metal concentrations. As such, it provides a favorable sanctuary for many native species that are otherwise uncommon in the region. Much of this ridge is now protected as permanent open space under a conservation easement held by the Sonoma County Agricultural Preservation and Open Space District.

Serpentine Bunchgrass

Like serpentine chaparral, this habitat is restricted to areas with serpentine soils, but is characterized by native bunchgrasses and lacks trees and brush found in the former. Small, scattered areas of serpentine

bunchgrass grassland are found in Sub-Areas B and C. The largest of these areas is found on a linear shaped mound in Sub-Area C just east of the city's north detention basin.

Perennial Bunchgrass

This type of grassland is comprised of mostly native species. Very limited areas of perennial bunchgrass habitat can be found in Sub-Areas A, B and C, in places where soil and exposure conditions are present to favor the dominance of native bunchgrass cover rather than the invasive non-native annual grasses and non-grass herbs more typically found throughout the region. These areas are biologically important because of their relative rarity and because they provide examples of native grassland that existed in this area before non-native grass species took over with European settlement.

Oak Woodland/Forest

Oak woodlands and forest are found in Sub-Areas B and C, and in the vicinity of Fitch Mountain. There are also a few remaining pockets of oak woodland within city limits, notably in Sub-Area A, in Tayman Park, and on the west foothills of Fitch Mountain. The predominant tree is coast live oak (*Quercus agrifolia*), although white and black oak are also found. Sub-Area C includes significant acreage of oak savannah or woodland dominated by Blue Oak (*Quercus douglasii*) in the northeastern portion of this area, a very slow-growing species that is typically found on drier, warmer sites than the coast live oak.

Mixed Evergreen Forest

Mixed evergreen forest, consisting of trees species such as bay, madrone, and various oaks, is found mostly on north and east facing slopes in Sub-Areas A, B and C and in the vicinity of Fitch Mountain. In some locations on the north side of Fitch Mountain on lower slopes and in alluvial soil pockets along the Russian River canyon are also found scattered small groves of redwoods.

Seasonal Wetland

Seasonal wetlands are generally low-lying areas that are saturated or inundated with shallow water for periods of time during the rainy season. In the Planning Area, these include basins within city detention basins, an area in the southwest portion of Sub-Area C, and more limited acreages found in Sub-Area B, as well as within the banks of various seasonal drainages and creeks. If such areas meet certain vegetation, soil and hydrology conditions, they are subject to jurisdiction by the U.S. Army Corps of Engineers (Corps), in which permits may be required prior to filling or excavation.

Non-Native Annual Grassland

Non-native annual grassland, comprised mostly of non-native annual grass and non-grass herbaceous species, is found throughout the Planning Area, both in developed areas, such as vacant lots, and in undeveloped areas, where it often includes open meadows, lands left over from previous agricultural use, and as an understory in oak savannahs and other wooded areas.

Sensitive Natural Communities/Wetlands

Sensitive natural communities within the Planning Area include serpentine bunchgrass grassland, serpentine chaparral, oak woodlands, riparian corridors, pond or river, seasonal wetlands, and perennial bunchgrass grassland. Serpentine areas are considered to be sensitive because of their potential to support a number of special status plant species. Oak woodland habitats provided food and shelter for a variety of birds and other animals and these habitats have been impacted by development within the state and region.

The CNDDDB lists blue oak woodland as “threatened” and coast live oak and valley oak woodlands as “communities of concern.” Riparian corridors; riverine riparian habitats; pond and river communities, including the Russian River, Foss Creek and all other creeks and drainages; and seasonal wetlands are by definition sensitive communities because of their value for wildlife habitat, as well as providing other important functions and values such as ground water recharge, sediment and toxicant reduction, flood flow alteration, and nutrient removal and transformation. The Russian River, Foss Creek and all creeks and drainages, as well as seasonal wetlands, are also considered to be “waters of the United States” as well as being waters of the State and are subject to jurisdiction by the Corps, the California Regional Water Quality Control Board (RWQCB), and CDFG. Perennial bunchgrass grassland is a sensitive natural community because this community type has a very limited distribution within the state as most grasslands have been converted to non-native annual grasslands as a result of the invasion of Mediterranean annual grass species, primarily from cattle grazing.

Special Status Species

Special-status species are plants and animals that are legally protected under the California Endangered Species Act (CESA) and/or Federal Endangered Species Acts (FESA) or other regulations, as well as other species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitat. As discussed below, under Regulatory Setting, species with legal protection under the Federal and State Endangered Species Acts often represent major constraints to development; particularly when they are wide ranging or highly sensitive to habitat disturbance and where proposed development would result in a “take” of these species. “Take” as defined by the FESA means to “harass, harm, pursue, hunt, shoot, kill, trap, capture, or collect” a threatened or endangered species. “Harm” is further defined by the U.S. Fish & Wildlife Service (USFWS) to include the killing or harming of wildlife due to significant obstruction of essential behavior patterns (i.e. breeding, feeding, or sheltering) through significant habitat modifications or degradation. The CDFG also considers the loss of listed species habitat as “take”, although this policy lacks statutory authority and case law support under the CESA.

A search of the CNDDDB and the CNPS on-line electronic Inventory of Rare and Endangered Plants of California¹ for the Healdsburg, Jintown, Geyserville, and Guerneville USGS quads was conducted to develop a list of special status plants and wildlife that have the potential to occur within the Planning Area (see Table IV.E-1 and Table IV.E-2).

As shown in Table IV.E-1, there are a total of 30 special-status plants that may occur in the Planning Area based on the presence of potential habitat. Habitats that support special status plants that occur in the Planning Area include freshwater marshes and swamps, riparian woodland and scrub, cismontane or oak woodland, broadleaved upland or mixed evergreen forest, serpentine and non-serpentine chaparral, perennial and annual grasslands, and seasonal wetlands (vernal pools). Nine of the species on the list are either restricted to or are often associated with serpentine chaparral and serpentine barrens and another nine of the species are associated with wetland type habitats.

Two special status plant species are known to occur within the Planning Area: Baker's manzanita (*Arctostaphylos bakeri* ssp. *bakeri*), a State-listed rare plant that occurs in broadleaved upland forests and in chaparral, often on serpentine at elevation 75-300 meters; and Mt. Saint Helena morning-glory (*Calystegia collina* ssp. *oxyphylla*), a CNPS List 4 species, or watch list species found in chaparral, lower montane coniferous forest and serpentine grasslands. However, numerous other plants could potentially occur within the Planning Area, based on the presence of potential habitat. Two other plant species have records from the Healdsburg area and are presumed extant within the area. These are narrow-anthered California brodiaea (*Brodiaea californica* var. *leptandra*), which occurs in broadleaved upland forests, chaparral and lower montane coniferous forests; and robust monardella (*Monardella villosa* ssp. *globosa*), which occurs in chaparral and cismontane woodland communities.

Baker's manzanita (*Arctostaphylos bakeri* ssp. *bakeri*), a state-listed rare plant and CNPS List 1B species, was reported to occur on a serpentine ridge in Sub-Area B and south and east of the municipal water reservoir.² More recently Mt. Saint Helena morning-glory (*Calystegia collina* ssp. *oxyphylla*), a CNPS List 4 watch species, was recorded to occur in the Saggio Hills area in the northern portion of the Planning Area. Both of these species are associated with serpentine soils.

As shown in Table IV.E-2, there are a total of 27 special status wildlife species that have been recorded or could potentially occur within the Healdsburg area. Animals that are recorded or have a moderate to high potential to occur within the planning area based on potential habitat are: Cooper's hawk (*Accipiter cooperii*); sharp-shinned hawk (*Accipiter striatus*), ferruginous hawk (*Buteo regalis*), golden eagle (*Aquila chrysaetos*), loggerhead shrike (*Lanius ludovicianus*), osprey (*Pandion haliaetus*), white-tailed kite (*Elanus leucurus*), California yellow warbler (*Dendroica petechia brewsteri*), oak titmouse (*Baeolophus inornatus*), olive-sided flycatcher (*Contopus borealis*), Pacific slope flycatcher (*Epidonax*

¹ California Natural Diversity Data Base and California Native Plant Society Searches, October 2007.

² Earthcraft Planning Services, Opportunities and Constraints Analysis of Specific Plan Area A and C, City of Healdsburg, California, March 1990.

**Table IV.E-1
Potentially-Occurring Special Status Plant Species**

Scientific Name	Common Name	Status			Growth Form, Habitat(s) and Blooming Season	Range, Nearest Occurrence(s) and Potential of Occurrence in Planning Area
		Fed	State	CNPS		
<i>Alopecurus aequalis</i> var. <i>sonomensis</i>	Sonoma alopecurus	Endangered	None	1B	Perennial herb found in freshwater marshes and swamps and riparian scrub. Blooms: May - July	Occurrences in Marin and Sonoma counties. Known from fewer than five native occurrences. Closest recorded occurrence at Guerneville marsh in Guerneville. Potential habitat occurs within the Planning Area. Moderate Potential
<i>Amorpha californica</i> var. <i>napensis</i>	Napa false indigo	None	None	1B	Shrub found in broadleaved upland forest openings, chaparral, and cismontane woodland at elevations of 150-2000 meters. Blooms: April-July	Occurrences in Monterey, Marin, Napa and Sonoma counties. Closest recorded occurrence mapped on road between Guerneville to Monte Rio. Potential habitat occurs within the Planning Area. Moderate Potential
<i>Arctostaphylos bakeri</i> ssp. <i>bakeri</i>	Baker's manzanita	None	Rare	1B	Evergreen shrub found in broadleaved upland forests and chaparral, often on serpentinite at elevation 75-300 meters. Blooms: February-April	Only known from Sonoma County. Recorded to occur in Healdsburg on a serpentine ridge in Area B. Habitat for this species occurs within the Planning Area. High Potential
<i>Arctostaphylos bakeri</i> ssp. <i>sublaevis</i>	The Cedars manzanita	None	Rare	1B	Evergreen shrub found in closed-cone coniferous forests and chaparral in serpentine seeps at elevation 300-760 meters. Blooms: February-May	Only known from Sonoma County. Recorded occurrences in northeast Austin Creek State Recreation Area and at Palmer Creek divide north of Guerneville. Although habitat for this species occurs within the Planning Area, low population numbers indicate it is unlikely to occur. Low Potential

Table IV.E-1 (Continued)
Potentially-Occurring Special Status Plant Species

Scientific Name	Common Name	Status			Growth Form, Habitat(s) and Blooming Season	Range, Nearest Occurrence(s) and Potential of Occurrence in Planning Area
		Fed	State	CNPS		
<i>Arctostaphylos densiflora</i>	Vine Hill manzanita	None	Endangered	1B	Evergreen shrub found in chaparral in acid marine sand soils at elevation 50-120 meters. Blooms: February-April	Only known from Sonoma County. Known from only one occurrence on the Sonoma Barren near Forestville. Suitable habitat not found in the Planning Area. No Potential
<i>Arctostaphylos stanfordiana</i> ssp. <i>decumbens</i>	Rincon manzanita	None	None	1B	Evergreen shrub found in chaparral in rhyolitic soils and cismontane woodland at elevation 75-370 meters. Blooms: February-April	Only known from Sonoma County. Known from fewer than ten occurrences. Suitable habitat not found in the Planning Area. No Potential
<i>Blennosperma bakeri</i>	Sonoma sunshine	FE	Endangered	1B	Annual herb found in mesic valley and foothill grassland and vernal pools at elevation 10 to 110 meters. Blooms: March-May	Known only from Laguna de Santa Rosa and Sonoma area. Although species is present in surrounding area, its low rather isolated population means it is unlikely to occur within the Planning Area. Low potential
<i>Brodiaea californica</i> var. <i>leptandra</i>	Narrow-anthered California brodiaea	Species of Concern	None	1B	Perennial bulb found often on serpentine soils in upland forests, chaparral, and lower montane coniferous forest at elevations between 110-915 meters. Blooms: May-July	Occurrences in Sonoma, Napa and Lake counties. Closest known occurrence two miles southeast of Healdsburg. Suitable habitat for this species occurs within the Planning Area. High Potential

Table IV.E-1 (Continued)
Potentially-Occurring Special Status Plant Species

Scientific Name	Common Name	Status			Growth Form, Habitat(s) and Blooming Season	Range, Nearest Occurrence(s) and Potential of Occurrence in Planning Area
		Fed	State	CNPS		
<i>Calystegia collina</i> ssp. <i>oxyphylla</i>	Mt. Saint Helena morning-glory	None	None	4	Perennial rhizomatous herb found in chaparral, lower montane coniferous forest, valley and foothill grassland on serpentinite at elevation 305-1010 meters. Blooms: April-June	Occurrences in Sonoma, Lake and Mendocino counties. Known to occur on the Saggio Hills project site within the Planning Area. High Potential
<i>Carex comosa</i>	Bristly sedge	None	None	2	Perennial rhizomatous herb found in coastal prairie, marshes and swamps (lake margins), valley and foothill grassland at elevation 0-425 meters. Blooms: May-September	Occurrences in Sonoma and other Bay Area counties as well as Idaho, Oregon and Washington. Closest known occurrence from the Russian River near Guerneville. Moderate Potential
<i>Ceanothus confusus</i>	Rincon Ridge ceanothus	None	None	1B	Evergreen shrub found in closed-cone coniferous forest, chaparral, cismontane woodland on volcanic or serpentinite at elevation 75-1065 meters. Blooms: February-April	Occurrences in Sonoma, Lake, Mendocino and Napa counties. Closest known occurrence from west of the Planning Area. Moderate Potential
<i>Ceanothus purpureus</i>	Holly-leaved Ceanothus	Species of Concern	None	1B 2-2-3	Evergreen bush found in chaparral and cismontane woodland on volcanic and rocky substrates at elevations between 120-640 meters. Blooms: February-June	Occurrences at Sonoma, Napa and Solano Counties. Closest known occurrence from Guerneville. Limited habitat in the Planning Area for this species. Low Potential

Table IV.E-1 (Continued)
Potentially-Occurring Special Status Plant Species

Scientific Name	Common Name	Status			Growth Form, Habitat(s) and Blooming Season	Range, Nearest Occurrence(s) and Potential of Occurrence in Planning Area
		Fed	State	CNPS		
<i>Cordylanthus tenuis</i> ssp. <i>capillaris</i>	Pennel's bird's-beak	Endangered	Rare	1B	Annual hemiparasitic herb found in closed-cone coniferous forest, chaparral on serpentinite at elevation 45-305 meters. Blooms: June-September	Known from fewer than five occurrences in Sonoma County. Closest known occurrence from Twin Valley Ranch at Porter Creek. Habitat for this species occurs within the Planning Area. Moderate Potential
<i>Cryptantha clevelandii</i> var. <i>dissita</i>	Serpentine cryptantha	None	None	1B	Annual herb found in serpentine chaparral at elevation 395-580 meters. Blooms: April-June	Known from Sonoma, Lake and Napa Counties. Closest known occurrence from north-northeast of Healdsburg. Habitat for this species occurs within the Planning Area. Moderate Potential
<i>Downingia pusilla</i>	Dwarf Downingia	None	None	2	Annual herb found in vernal pools and other wet sites in valley and foothill grasslands Blooms: March - May	Known to occur within Inner North Coast Ranges, Southern Sacramento Valley, northern and central San Joaquin Valley and San Francisco Bay. Closest known occurrence from Windsor. Habitat for this species occurs within the Planning Area. Moderate Potential
<i>Erigeron serpentinus</i>	Serpentine daisy	None	None	1B	Perennial herb found in chaparral in serpentine and in seeps at elevation 60-670 meters. Blooms: May-August	Known only from The Cedars and along Porter Creek in Sonoma County. Highly specific habitat requirements of this species mean it is unlikely to occur within the Planning Area. Low potential

Table IV.E-1 (Continued)
Potentially-Occurring Special Status Plant Species

Scientific Name	Common Name	Status			Growth Form, Habitat(s) and Blooming Season	Range, Nearest Occurrence(s) and Potential of Occurrence in Planning Area
		Fed	State	CNPS		
<i>Fritillaria liliacea</i>	Fragrant fritillary	Species of Concern	None	1B	Perennial herb found in cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland, often on serpentine soils at elevation 3-410 meters. Blooms: February-April	Occurs in several counties including Sonoma and Marin. Closest known occurrence from Guerneville USGS quadrangle. Habitat for this species occurs within the Planning Area. Moderate Potential
<i>Hemizonia congesta</i> ssp. <i>Leucocephala</i>	Hayfield tarplant	None	None	3	Annual herb found in coastal scrub and valley and foothill grassland at elevation 25-365 meters. Blooms: April-October	Known from Sonoma, Marin and Mendocino counties. Habitat for this species occurs within the Planning Area. Moderate Potential
<i>Horkelia tenuiloba</i>	Thin-lobed horkelia	None	None	1B	Perennial herb found in broadleaved upland forest and chaparral in mesic openings and in sandy soils at elevation 50-500 meters. Blooms: May-July	Occurs in Sonoma, Marin and Mendocino counties. Historical occurrences need field surveys. Closest known occurrence from Anderson Valley on the Geyserville USGS quadrangle. Suitable sandy soils habitat not present in the Planning Area. Low to No Potential
<i>Lasthenia burkei</i>	Burke's goldfields	Endangered	Endangered	1B	Annual herb found in meadows and seeps (mesic), vernal pools, shallow swales, and low depressions in open grasslands at elevation 15 to 600 meters. Blooms: April-June	Occurs in Sonoma, Lake and Mendocino counties. Closest known occurrence from Alexander Valley. Most occurrences in Windsor. Suitable habitat exists onsite and species could occur in the seeps and ephemeral wetlands within the Planning Area. Moderate Potential

Table IV.E-1 (Continued)
Potentially-Occurring Special Status Plant Species

Scientific Name	Common Name	Status			Growth Form, Habitat(s) and Blooming Season	Range, Nearest Occurrence(s) and Potential of Occurrence in Planning Area
		Fed	State	CNPS		
<i>Leptosiphon jepsonii</i>	Jepson's leptosiphon	None	One	1B	Annual herb found in chaparral and cismontane woodland, usually volcanic soils at elevation 100 to 500 meters. Blooms: April-May	Occurs in Sonoma, Lake and Napa counties. Closest known occurrence from Knights Valley on the Jimtown USGS quadrangle. Suitable habitat occurs onsite, but no occurrences within the Planning Area. Moderate to Low Potential
<i>Lessingia arachnoidea</i>	Crystal springs lessingia	None	None	1B	Annual herb found in cismontane woodland, coastal scrub, valley and foothill grassland on serpentine soils at elevation 60 to 200 meters. Blooms: July-October	Sonoma (not verified), and San Mateo Counties. Known only from seven occurrences near Crystal Springs Reservoir in San Mateo County. Low Potential
<i>Limnanthes vinculans</i>	Sebastopol meadowfoam	Endangered	Endangered	1B 2-3-3	Annual herb found in mesic or wet areas in meadows, valley foothill grasslands and vernal pools at elevation 15-305 meters. Blooms: April-May	Endemic to Sonoma County. Closest known occurrence from Sonoma County Airport in Windsor. Could possibly occur in ephemeral wetlands of the Planning Area. Moderate Potential
<i>Microseris paludosa</i>	Marsh microseris	None	None	1B	Perennial herb found in closed-cone coniferous forest, cismontane woodland, coastal scrub and valley and foothill grassland at elevation 5-300 meters. Blooms: April-June	Found in Sonoma, Mendocino, Monterey, Marin, Santa Cruz, San Francisco, San Luis Obispo, and San Mateo counties. Closest known occurrence from northwest of Windsor. Moderate Potential

Table IV.E-1 (Continued)
Potentially-Occurring Special Status Plant Species

Scientific Name	Common Name	Status			Growth Form, Habitat(s) and Blooming Season	Range, Nearest Occurrence(s) and Potential of Occurrence in Planning Area
		Fed	State	CNPS		
<i>Monardella villosa</i> ssp. <i>globosa</i>	Robust monardella	None	None	1B	Perennial herb found in openings in chaparral and in cismontane woodland and coastal scrub at elevation 185-600 meters. Blooms: June-July	Found in Sonoma, Alameda, Contra Costa, Humboldt, Lake, Mendocino, Napa and San Mateo counties. Known from approximately ten occurrences. Closest known occurrence is a historic occurrence from the city but has not been recently seen. High to Moderate Potential
<i>Navarretia leucocephala</i> ssp. <i>bakeri</i>	Baker's navarretia	Species of Concern	None	1B 2-3-3	Annual herb found in mesic or wet areas in woodlands, meadows, valley foothill grasslands and vernal pools. Blooms: May-July	Found within Sonoma, Marin, Mendocino, Napa, Lake, Colusa, Solano and Tehama Counties. May be more widespread. Closest known occurrence from Windsor. Moderate Potential
<i>Navarretia leucocephala</i> ssp. <i>plienantha</i>	Many-flowered navarretia	Endangered	Endangered	1B	Annual herb found in volcanic ash flow vernal pools at elevation 30-950 meters. Blooms: May-June	Found within both Sonoma and Lake Counties. No suitable habitat exists within the Planning Area for this species. No Potential
<i>Streptanthus brachiatus</i> ssp. <i>hoffmanii</i>	Freed's jewel-flower	None	None	1B	Perennial herb found in chaparral and cismontane woodland on serpentine soils at elevation 490-1220 meters. Blooms: May-July	Found within both Sonoma and Lake counties. Closest known occurrence from Red Hill area north-northeast of the city. Not likely to occur in Planning Area because of elevation. Low to No Potential
<p>Federal; Endangered Species Act of 1973 (as amended) Endangered = Any species, including subspecies, in danger of extinction through all or a significant portion of its range. Threatened = Any species likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. Species about which the USFWS does not have enough information to support a listing as endangered or threatened but which are of concern.</p>						

**Table IV.E-1 (Continued)
Potentially-Occurring Special Status Plant Species**

Scientific Name	Common Name	Status			Growth Form, Habitat(s) and Blooming Season	Range, Nearest Occurrence(s) and Potential of Occurrence in Planning Area
		Fed	State	CNPS		
<p>State; California Endangered Species Act of 1984 (as amended) <i>Endangered</i> = Any native species whose survival and reproduction are in immediate jeopardy from one or more causes. <i>Threatened</i> = Any native species, although not presently threatened with extinction, is likely to become an endangered species within the foreseeable future in the absence of special protection and management efforts of the state. <i>Rare</i> = Any native species, although not presently threatened with extinction, is in such small numbers throughout its range that it may become endangered if its present environment worsens.</p> <p>CNPS (California Native Plant Society); Inventory of Rare and Endangered Plants of California, Special Publication No. 1/ Sixth Edition / August 2001. <i>1B</i> = List 1B – Plants rare, threatened, or endangered in California and elsewhere. <i>2</i> = List 2 – Plants rare, threatened, or endangered in California, but more common elsewhere <i>3</i> = List 3 – Plants about which more information is needed, a review list. <i>4</i> = List 4 – Plants of limited distribution – a watch list.</p> <p>Potential Occurrence on Site: <i>No Potential</i> = Plant communities, soils, or elevations that this is typically associated with this plant do not occur within the Planning Area. <i>Low Potential</i> = Typical plant communities/habitat types associated with this plant are of marginal quality, very limited extent, or at elevations that do not occur within the Planning Area. <i>Moderate Potential</i> = Typical plant communities or habitat types this plant is associated with are common on the site but of marginal quality within the Planning Area. <i>High Potential</i> = Typical plant communities or habitat types this plant is associated with are common within the Planning Area and of high quality and good health.</p>						

**Table IV.E-2
Potentially-Occurring Special Status Wildlife Species**

Scientific Name	Common Name	Status	Habitat Affinities	Potential of Occurrence and Reported Localities in Planning Area
Invertebrates				
<i>Syncaris pacifica</i>	Freshwater Shrimp	FE	Found in streams with 12-36 inches of water, exposed live roots of alders and willows, with undercut banks > 6 inches and overhanging woody debris or stream vegetation.	Possible. Suitable habitat in Foss Creek.
Fish				
<i>Lavinia symmetricus navarroensis</i>	Navarro Roach	CSC	Habitat generalists, found in warm intermittent streams as well as cold, well-aerated streams.	Possible. Suitable habitat present in the Planning Area.
<i>Onchorhynchus kisutch</i>	Coho Salmon - Central California Coast ESU	FT, SE	Occurs from Punta Gorda, in northern California, to the San Lorenzo River, in Santa Cruz County, and includes coho salmon populations from several tributaries of San Francisco Bay (e.g., Corte Madera and Mill Valley Creek).	Known. Found in Russian River at HWY 101, Healdsburg (CNDDDB 2007).
<i>Hysteroecarpus traskii pomo</i>	Russian River Tule Perch	CSC	Low gradient freshwater streams of the Russian River with emergent vegetation or overhanging banks.	Known. Found in Russian River at HWY 101, Healdsburg (CNDDDB 2007)
Amphibians				
<i>Rana aurora aurora</i>	Northern Red-legged Frog	CSC	Range occurs from northern Sonoma County to British Columbia. Inhabit perennial and ephemeral streams with quiet waters and dense emergent vegetation.	Unlikely. No records of occurrence in CNDDDB.
<i>Rana boylei</i>	Foothill Yellow-legged Frog	SC, CSC	Inhabits permanent, flowing stream courses with a cobble substrate and a mixture of open canopy riparian vegetation.	Unlikely. No records of occurrence in CNDDDB and habitat is lacking in the Planning Area.
Reptiles				
<i>Actinemys marmorata marmorata</i>	Northwestern Pond Turtle	SC, CSC	Associated with permanent or nearly permanent water in a variety of habitats. Requires basking sites. Nests may be found up to 0.5 km from water.	High. Known to occur in the Russian River between Alexander Valley Road and Healdsburg Dam, along U.S. Highway 101.

Table IV.E-2 (Continued)
Potentially-Occurring Special Status Wildlife Species

Scientific Name	Common Name	Status	Habitat Affinities	Potential of Occurrence and Reported Localities in Planning Area
<i>Ctinemys marmorata</i>	Western Pond Turtle	SC, CSC	Prefers permanent, slow-moving creeks, streams, ponds, rivers, marshes and irrigation ditches with basking sites and a vegetated shoreline. Requires upland sites for egg-laying.	High. Found in Foss Creek Grant Road (CNDDDB 2007).
Birds				
<i>Accipiter cooperi</i>	Cooper's Hawk	MB, CSC	Nests primarily in deciduous riparian forests. May also occupy dense canopied forests from gray pine-oak woodland to ponderosa pine. Forages in open woodlands.	Possible. Suitable habitat is present in the Planning Area.
<i>Accipiter striatus</i>	Sharp-shinned Hawk	MB, CSC	Dense canopy pine or mixed conifer forest and riparian habitats. Water within one mile required.	Possible. Suitable habitat is present in the Planning Area.
<i>Ardea herodias</i>	Great Blue Heron	MB, CSC	Nests colonially in large trees near water. Closest known nesting site is 4 miles east of Healdsburg.	Unlikely. Suitable habitat either marginal or absent.
<i>Baeolophus inornatus</i>	Oak Titmouse	MB, CSC	Breeds in cavities in oak woodlands, gleaning insects from the bark. Occurs from southern Oregon to northern Mexico along the Central Valley and xeric coastal foothills.	Possible. Suitable habitat is present in the Planning Area.
<i>Contopus borealis</i>	Olive-sided Flycatcher	MB, CSC	Nests in open conifer or mixed oak woodland. Nets on horizontal branches, among a cluster of twigs and needles.	Possible. Suitable habitat is present in the Planning Area.
<i>Dendroica petechia brewsteri</i>	California Yellow Warbler	MB, CSC	Nests in riparian areas dominated by willows, cottonwoods, sycamores or alders and in mature chaparral. May also inhabit oak and coniferous woodlands and urban areas near stream courses.	Possible. Suitable habitat is present in the Planning Area.
<i>Elanus leucurus</i>	White-tailed Kite	MB, CFP	Inhabits low rolling foothills and valley margins with scattered oaks and river bottomlands or marshes adjacent to deciduous woodlands. Prefers open grasslands, meadows and marshes for foraging close to isolated,	Possible. Suitable habitat is present in the Planning Area. Known occurrence in CNDDDB from northeast of the city.

Table IV.E-2 (Continued)
Potentially-Occurring Special Status Wildlife Species

Scientific Name	Common Name	Status	Habitat Affinities	Potential of Occurrence and Reported Localities in Planning Area
			dense-topped trees for nesting and perching.	
<i>Empidonax difficilis</i>	Pacific-slope Flycatcher	SC, MB, CSC	Found in a variety of habitats including cliff, conifer, forest, hardwood, mixed, and woodland. Nests along streams, in tree cavities, in cliffs, crotch of branch, earth banks, or buildings.	Possible. Suitable habitat is present in the Planning Area.
<i>Hirundo rustica</i>	Barn Swallow	MB	Nests in anthropogenic structures stuck against a vertical surface. Nest made of mud pellets mixed with vegetable fibers and plant fibers.	Unlikely. Suitable habitat either marginal or absent in the Planning Area.
<i>Lanius ludovicianus</i>	Loggerhead Shrike	SC, MB, CSC	Nests in woodland and scrub habitats at margins of open grasslands. Often uses lookout perches such as fence posts. Resident and winter visitor in lowlands and foothills throughout California.	Unlikely. Suitable habitat either marginal or absent in the Planning Area.
<i>Pandion haliaetus</i>	Osprey	CSC	Nests found within 3 to 5 km of a water body. Nest structures are built up over the years and are often large (5-7 feet diam.).	Possible. Recorded in the vicinity of Fitch Mountain east of the city.
<i>Sayornis nigricans</i>	Black Phoebe	MB	Nests in anthropogenic structures on ledges. Nest made of mud pellets, dry grasses, weed stems, plant fibers and hair.	Possible. Suitable habitat is present in the Planning Area.
<i>Selasphorus rufus</i>	Rufous Hummingbird	SC, MB	Nests in chaparral, coniferous forest, scrub habitats and riparian habitats. Nests are placed on a downward drooping structure.	Possible. Suitable habitat is present in the Planning Area.
<i>Selasphorus sasin</i>	Allen's Hummingbird	SC, MB	Nests in wooded areas, meadows, or thickets along shaded streams, on a branch low down on stem, although placement height varies between 10 inches and 90 feet.	Possible. Suitable habitat is present in the Planning Area.
Mammals				
<i>Antrozous pallidus</i>	Pallid Bat	CSC	Day roosts include rock outcrops, mines, caves, hollow trees, buildings and bridges. Recent research suggests high reliance on tree	Possible. Suitable habitat is present in the Planning Area. Known occurrences from vineyards west-northwest

**Table IV.E-2 (Continued)
Potentially-Occurring Special Status Wildlife Species**

Scientific Name	Common Name	Status	Habitat Affinities	Potential of Occurrence and Reported Localities in Planning Area
			roosts.	Healdsburg.
<i>Arborimus pomo</i>	Sonoma tree vole	SC, CSC	Inhabits old growth, North Coast coniferous forests, redwood forests, and montane hardwood coniferous forests. Is found in the North Coast fog belt from Oregon to Sonoma County. Feeds almost exclusively on Douglas fir needles.	Unlikely. Suitable habitat either marginal or absent in the Planning Area. Closest known occurrence is from Pacheco Creek in Geyserville.
<i>Corynorhinus townsendii townsendii</i>	Townsend's big-eared Bat	CSC	Roosting sites include caves, mine tunnels, abandoned buildings and other structures. Forages in a variety of plant communities including coastal conifer and broad-leaf forests, oak and conifer woodlands, arid grasslands and deserts. Most commonly associates with mesic sites. Highly sensitive to human disturbances; a single visit by humans can cause bats to abandon roosts.	Possible. Suitable habitat is present in the Planning Area.
<i>Myotis evotis</i>	Long-eared Bat	SC	Day roosts in hollow trees under exfoliating bark, and crevices in rock outcrops. Found roosting under bark of small black oaks in northern California. Found throughout California.	Possible. Suitable habitat is present in the Planning Area.
<i>Myotis volans</i>	Long-legged Myotis	SC	Day roosts in hollow trees, particularly large diameter snags or live trees with lightning scars. Habitat usually defined by montane coniferous forests, pinyon-juniper, and Joshua tree woodland habitats.	Possible. Suitable habitat is present in the Planning Area.
<p>USFWS Designations: FE = listed as Endangered FT = listed as Threatened FPE = proposed as Endangered FPT = proposed as Threatened FSS = federal sensitive species, as listed by BLM and USFS</p>				

**Table IV.E-2 (Continued)
Potentially-Occurring Special Status Wildlife Species**

Scientific Name	Common Name	Status	Habitat Affinities	Potential of Occurrence and Reported Localities in Planning Area
<p><i>SC</i> = Species of Concern <i>MB</i> = Migratory non-game protected under the Migratory Bird Treaty Act.</p> <p>CDFG Designations: <i>CE</i> = Listed as Endangered <i>CR</i> = Listed as Rare <i>CT</i> = Listed as Threatened <i>CPE</i> = Proposed for listing as Endangered <i>CSC</i> = California Special Concern Species * = Taxa restricted in distribution, declining throughout their range, or associated with declining habitats in California. <i>CFP</i> = Fully protected under the Cal. Fish and Game Code.</p> <p>Potential Occurrence on Site: <i>Known</i> = Reported or observed. <i>Possible</i> = Suitable habitat present, although no individuals observed or reported. <i>Unlikely</i> = Suitable habitat either marginal or absent, and likelihood of occurrence on the site is low to nonexistent.</p> <p>Source: CNDDDB database search of the Healdsburg, Jintown, Geyserville, and Guerneville USGS Quadrangles, August 2007.</p>				

difficilis), black phoebe (*Sayornis nigricans*), rufous hummingbird (*Selasphorus rufus*), Allen's hummingbird (*Selasphorus sasin*), pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii townsendii*), long-eared bat (*Myotis evotis*), long-legged myotis (*Myotis volans*), western pond turtle (*Actinemys marmorata*), northwestern pond turtle (*Actinemys marmorata marmorata*) and Northern red-legged frog (*Rana aurora aurora*).

Western pond turtle (*Actinemys marmorata*), a California species of special concern, has been reported to occur in Foss Creek at the Grant Street bridge. Northwestern pond turtle (*Actinemys marmorata marmorata*), a California species of special concern, has been reported south of Healdsburg at the confluence of the Russian River and Dry Creek to approximately 1.0 mile downstream of Wohler Bridge crossing and in the Russian River between Alexander Valley Road and the Healdsburg Dam along U.S. Highway 101. White tailed kite (*Elanus leucurus*), a California fully protected species, was recorded northeast of Healdsburg with a nest site located along a ridge adjacent to the Russian River. Osprey (*Pandion haliaetus*), a California species of special concern, has been recorded foraging in the vicinity of Fitch Mountain. Cooper's hawk, ferruginous hawk, golden eagle, merlin, osprey and white-tailed kite may nest or forage in oaks and other trees and forage over grasslands and seasonally wet meadows. Cooper's hawk and golden eagle are known to occur within the Saggio Hills project vicinity and the white-tailed kite is suspected of nesting in northern Sonoma County.³

Special status fish species that occur within the Russian River include: coho salmon – Central California Coast ESU (*Oncorhynchus kisutch*); Navarro roach (*Lavinia symmetricus navarroensis*); and Russian River tule perch (*Hysterocarpus traski pomo*). Foss Creek may also support California freshwater shrimp (*Syncaris pacifica*), a state- and federally-listed endangered species. Foss Creek contains suitable freshwater shrimp habitat in several portions of the creek, and in particular downstream of Sub-Area A. Navarro roach (*Lavinia symmetricus navarroensis*) and Russian River tule perch (*Hysterocarpus traski pomo*) are California species of special concern. Navarro roach was found in the Russian River at U.S. Highway 101 in Healdsburg. Russian River tule perch occurs in low gradient freshwater streams of the Russian River and has a high potential to occur in the Planning Area.

Regulatory Setting

Federal

Federal Endangered Species Act

The FESA of 1973, as amended, provides the regulatory framework 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 four major components: provisions for listing species, requirements for consultation with the USFWS and the

³ City of Healdsburg, Saggio Hills Draft EIR, October 2007.

National Marine Fisheries Service (NOAA Fisheries), prohibitions against “taking” of listed species, and provisions for permits that allow incidental “take.” The FESA also discusses recovery plans and the designation of critical habitat for listed species. Both the USFWS and the NOAA Fisheries share the responsibility for administration of the FESA. During the CEQA review process, each agency is given the opportunity to comment on the potential of the proposed Project to affect listed plants and animals.

Sensitive Species

The USFS designates plant and animal species identified by a regional forester that are not listed or proposed for listing under FESA for which population viability is a concern, as evidenced by significant current or predicted downward trend in population numbers or density, or significant current or predicted downward trends in habitat capability that would reduce a species’ existing distribution, as “sensitive.” Although these species generally have no special legal status, they are given special consideration under CEQA during project review.

Clean Water Act Section 404 & 401

The Corps and the U.S. Environmental Protection Agency (EPA) regulate the discharge of dredged or fill material into waters of the United States, including wetlands, under Section 404 of the Clean Water Act (CWA) (33 U.S.C. 1344). Waters of the United States 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 (such as dams and levees), infrastructure developments (such as highways and airports) and mining projects. Section 404 of the CWA requires a federal license or 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).

Section 401 of the Clean Water Act (33 U.S.C. 1341) requires any 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 certification from the state in which the discharge originates or would originate, or, if appropriate, from the interstate water pollution control agency having jurisdiction over the affected waters at the point where the discharge originates or would originate, that the discharge will comply with the applicable effluent limitations and 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 (SWRCB) and its nine Regional Water Quality Control Boards (RWQCBs).

Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (16 U.S.C. Sections 661-667e, March 10, 1994, as amended 1946, 1958, 1978, and 1995) requires that whenever waters or channel of a stream or other body of water

are proposed or authorized to be modified by a public or private agency under a federal license or permit, the federal agency must first consult with the USFWS and/or NOAA Fisheries and with the head of the agency exercising administration over the wildlife resources of the state where construction will occur (in this case the CDFG), with a view to conservation of birds, fish, mammals and all other classes of wild animals and all types of aquatic and land vegetation upon which wildlife is dependent.

The Migratory Bird Treaty Act & Bald and Golden Eagle Protection Act

The Federal Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703 et seq.), Title 50 Code of Federal Regulations (CFR) Part 10, 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. Disturbance that causes nest abandonment and/or loss of reproductive effort or loss of habitat upon which these birds depend would be in violation of the MBTA.

The Bald Eagle Protection Act (16 U.S.C. 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.

State

California Endangered Species Act

The State of California enacted similar laws to the FESA, 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 California Fish and Game Code. To align with the FESA, CESA created the categories of “threatened” and “endangered” species. It converted all “rare” animals into the CESA as threatened species, but did not do so for rare plants. Thus, these laws provide the legal framework for protection of California-listed rare, threatened, and endangered plant and animal species. The CDFG implements NPPA and CESA, and its Wildlife and Habitat Data Analysis Branch maintains the CNDDDB, a computerized inventory of information on the general location and status of California’s rarest plants, animals, and natural communities. During the CEQA review process, the CDFG is given the opportunity to comment on the potential of the proposed Project to affect listed plants and animals.

Fully Protected Species & Species of Special Concern

The classification of “fully protected” was the CDFG’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 Fish and Game Code 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,” 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 CDFG 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 CDFG because are declining at a rate that could result in listing or historically occurred in low numbers and known threats to their persistence currently exist. This designation is intended to result in special consideration for these animals by the CDFG, land managers, consulting biologist, and others, and is 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. This designation also is 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 under the CEQA during project review.

California Fish and Game Code Sections 3503 & 3513

According to Section 3503 of the California Fish and Game Code it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird except English sparrows (*Passer domesticus*) and European starlings (*Sturnus vulgaris*). Section 3503.5 specifically protects birds in the orders Falconiformes and Strigiformes (birds-of-prey). Section 3513 essentially overlaps with the MTBA, 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 CDFG.

California Native Plant Society

The CNPS publishes and maintains an Inventory of Rare and Endangered Vascular Plants of California in both hard copy and electronic version.⁴ The Inventory assigns plants to the following categories:

- 1A – Presumed extinct in California
- 1B – Rare, threatened, or endangered in California and elsewhere
- 2 – Rare, threatened, or endangered in California, but more common elsewhere
- 3 – Plants for which more information is needed

⁴ *California Native Plant Society, Inventory of Rare and Endangered Plants (online edition, v7-06d), <http://cnps.org/inventory>, November 6, 2007.*

- 4 – Plants of limited distribution

Additional endangerment codes are assigned to each taxa as follows:

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

Plants on Lists 1A, 1B, and 2 of the CNPS Inventory consist of plants that may qualify for listing, and are given special consideration under CEQA during project review. Although plants on List 3 and 4 have little or no protection under CEQA, they are usually included in the project review for completeness.

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 RWQCB protects all waters in its regulatory scope, but has special responsibility for isolated wetlands and headwaters. These waterbodies have high resource value, are vulnerable to filling, and may not be regulated by other programs, such as Section 404 of the CWA. Waters of the State are regulated by the RWQCB under the State Water Quality Certification Program, which regulates discharges of dredged and fill material under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act. Projects that require a Corps permit, or fall under other federal jurisdiction, and have the potential to impact waters of the State are required to comply with the terms of the Water Quality Certification Program. If a proposed project does not require a federal license or permit, but does involve activities that may result in a discharge of harmful substances to waters of the State, the RWQCB has the option to regulate such activities under its State authority in the form of Waste Discharge Requirements or Certification of Waste Discharge Requirements.

California Fish and Game Code Section 1600

Streams, lakes, and riparian vegetation as habitat for fish and other wildlife species, are subject to jurisdiction by the CDFG under Sections 1600-1616 of the California Fish and Game Code. Any activity that will do one or more of the following: 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; generally require a 1602 Lake and Streambed Alteration Agreement. 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.⁵ 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.”⁶ Removal of riparian vegetation also requires a Section 1602 Lake and Streambed Alteration Agreement from the CDFG.

California Oak Woodland Statute

In September 2004, State Bill 1334 was passed and added to the State Public Resources Code as Statute 21083.4, requiring all California counties to determine in their CEQA documents whether a project in its jurisdiction may result in a conversion of oak woodlands that will have a significant effect on the environment. In addition, if the County determines that a project may result in a significant impact to oak woodlands, the County shall require one or more of the following mitigation alternatives to mitigate for the impact:

- 1) Conserving oak woodlands through the use of conservation easements.
- 2) Plant an appropriate number of trees, including maintaining the plantings and replacing dead or diseased trees; required maintenance of trees terminates seven years after the trees are planted; this type of mitigation shall not fulfill more than half of the mitigation requirement for the project; this type of mitigation may also be used to restore former oak woodlands.
- 3) Contribute funds to the Oak Woodlands Conservation Fund.
- 4) Other mitigation measures developed by the County.

The California Fish and Game Code (Section 1361) defines oak woodland habitat as “an oak stand with a greater than 10 percent canopy cover or that may have historically supported greater than 10 percent canopy cover.”

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. These resources have been defined by federal, state, and local conservation plans, policies or regulations. The CDFG ranks sensitive communities as “threatened” or “very threatened” and keeps records of their occurrences in its CNDDDB. Sensitive vegetation communities are also identified by CDFG on its List of California Natural Communities Recognized by the CNDDDB. Impacts to sensitive natural communities and habitats identified in local or regional plans, policies, regulations or by federal or state agencies must be considered and evaluated under the CEQA (CCR: Title 14, Div. 6, Chap. 3, Appendix G).

⁵ California Department of Fish and Game, Environmental Services Division, *A Field Guide to Lake and Streambed Alteration Agreements, Sections 1600-1607, California Fish and Game Code, 1994.*

⁶ *Ibid.*

Regional/Local

City of Healdsburg Zoning Ordinance

The City protects “heritage trees,” defined in Article 18, Section 18105 of the City’s Zoning Ordinance as any tree with a diameter of 30 inches measured two feet above ground level. Heritage trees of various species are found throughout the Planning Area, both within already-developed areas and in areas that are potentially developable both within and outside the city limits. Typically, identification of heritage trees in areas proposed for development occurs during the development and environmental review process.

The provisions of the Zoning Ordinance pertaining to heritage trees regulate the removal of such trees by requiring the approval of permits prior to removal or encroachment in areas immediately surrounding such trees, with the exception of trees on single-family parcels not capable of being further subdivided.

Article 18, Section 18120, of the City’s Zoning Ordinance includes riparian setback requirements for new development. Setbacks apply to any structure or other form of development located on property adjacent to or near the Russian River, Foss Creek, or other stream or creek, except as provided in the Zoning Ordinance. The requirements of this ordinance do not apply to public streets or utilities, flood control facilities, erosion control structures or creek bank stabilization improvements that have been approved as required by governmental agencies having jurisdiction over them.

The ordinance provides for the following setback requirements:

- 1) No building, structure or permanent or temporary improvement, including but not limited to buildings of any type, garages, swimming pools and spas, parking lots (paved or unpaved), patios, platforms, decks, fences, liquid storage tanks, trash enclosures, mobile homes, retaining walls, debris, fill or trash shall be allowed within the following setbacks: Russian River: one hundred (100) feet, Foss Creek: thirty-five (35) feet. All other streams and creeks: twenty-five (25) feet.
- 2) Setbacks shall be measured from the top of existing bank. Where channel improvements are proposed, subject to the approval of a variance pursuant to this section, setbacks shall be measured from the top of finished bank.
- 3) Existing riparian vegetation within setback areas shall be maintained and protected from disturbance.

Adopted Specific and Area Plans

The City of Healdsburg has adopted a number of plans to guide the development of specific areas of its Planning Area, including the Specific Plan for Area A, the Ridgeline North Area Plan, the Saggio Hills Area Plan and the Grove Street Neighborhood Plan. All of these plans include objectives and policies intended to protect significant biological resources.

PROPOSED GENERAL PLAN POLICIES AND IMPLEMENTATION MEASURES

Proposed General Plan policies and implementation measures that affect or pertain to biological resources are listed below.

Policies

- *LU-C-1*: Only low-intensity urban development and open space land uses shall be allowed in areas characterized by steep slopes, environmental hazards, scenic ridgelines and hillsides. Clustering of development in these areas shall be encouraged to preserve open space, meet the policies of the General Plan concerning natural hazards and scenic resources and minimize the costs of infrastructure improvements.
- *LU-C-2*: Intensive urban development shall be allowed only in areas that are relatively free of topographic, geologic and environmental limitations.
- *LU-D-1*: The downtown shall be defined by identifiable boundaries. Land use designations shall reinforce the distinction between the downtown and surrounding areas. Landscaping, street furniture, special paving, lighting and street trees shall be used to reinforce the distinction between the downtown and adjacent districts.
- *T-A-2*: Streets shall be dedicated, modified, extended, and constructed according to the street cross-sections as shown in General Plan Figure 6, Street Standard Cross-Sections with the following exceptions:
 - (b) Deviations from these cross-sections may be allowed where such improvements are infeasible or are needed to preserve neighborhood character, enhance pedestrian use or protect significant trees, upon a determination by the City Engineer that safe and adequate public access and circulation are preserved by such deviations.
- *PS-D-2*: The City will provide for channel improvements to, and periodic tree and brush clearance along Foss Creek to increase its capacity, provided appropriate environmental mitigation measures are taken.
- *PS-H-7 (NR-B-5)*: The City will work with Sonoma County Agricultural Preservation and Open Space District, Sonoma County Land Trust and other appropriate non-profit conservation groups and agencies in acquiring and maintaining key open space areas with public access and park sites where such an arrangement benefits both the City and property owners, including, but not limited to, those areas shown in General Plan Figure 7.
- *NR-B-1*: Channel improvements to, and tree and brush clearance activities along Foss Creek shall not unnecessarily disturb riparian vegetation.
- *NR-B-2*: Large, mature trees that contribute to the visual quality of the environment or provide important wildlife habitat shall be protected.
- *NR-B-3*: New development shall be sited to maximize the protection of native tree species, riparian vegetation, important concentrations of native plants, and important wildlife habitat.

- *NR-B-4:* The use of native plant species in landscaping and in the replanting of cut slopes is encouraged.
- *NR-B-6:* The use of large-scale trees in new development is encouraged where adequate space can be provided for the trees' ultimate size, such as in open space areas, parks, large lots, and wide parkway strips, to visually blend new development with the older parts of the City.
- *NR-C-1:* The City will protect the existing natural features to give shape and form to Healdsburg. To this end, new development shall not be allowed to breach the Urban Growth Boundary except under the exceptional circumstances allowed by this General Plan.
- *NR-C-2:* The City will encourage Sonoma County to retain surrounding lands in very low-density residential, agricultural, open space and natural resource uses that provide contrast to urbanized Healdsburg.
- *NR-C-4:* The top of Fitch Mountain shall remain in open space to preserve its natural environment, scenic beauty and use for public trails.
- *NR-C-6:* Protection of distinctive natural vegetation such as oak woodlands, riparian corridors, and mixed evergreen forest is encouraged.
- *S-C-3:* The City will provide for environmentally-appropriate channel improvements to, and tree and brush clearance along Foss Creek and other watercourses to reduce flooding.
- *CD-A-7:* The City will require the undergrounding of utilities as new development occurs to the extent that this does not adversely impact trees or cause similar undesirable consequences.
- *CD-A-11:* Landscaping shall be used in public and private development projects to enhance the city's visual qualities, provide shade and minimize glare.

Policy Implementation Measures

- *NR-2:* Continue to enforce the riparian setback requirements of the Zoning Ordinance.
- *NR-3:* Continue to promote the use of native plant species and the use of appropriate species in and adjacent to riparian habitat areas through implementation of Zoning Ordinance regulations and adopted design guidelines.
- *NR-4:* Pursue, to the extent feasible, the following actions to implement the Foss Creek Work Program:
 - (a) Discuss with interested parties the development of guidelines for future development along Foss Creek
 - (b) Select one or more sites for renovation projects
 - (c) Encourage development proposals along Foss Creek to incorporate and enhance the creek
 - (d) Identify target pollutants and develop an education and voluntary contaminant reduction program with business owners and residents

- (e) Prepare a series of “best practice one sheets” to assist with public education efforts
- (f) Discuss with interested parties the establishment of a streamside native plant demonstration garden and seek a community organization to take charge of the construction and on-going management of the garden
- (g) Schedule periodic creek walks in partnership with a local community organization
- (h) Continue the City’s Foss Creek communication and education programs
- *NR-5*: Continue the City’s Foss Creek restoration efforts by working with community groups to clear and eradicate non-native vegetation in selected areas and re-vegetate them with appropriate materials, and by encouraging public participation in these efforts, such as the annual Foss Creek Clean Up Event.
- *NR-6*: Use native plant species in City landscaping projects to the maximum feasible extent.
- *NR-25*: Include the locations of identified wetlands in the City GIS database.
- *CD-5*: Require the undergrounding of utilities by new development while seeking to avoid adverse impacts on trees or similar undesirable consequences.
- *CD-6*: The perimeter and interior of parking lots shall be landscaped with shrubs and shade trees selected from a City-approved list of trees to improve aesthetics and to provide relief from solar radiation, heat and glare.
- *CD-7*: Prepare and adopt a master street tree plan for the city’s primary streets.
- *CD-8*: Periodically review and update the Master Tree List.
- *CD-9*: Require the planting of street trees as a part of all development projects, guided by the Master Tree List.

ENVIRONMENTAL IMPACTS

Methodology

Impacts associated with biological resources were evaluated based on the information provided by the *Healdsburg 2030 General Plan Background Report*, CNDDDB, and CNPS. The analysis of biological impacts focuses on the nature and magnitude of changes to the biological environment of the city as a result of implementation of the proposed Project. The analysis also considered biological resources within the Planning Area that would be affected by development.

Thresholds of Significance

In accordance with Appendix G to the CEQA Guidelines, the proposed Project would have a significant impact related to biological resources if it would:

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

Additionally, the City is guided by CEQA Guidelines Section 15065, which directs lead agencies to find that a project may have a significant effect on the environment if it has the potential to 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; or substantially reduce the number or restrict the range of an endangered, rare, or threatened species.

Project Impacts

Impact IV.E-1: The proposed Project would not 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 CDFG or USFWS.

Development in the Planning Area has the potential to affect special status plants and animals.

If suitable habitat were present within the area proposed for development, then surveys for special status plants or animals as required by federal, state, and local regulations will be undertaken as part of the development review process, which includes environmental review. Additionally, Policies LU-C-1, LU-C-2, and NR-B-3 encourage the clustering of development in more urban areas to avoid impacts to habitat, Policy NR-B-5 (PS-H-7) seeks to protect and preserve areas of habitat by designating those areas as permanent open space. As part of the Saggio Hills project, approximately 162 acres of natural open space will be preserved by clustering development, consistent with this policy.

Article 18, Section 18120, of the City's Zoning Ordinance includes riparian setback requirements for new development. Policy NR-B-1 requires that "Channel improvements to, and tree and brush clearance activities along Foss Creek shall not unnecessarily disturb riparian vegetation." Policy NR-2 requires that

the proposed Project continue to enforce the riparian setback requirements of the Zoning Ordinance. In addition, Policy NR-B-2 requires the protection of large, mature trees that contribute to the visual quality of the environment or provide important wildlife habitat. Implementation of federal, state and local regulations and the proposed General Plan policies and implementation measures designed to protect plants and animals and their habitats would reduce impacts related to candidate, sensitive, or special status species to *less than significant*.

Impact IV.E-2: The proposed Project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by CDFG or USFWS.

Sensitive natural communities within the Planning Area include serpentine bunchgrass grassland, serpentine chaparral, oak woodlands, riparian corridors, pond or river, seasonal wetlands, and perennial bunchgrass grassland. Serpentine areas are considered to be sensitive because of their potential to support a number of special status plant and animals species. Oak woodland habitats provide food and shelter for a variety of birds and other animals and these habitats have been impacted by development within the state and region. The CNDDDB lists blue oak woodland as threatened and coast live oak and valley oak woodland as communities of concern. Riparian corridor, riverine riparian, pond or river communities, including the Russian River and Foss Creek and all creeks and drainages, and seasonal wetlands are by definition sensitive communities because of their value for wildlife habitat, as well as providing other important functions and values such as ground water recharge, sediment and toxicant reduction, flood flow alteration, and nutrient removal and accretion. ~~The Russian River, Foss Creek and all creeks and drainages, as well as seasonal wetlands, are also considered to be “waters of the United States” and well as being waters of the State and are subject to jurisdiction by the Corps, the RWQCB, and CDFG.~~ The Russian River and Foss Creek, as well as other creeks, drainages, wetlands within the Planning Area, may be regulated as waters of the United States and/or waters of the State by the Corps, RWQCB, and/or CDFG. Perennial bunchgrass grassland is a sensitive natural community because this community type has a very limited distribution within the state. Most Californian grasslands have been converted to non-native annual grasslands due to agricultural activities, primarily cattle grazing.

Policy LU-C-2, “Intensive urban development shall be allowed only in areas that are relatively free of topographic, geologic and environmental limitations.” underlines the importance of avoiding environmentally-sensitive areas. Environmental review will be required under CEQA for any project that could impact an area that supports any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by CDFG or USFWS, such as the Saggio Hills project EIR that was certified in 2008. Implementation of federal, state and local regulations and the proposed General Plan policies designed to protect riparian (Policy PS-D-2; Policy NR-B-1; Policy NR-B-3; and Policy NR-C-6), oak woodland (Policy LU-C-2; Policy NR-B-2; Policy NR-B-3; Policy NR-C-6; and Policy CD-A-7), wetlands (Policy NR-C-6), and other sensitive habitats (Policy LU-C-2; Policy NR-B-1; Policy NR-B-3; Policy NR-B-5; Policy NR-C-4; and Policy NR-C-6) will reduce the impacts related to these habitats or other sensitive communities to *less than significant*.

Impact IV.E-3: The proposed Project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

Areas proposed for development have the potential to support federally- and state-protected wetlands. In such cases, prior to development, a delineation of wetlands and waters of the U.S. and the state will be required. Wetlands are by definition sensitive communities because of their value for wildlife habitat, as well as providing other important functions and values such as ground water recharge, sediment and toxicant reduction, flood flow alteration, and nutrient removal. ~~The Russian River, Foss Creek and all creeks and drainages, as well as seasonal wetlands, are also considered to be “waters of the United States” and well as being waters of the State and are subject to jurisdiction by the Corps, the RWQCB, and CDFG.~~ The Russian River and Foss Creek, as well as other creeks, drainages, wetlands within the Planning Area, may be regulated as waters of the United States and/or waters of the State by the Corps, RWQCB, and/or CDFG

Environmental review will be required under CEQA for any project that could impact an area that supports any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by CDFG or USFWS, such as the Saggio Hills project EIR that was certified in 2008. ~~Prior to development, a delineation of wetland features, waters of the U.S., and waters of the state will be required.~~ the approval of a project in any of these areas, formal jurisdictional delineation studies will be conducted to confirm the location, extent, and regulatory status of wetland and water features within the Planning Area. These studies will also include a significant nexus evaluation to verify the extent of Corps jurisdiction in light of the recent U.S. Supreme Court opinions resulting from *Rapanos v. United States* and *Carabell v. United States* cases.⁷

The federal and state governments have a no net loss of wetlands policy. Implementation of the federal and state regulations under the Clean Water Act and the Porter-Cologne Act will require obtaining permits from the Corps and the RWQCB for the placement of fill into wetlands. These permits will identify impacts and mitigation measures. Because individual projects will undergo environmental review and permitting process as required under the Clean Water Act and Porter-Cologne Act, impacts related to federally protected wetlands would be *less than significant*.

Impact IV.E-4: The proposed Project would not interfere substantially with the movement of any native resident or migratory fish and wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

Four special status fish species that are known to occur within the Healdsburg area within the Russian River are: coho salmon—Central California Coast ESU (*Oncorhynchus kisutch*); Navarro roach (*Lavinia*

⁷ U.S. Army Corps of Engineers. June 5, 2007. Clean Water Act Jurisdiction Following the U.S. Supreme Court’s Decision in *Rapanos v. United States* & *Carabell v. United States* Memorandum.

symmetricus navarroensis); and Russian River tule perch (*Hysterocarpus traski pomu*). Foss Creek may also support California freshwater shrimp (*Syncaris pacifica*), a state- and federally-listed endangered species. Foss Creek contains suitable freshwater shrimp habitat in several portions of the creek, and in particular downstream of Sub-Area A.

The FESA (1973) prohibits federal agencies from authorizing, permitting, or funding any action that would jeopardize the continued existence of a plant or animal species listed, or a candidate for listing as Threatened or Endangered under the FESA. If a federal agency is involved with a proposed action or project that may adversely affect a listed plant or animal, that agency must enter into consultation with the USFWS under Section 7(a)(2) of the FESA. For fish species, additional consultation with NOAA fisheries is required. Individuals, corporations, and State or local agencies with proposed actions or projects that do not require authorizing, permitting, or funding from a federal agency but that may result in the “take” of listed species or candidate species are required to apply to the USFWS for a Section 10(a) incidental take permit.

Project permitting and approval requires compliance with the CESA (1984), the Native Plant Protection Act (NPPA 1977), and CEQA (1970). The CESA authorizes the California Fish and Game Commission to designate endangered or threatened animals, including fish species, and to regulate the taking of these species. In addition to protecting listed species, the CESA allows the CDFG to afford protection to candidate species that have been officially noticed by the California Fish and Game Commission as being under review for listing. Applicants of proposed projects that could have an adverse affect on any endangered, threatened, rare, or candidate species must secure a permit from CDFG before the proposed project may proceed.

The CDFG also maintains lists of animal Species of Special Concern, most of which are species whose breeding populations in California are on the decline. Although these species of special concern have no legal status, the CDFG recommends considering them during the analysis of project impacts in an effort to protect declining populations and avoid the need to add these species to the endangered, threatened, or rare lists.

CEQA requires governmental agencies to consider and disclose the projects potential environmental impact to biological resources. Under provisions of Section 15380(d) of the CEQA Guidelines, the project lead agency and the CDFG, in making a determination of significance, must treat non-listed animal species as equivalent to listed species if such species satisfy the minimum requirements for listing.

Compliance with the federal and state regulations related to the protection of migratory fish and wildlife species along with the proposed General Plan policies that protect biological resources (Policy PS-D-2; Policy NR-2; Policy S-C-3) would reduce impacts to *less than significant*.

Impact IV.E-5: The proposed Project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Heritage trees of various species are found throughout the Planning Area, both within already-developed areas and in areas that may undergo development, both within and outside the city limits. The City protects “heritage trees,” defined in Article 18, Section 18105 of the City’s Zoning Ordinance, as any tree with a diameter of 30 inches measured two feet above ground level. Typically, identification of heritage trees in areas proposed for development occurs during the development and environmental review process.

Article 18, Section 18120, of the City’s Zoning Ordinance includes riparian setback requirements for new development. Setbacks apply to any structure or other form of development located on property adjacent to or near the Russian River, Foss Creek, or other stream or creek, except as provided in the zoning ordinance. The requirements of this ordinance do not apply to public streets or utilities, flood control facilities, erosion control structures or creek bank stabilization improvements that have been approved as required by governmental agencies having jurisdiction over them. Policy NR-2 requires that the City “Continue to enforce the riparian setback requirements of the Zoning Ordinance.” In view of this, the proposed Project will not conflict with this ordinance. The proposed Project will not conflict with any local policies or ordinances, including those protecting heritage trees and riparian setback requirements and, therefore, impacts would be *less than significant*.

Impact IV.E-6: The proposed Project would not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

Policy NR-B-5 states that “The City will work with the Sonoma County Agricultural Preservation and Open Space District, the Sonoma Land Trust and other non-profit conservation organizations and agencies in acquiring key open space and habitat areas where such an arrangement would benefit both the City and the property owner.” The proposed Project and future development subject to the proposed General Plan are not expected to conflict with any adopted conservation plans, present or future, and will comply with the federal and state regulations related to habitat conservation plans and other approved plans that protect biological resources. Therefore, impacts related to conflict with the provisions of an adopted habitat conservation plan or natural community plan would be *less than significant*.

CUMULATIVE IMPACTS

The geographic context for the analysis of cumulative biological resources impacts consists of Sonoma County. This analysis accounts for all anticipated cumulative growth in this area, as represented by implementation of the proposed Project and cumulative development as anticipated in the Sonoma County General Plan. All future development that may occur in this geographic region will be subject to existing federal, state and local regulations. Land uses and development consistent with the proposed Project and additional eight cities and cumulative projects, could result in a significant loss of populations

and/or essential habitat for special-status plant and animal species, loss of sensitive natural communities, and wildlife habitat and result in the obstruction of wildlife movement opportunities. However, with the implementation of the proposed policies, development under the proposed General Plan would not make a considerable contribution to cumulative biological resources impacts in Sonoma County related to loss of populations and/or essential habitat.

Although the proposed Project would not result in a significant impact to wetlands, any wetlands or wetland feature within the area planned for development and in locations of cumulative projects may be affected. However, any potential impact would likely be reduced to a less-than-significant level by federal and state regulations, and proposed General Plan policies, as in the case of the Saggio Hills project which proposed to remove wetlands but was required to replace them with new enhanced wetlands at a rate greater than the existing habitat. Therefore, the proposed Project's contribution to cumulative impacts would not be considerable and cumulative impacts related to biological resources would be *less than significant*.

MITIGATION MEASURES

With implementation of applicable regulations and the proposed General Plan policies and implementation measures listed above, no mitigation measures would be required for Impacts IV.E-1 through IV.E-6. Additionally, no mitigation measures would be required for cumulative impacts.