3A.3 BIOLOGICAL RESOURCES – LAND

3A.3.1 AFFECTED ENVIRONMENT

The SPA is located in the eastern portion of Sacramento County, and there are two local roadway connections into western El Dorado County. The SPA is characterized by rolling foothill topography. Elevations within the SPA range from approximately 240 feet to 800 feet above mean sea level. Historic land uses in the area include cattle ranching, farming, and mining activities, primarily gold mining. The SPA is predominantly characterized by annual grassland on gently sloping topography. Also present in the SPA are blue oak woodland, seasonal wetland, freshwater seeps, swales, riparian woodland and scrub, and intermittent and perennial drainages (Alder Creek).

The following documents were used as information sources during preparation of this biological resources section. These documents are provided in Appendix D1 through Appendix D25 of this EIR/EIS.

- *Biological Resources Report, Sacramento Country Day School* (FHK Companies 2003)
- *Biological Resources Assessment 130-acre Folsom 138 Property* (Woodside Homes 2004)
- *Special-status Plant and Wildlife Report, Sacramento Day School, White Rock Road* (Holloway Rassmusson Molondanof 2005)
- *Results of a Focused Plant Survey on the Folsom South Site* (MJM Properties LLC 2006a)
- *Biological Resources Assessment, Folsom South 1,400-acre Site* (MJM Properties LLC 2006b)
- *Draft Special-status Species Assessment for Folsom South Area Group, Javanifard and Zhargami Parcel, Sacramento County* (The Hodgson Company 2007a)
- MJM Properties LLC. 2007a. *90-Day Report, 2006–2007 Wet-Season Survey for Listed Vernal Pool Branchiopods, Folsom South Property, Sacramento County, California*. Prepared by Foothill Associates, Rocklin, CA.
- MJM Properties LLC. 2007b. *Results of Analyses of Soil Samples Collected from the Proposed Folsom South Project Site*. Prepared by Christopher Rogers of EcoAnalysts, Inc, Woodland, CA, for Foothill Associates, Rocklin, CA.
- *Draft Biological Resources Assessment Report, Centex - Folsom Heights Property* (Centex Homes 2006a)
- *Listed Vernal Pool Branchiopod Wet Season Survey 90-Day Report, Carpenter Ranch* (Colliers International 2007a)
- *Revised Jurisdictional Delineation and Special-status Species Evaluation, Carpenter Ranch Property* (Colliers International 2007b)
- Gibson and Skordal, LLC. 2009. *Carpenter Ranch Vernal Pool Branchiopod Survey Results and Summary.* Memorandum prepared by Ginger Fodge for Kent MacDiarmid, April 10, 2009.
- *Folsom 560 Revised Wetland Delineation* (GenCorp Realty Investments 2007a) *Wetland Delineation for Folsom 560* (GenCorp Realty Investments 2006a)
- *Prairie City Road Business Park – Revised Wetland Delineation* (GenCorp Realty Investments 2007b) *Wetland Delineation for Prairie City Road Business Park* (GenCorp Realty Investments 2006b)
- *Delineation of Waters of the United States, Folsom South 1,400-acre Site* (MJM Properties LLC 2006c)

- *Wetland Delineation for Folsom South Owners Group Javanifard and Zhargami Parcel* (The Hodgson Company 2007b)
- *Preliminary Delineation of Waters of the United States Folsom Heights Property* (Folsom Heights LLC 2008)
- *Comprehensive Clean Water Act Section 404 Application, Folsom Plan Area Specific Plan* (City of Folsom et al. 2008)
- *Tree Survey for the Centex - Folsom Heights Property* (Centex Homes 2006b)
- *Arborist Report on Trees on the White Rock Springs Golf Course Project* (Sacramento Valley View 1993)
- *Folsom South Sphere of Influence Project Site Native Oak and Non Oak Tree* Tabulation *for Grid Areas 1–7* (MJM Properties LLC 2005)
- *Carpenter Ranch – Folsom Sphere of Influence Project Site Initial Arborist Report and Inventory Summary* (Carpenter Ranch LP 2006)
- *Arborist Report for 14005 White Rock Road* (PDF Development Company 2003)
- *Arborist Report for Sacramento Country Day School* (Katz Kitpatrick Properties 2007)
- ECORP Consulting. 2009b. *Folsom Specific Plan Area Bio Survey Status Report (Wet Season, Rare Plant, Elderberry, and other)*. Prepared by Richard O'Neal, April 13, 2009.

PLANT COMMUNITIES

The SPA is characterized primarily by annual grassland, which covers the eastern two-thirds of the site as well as the southwest corner, and by blue oak woodland, which is prevalent in the northwestern portion of the site. Some areas of the SPA, mostly in the western half, have a subsurface hardpan layer that supports a mosaic of vernal pools and swales, and seasonal wetlands interspersed within a matrix of annual grassland vegetation. Plant communities found in the SPA are described in the following paragraphs. The location and extent of these communities is shown in Exhibit 3A.3-1.

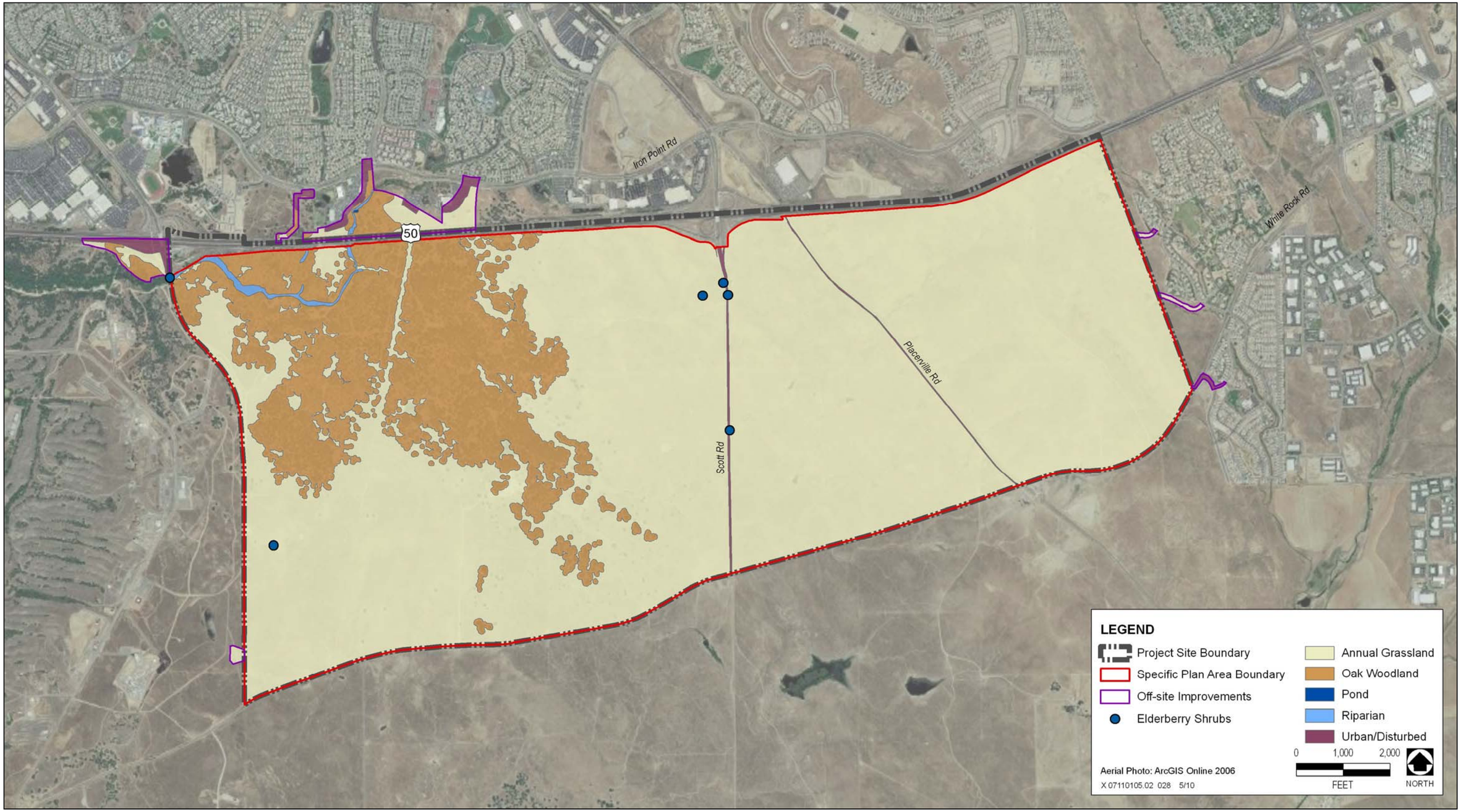
Upland Communities

Annual Grassland

This community type covers over two-thirds (approximately 2,594 acres) of the SPA and is characterized by a dense cover of nonnative annual grasses interspersed with numerous species of nonnative annual forbs and native wildflowers. Characteristic grass species include ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), Italian ryegrass (*Lolium multiflorum*), and medusahead (*Taeniatherum caput-medusae*). Common nonnative forbs include cut-leaved geranium (*Geranium dissectum*), Klamath weed (*Hypericum perforatum*), prickly sow thistle (*Sonchus asper*), yellow starthistle (*Centaurea solstitialis*), and Italian thistle (*Carduus pycnocephalus*). Native wildflowers observed in the annual grassland within the SPA include wild hyacinth (*Triteleia hyacinthina*), Ithuriel's spear (*Triteleia laxa*), purple owl's-clover (*Castilleja exserta*), valley tassels (*Castilleja attenuata*), harvest brodiaea (*Brodiaea elegans*), and Fremont's tidy-tips (*Layia fremontii*). The off-site project elements contain another 43.3 acres of annual grassland.

Valley Needlegrass Grassland

Small inclusions of valley needlegrass grassland may be present in the SPA, interspersed within the annual grassland community described above. Valley needlegrass grassland is characterized by purple needlegrass (*Nassella pulchra*), a native perennial bunchgrass. Associate species are primarily native and nonnative annual



Source: ECORP Consulting 2008, RRM Design Group 2008

Existing Plant Communities **Exhibit 3A.3-1**

forbs including blowwives (*Achyrachaena mollis*), purple clarkia (*Clarkia purpurea* ssp. *quadrivulnera*), California poppy (*Eschscholzia californica*), hayfield tarweed (*Hemizonia congesta* ssp. *luzulifolia*), valley tassels (*Castilleja attenuata*), and species characteristic of the annual grassland community. This community type has not been mapped and quantified in the SPA or in the proposed off-site sewer force main alignment, but was observed on the Folsom Heights property during the wetland delineation conducted on the property and may be present elsewhere. ECORP Consulting (ECORP) biologists surveyed the remaining off-site elements for valley needlegrass grassland in fall and winter 2008 and did not find this community present.

Blue Oak Woodland

As defined by the California Oak Woodlands Conservation Act of 2001, oak woodlands are stands of oak trees with greater than 10% canopy cover. Approximately 642 acres of blue oak woodland containing 249.8 acres of tree canopy (39% canopy cover) is present in the SPA, primarily in the northwestern third of the site, and approximately 38 additional acres are present within the location of the off-site interchange elements at Prairie City Road, Oak Avenue, and Rowberry Drive Overcrossing. Blue oak woodland is a broadleaved deciduous woodland plant community with a grassy understory. The tree layer is dominated by blue oak (*Quercus douglasii*) while the understory is dominated by dogtail grass (*Cynosurus echinatus*), soft chess, and other herbaceous species similar to those found in the annual grassland community.

Wetland Communities and Other Waters

Freshwater Seeps

A seep is a wetland plant community characterized by dense cover of perennial herb species usually dominated by rushes, sedges, and grasses. Freshwater seep communities occur on sites with permanently moist or wet soils resulting from daylighting groundwater. Characteristic plant species found in seeps in the SPA include Baltic rush (*Juncus balticus*), iris-leaved rush (*Juncus xiphioides*), common spikerush (*Eleocharis macrostachya*), white hedge-nettle (*Stachys albens*), rice cutgrass (*Leersia oryzoides*), and dense-flowered willowherb (*Epilobium densiflorum*). There are approximately 10.80 acres of seeps present, primarily in the eastern portion of the SPA interspersed within the annual grassland matrix. All acreage of the seep habitat in the SPA has been determined to fall under USACE jurisdiction. There are no seeps present in the off-site elements of the project.

Vernal Pools

Vernal pools are natural ephemeral wetlands that form in shallow depressions underlain by an impervious or restrictive soil layer near the surface that restricts the percolation of water. Vernal pools are supported by direct precipitation and surface runoff. They pond during the wet season and typically become dry by late spring. Vernal pools are typically characterized by a high percentage of native plant species, many of which may be endemic (restricted) to vernal pools. Many of the vernal pools located on the northeastern portion of the Folsom 560 site appear to have been created by human activities, probably from mining test holes.

Characteristic vernal pool species in the SPA include annual hairgrass (*Deschampsia danthonioides*), Fremont's goldfields (*Lasthenia fremontii*), common spikerush, coyote thistle, stipitate popcorn flower (*Plagiobothrys stipitatus*), white-headed navarretia (*Navarretia leucocephala*), and horned downingia (*Downingia bicornuta*). There are approximately 4.67 acres of vernal pools in the SPA, consisting of 4.64 acres subject to USACE jurisdiction and 0.03 acre that has been determined to be non-jurisdictional by USACE, but is considered a water of the state subject to regulation under the Porter Cologne Act. They are concentrated primarily within the blue oak woodland in the western third of the site, but there are a few scattered elsewhere. There is an estimated 0.59 acre of vernal pool habitat in the off-site elements of the project that is likely subject to USACE jurisdiction, but a formal wetland delineation has not been completed and verified by USACE for the off-site elements.

Seasonal Wetlands

Seasonal wetlands are present in the SPA in both topographic depressions and swales. Hydrologically, seasonal wetlands are similar to vernal pools because they remain inundated or saturated for extended periods during winter and spring. Seasonal wetland swales do not pond water appreciably, but are inundated by flowing water during rainfall and support a saturated upper soil horizon for an extended period of time during the growing season. Characteristic plant species in seasonal wetlands and seasonal wetland swales in the SPA include coyote thistle (*Eryngium vaseyi*), toad rush (*Juncus bufonius*), hyssop loosestrife (*Lythrum hyssopifolium*), foothill meadowfoam (*Limnanthes striata*), dallis grass (*Paspalum dilatatum*), rabbitsfoot grass (*Polypogon monspeliensis*), common spikerush, and Italian ryegrass (*Lolium multiflorum*). There are approximately 4.66 acres of depressional seasonal wetlands and 25.48 acres of seasonal wetland swales scattered throughout the SPA. It has been determined by USACE that 4.657 acres of the depressional seasonal wetlands and all of the 25.48 acres of seasonal wetland swales are Federally jurisdictional. There is 0.004 acre of depressional seasonal wetland that has been disclaimed by USACE, but that is considered a water of the state subject to regulation under the Porter Cologne Act. Off-site project elements support an additional 0.25 acre of depressional seasonal wetlands and 0.55 acre of seasonal wetland swales. Jurisdiction over the off-site seasonal wetlands has not been determined.

Drainage Channels

Drainage channels occur throughout the SPA. These include intermittent to nearly permanent stream channels. Alder Creek is an intermittent to perennial stream that transects the SPA from the south-central portion at White Rock Road to the northwest corner at Prairie City Road, flowing generally in a northwesterly direction. Portions of Alder Creek support surface flow all year because flows are supplemented by runoff from adjacent developed areas, but upstream segments of the creek within the SPA are intermittent. Intermittent stream channels support flowing water through winter and spring, but dry up by summer. Many of the other intermittent channels present in the SPA are tributary to Alder Creek. There are 17.19 acres of perennial stream channel and 11.72 acres of intermittent drainage channel scattered throughout the SPA and all of this acreage has been determined to be Federally jurisdictional by USACE. The proposed off-site elements of the project (i.e., Prairie City Road and Oak Avenue Interchanges and improvements to Prairie City and White Rock Roads) contain an additional 0.04 acre of intermittent drainage channels and 2.47 acres of perennial stream channel and 0.04 acre of intermittent drainage channel. Jurisdiction over the off-site drainage channels has not yet been determined, but it is likely that they are all subject to Federal jurisdiction.

Hydrophytic plant species (i.e., plants adapted to grow in water), such as cattail (*Typha* sp.), dense sedge (*Carex densa*), slender rush (*Juncus tenuis*), American tule (*Scirpus americanus*), and dallisgrass, occur within the Ordinary High Water Mark (OHWM) of the drainage channels on-site. Vegetation cover becomes denser in flatter portions of the drainages where the channels are wide and relatively shallow. Riparian vegetation occurs within the OHWM and along the banks of Alder Creek. Much of the riparian habitat is characterized by dense monocultures of Himalayan blackberry (*Rubus discolor*) and would best be described as blackberry scrub. There are scattered patches of riparian woodland that include typical riparian species such as black willow (*Salix goodingii*), arroyo willow (*Salix lasiolepis*), purpletop vervain (*Verbena bonariensis*), and tall flatsedge (*Cyperus eragrostis*). Approximately 11 acres of riparian habitat are present in the SPA. The Oak Avenue interchange supports an additional 2.4 acres of riparian woodland and blackberry scrub along the banks of a perennial tributary to Alder Creek and the Prairie City Road interchange supports another 0.9 acre of riparian woodland along Alder Creek. These are the only off-site elements that support riparian habitat. Approximately 0.11 acre of riparian habitat present qualifies as a wetland under the CWA. This habitat consists of a stand of willow shrubs located within an intermittent drainage channel at the northern boundary of the Folsom Heights site and is best described as willow scrub.

Artificial ditches are also present throughout the SPA. Ditches are excavated channels surrounded by levees. Many of these features follow topographic contours and may represent relics from historic hydraulic gold mining activities, while others may have been excavated to transport irrigation water. Some ditches in the SPA support

hydrophytic vegetation such as rabbitsfoot grass, curly dock (*Rumex crispus*), and common yellow monkeyflower (*Mimulus guttatus*). Approximately 2.36 acres of ditches, 1.96 of which have been determined to be Federally jurisdictional, are present throughout the SPA and 0.01 acre of ditch is present in the off-site Oak Avenue interchange element.

Freshwater Marsh

Freshwater marsh is an emergent wetland plant community occurring in areas that are permanently or nearly permanently inundated. In the SPA, this community type was found in association with a few of the drainage channels described above. Dominant plant species identified in the freshwater marsh include cattail and common tule (*Scirpus acutus*). Approximately 0.21 acre of freshwater marsh are present in the SPA and approximately 1.94 acres present in the off-site elements of the project. All of the freshwater acreage present in the SPA has been determined to be Federally jurisdictional.

Ponds

Nine ponds, comprising approximately 7.72 acres, are present throughout the SPA. These include ponds created through impoundment of stream channels and excavated basins. Approximately 6.87 acres of pond were determined to be Federally jurisdictional while 0.85 were determined by USACE to be non-jurisdictional, although these waters are still considered waters of the state. The on-site ponds are typically inundated year round and some support sparse cover of emergent vegetation along the shallow margins, and black willow and Fremont cottonwood (*Populus fremontii*) on their banks. In contrast to seasonal wetlands, seeps, and marshes, ponds are characterized predominantly by open water or bare ground and are not vegetated wetlands. No ponds are present in off-site elements of the project.

WILDLIFE

The SPA supports an abundant and diverse fauna. This large and mostly contiguous block of open space, dominated by natural plant communities, is particularly important to native wildlife species associated with grassland, oak woodland, and riparian habitats. The SPA provides habitat for both resident breeding and migratory raptors that prefer large tracks of open grassland for foraging. The oak woodland and riparian communities are attractive to many of the common wildlife species in Sacramento County, as well as a few special-status wildlife species, which are discussed separately below under “Sensitive Biological Resources.”

A few of the many common wildlife species expected to occur in the SPA include red-tailed hawk (*Buteo jamaicensis*), western kingbird (*Tyrannus verticalis*), oak titmouse (*Baeolophus inornatus*), savannah sparrow (*Passerculus sandwichensis*), western meadowlark (*Sturnella neglecta*), gopher snake (*Pituophis catenifer*), western fence lizard (*Sceloporus occidentalis*), coyote (*Canis latrans*), and black-tailed hare (*Lepus californicus*).

SENSITIVE BIOLOGICAL RESOURCES

Sensitive biological resources addressed in this section include those that are afforded consideration or protection under the California Environmental Quality Act (CEQA), California Fish and Game Code, California Endangered Species Act (CESA), Federal Endangered Species Act (ESA), Clean Water Act (CWA), and the Porter-Cologne Water Quality Control Act (Porter-Cologne Act).

Special-Status Species

Special-status species include plants and animals in the following categories:

- species officially listed by the State of California or the Federal government as endangered, threatened, or rare;

- candidates for state or Federal listing as endangered, threatened, or rare;
- taxa (i.e., taxonomic categories or groups) that meet the criteria for listing, even if not currently included on any list, as described in California Code of Regulations (CCR) Section 15380 of the State CEQA Guidelines;
- species identified by the California Department of Fish and Game (DFG) as species of special concern;
- species listed as Fully Protected under the California Fish and Game Code;
- species afforded protection under local or regional planning documents; and
- taxa considered by the California Native Plant Society (CNPS) to be "rare, threatened, or endangered in California." The CNPS includes five lists for categorizing plant species of concern, which are summarized as follows:

    - List 1A—Plants presumed to be extinct in California;
    - List 1B—Plants that are rare, threatened, or endangered in California and elsewhere;
    - List 2—Plants that are rare, threatened, or endangered in California but more common elsewhere;
    - List 3—Plants about which more information is needed (a review list); and
    - List 4—Plants of limited distribution (a watch list).

Plant inventories prepared by CNPS provide one source of substantial evidence that is used by lead agencies to determine what plants meet the definition of endangered, rare, or threatened species, as described in CCR Section 15380 of the State CEQA Guidelines. For purposes of this EIR/EIS, the relevant inventories are List 1B (plants that are rare, threatened, or endangered in California and elsewhere) and List 2 (plants that are rare, threatened, or endangered in California but more common elsewhere). All plants listed in the CNPS Inventory (CNPS 2008) are considered "special plants" by DFG. The term "special plants" is a broad term used by DFG to refer to all of the plant taxa inventoried by the California Natural Diversity Database (CNDDB), regardless of their legal or protection status. Notation as a List 1B or 2 plant species does not automatically qualify the species as endangered, rare, or threatened within the definition of State CEQA Guidelines CCR Section 15380. Rather, CNPS designations are considered along with other available information about the status, threats, and population condition of plant species to determine whether a species warrants evaluation as an endangered, rare, or threatened species under CEQA. Plants on Lists 1A, 1B, and 2 of the CNPS Inventory may qualify for listing, and DFG recommends—and local governments may require—that these species be addressed during CEQA review of proposed projects. However, a plant species need not be in the CNPS Inventory to be considered a rare, threatened, or endangered species under CEQA.

The term California species of special concern is applied by DFG to animals not listed under the Federal ESA or the CESA, but that are nonetheless declining at a rate that could result in listing, or historically occurred in low numbers and known threats to their persistence currently exist. DFG's fully protected status was California's first attempt to identify and protect animals that were rare or facing extinction. Most species listed as fully protected were eventually listed as threatened or endangered under CESA, however some species remain listed as fully protected but do not have simultaneous listing under CESA. Fully protected species may not be taken or possessed at any time and no take permits can be issued for these species except for scientific research purposes or for relocation to protect livestock.

Tables 3A.3-1 and 3A.3-2 below provide lists of special-status species known to occur or with potential to occur in the SPA. These lists were developed through review of biological studies previously conducted in the SPA and in the vicinity, as listed previously in this section. The CNDDB (CNDDB 2008) and CNPS Inventory of Rare and Endangered Plants (CNPS 2008) were also reviewed for specific information on previously documented occurrences of special-status species in the Folsom and eight surrounding U.S. Geological Survey (USGS) quadrangles. Exhibit 3A.3-2 shows all of the CNDDB occurrences within a five-mile radius of the SPA.

Table 3A.3-1
Special-Status Plant Species Known to Occur or with Potential to Occur in the SPA

Species	Status[1]			Habitat and Blooming Period	Potential for Occurrence[2]
	USFWS	DFG	CNPS Other		
Big scale balsamroot *Balsamorhiza macrolepis* var. *macrolepis*	–	–	1B.2	Chaparral, cismontane woodland, and valley and foothill grassland, often on serpentinite soils; 295 to 4,600 foot elevation; blooms March–June.	Could occur in grassland and oak woodland in the SPA. However, the probability of occurrence is low because, although not restricted to serpentinite soils, this species is usually (65 to 74% of the time) found on serpentinite soils, which are not present in the SPA.
Brandegee's clarkia *Clarkia biloba* ssp. *brandegeae*	–	–	1B.2	Chaparral and cismontane woodland, often in roadcuts; 240 to 3,000 foot elevation; blooms May–July.	Could occur in the blue oak woodland community.
Hispid bird's beak *Cordylanthus mollis* ssp. *hispidus*	–	–	1B.1	Alkaline meadows, seeps, and playas; below 500 foot elevation; blooms June–September.	Unlikely to occur; no suitable habitat is present.
Dwarf downingia *Downingia pusilla*	–	–	2.2	Vernal pools or other seasonal wetlands in annual grasslands; below 1,500 foot elevation; blooms March–May.	Could occur in seasonal wetlands, vernal pools, and swales in the SPA.
Tuolumne button-celery *Eryngium pinnatisectum*	–	–	1B.2	Vernal pools or other seasonal wetlands in cismontane woodland and lower montane coniferous forest; 200 to 3,000 foot elevation; blooms June–August.	Could occur in on-site vernal pools and seasonal wetlands in the SPA.
Bogg's Lake hedge hyssop *Gratiola heterosepala*	–	E	1B.2	Lake margin marshes and swamps, vernal pools, and other seasonal wetlands, primarily in clay soils; 30 to 8,000 foot elevation; blooms April–August.	Likely to occur in vernal pools or other seasonal wetlands in the SPA. Known occurrences immediately adjacent to the SPA on west side of Prairie City Road very near the proposed off-site detention basin location.
Ahart's dwarf rush *Juncus leiospermus* var. *ahartii*	–	–	1B.2	Vernal pools and swales in areas of low cover of competing vegetation; most often on gopher turnings along margins of pools (Witham 2006:38); 95 to 750 foot elevation; blooms March–May.	Could occur in vernal pools and swales in the SPA.
Red Bluff dwarf rush *Juncus leiospermus* var. *leiospermus*	–	–	1B.1	Vernal pools, meadows and seeps, and other seasonally wet habitats; 115 to 3,500 foot elevation; blooms March–May.	Unlikely to occur; the nearest record of this species is from Roseville and is probably erroneous (CNDDB 2008). Sacramento and El Dorado Counties are outside the known range of this species.

Table 3A.3-1
Special-Status Plant Species Known to Occur or with Potential to Occur in the SPA

Species	Status [1]			Habitat and Blooming Period	Potential for Occurrence [2]
	USFWS	DFG	CNPS Other		
Greene's legenere *Legenere limosa*	–	–	1B.1	Relatively deep and wet vernal pools (Witham 2006:39); below 3,000 foot elevation. Blooms April–June.	Could occur in vernal pools in the SPA.
Pincushion navarretia *Navarretia meyersii* ssp. *Meyersii*	–	–	1B.1	Vernal pools; 65 to 750 foot elevation; blooms in May.	Could occur in vernal pools in the SPA.
Slender Orcutt grass *Orcuttia tenuis*	T	E	1B.1	Vernal pools; 100 to 5,800 foot elevation; blooms May–October.	Could occur in vernal pools in the SPA.
Sacramento Orcutt grass *Orcuttia viscida*	E	E	1B.1	Vernal pools; 95 to 325 foot elevation; blooms April–July.	Could occur in vernal pools in the SPA.
Sanford's arrowhead *Sagittaria sanfordii*	–	–	1B.2	Shallow freshwater marshes and swamps; below 2,200 foot elevation; blooms May–October.	Likely to occur in ponds, drainages, or other wetlands in the SPA that support freshwater marsh vegetation. Documented CNDDB occurrence boundary overlaps SPA boundary along Grant Line Road.

Notes: USFWS = U.S. Fish and Wildlife Service; DFG = California Department of Fish and Game; CNPS = California Native Plant Society; CNDDB = California Natural Diversity Database; ESA = Federal Endangered Species Act; CESA = California Endangered Species Act

[1] Legal Status Definitions

U.S. Fish and Wildlife Service:
E Endangered (legally protected)
T Threatened (legally protected)

California Department of Fish and Game:
E Endangered (legally protected)

California Native Plant Society Categories:
1B Plant species considered rare or endangered in California and elsewhere (protected under CEQA, but not legally protected under ESA or CESA)
2 Plant species considered rare or endangered in California but more common elsewhere (protected under CEQA, but not legally protected under ESA or CESA)

CNPS Extensions:
.1 Seriously endangered in California (>80% of occurrences are threatened and/or high degree and immediacy of threat)
.2 Fairly endangered in California (20 to 80% of occurrences are threatened)

[2] Potential for Occurrence Definitions

Unlikely to occur: Species is unlikely to be present in the SPA due to poor habitat quality, lack of suitable habitat features, or restricted current distribution of the species.

Could occur: Suitable habitat is available at the SPA; however, there are little to no other indicators that the species might be present.

Likely to occur: Habitat conditions, known occurrences in the project vicinity, or other factors indicate a relatively high likelihood that the species would occur at the SPA.

Sources: CNDDB 2008; CNPS 2008; data compiled by AECOM/AECOM (now AECOM) in 2008

Table 3A.3-2
Special-Status Wildlife with Potential to Occur in the SPA and Off-Site Elements

Species	Listing Status[1]		Habitat	Potential for Occurrence[2]
	Federal	State		
Invertebrates				
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	T/PD	–	Elderberry shrubs below 3,000 feet in elevation, typically in riparian habitats.	Could occur; elderberry shrubs are present in the SPA. Documented CNDDB occurrences within 2 miles of the SPA.
Vernal pool fairy shrimp *Branchinecta lynchi*	T	–	Vernal pools and other seasonal wetlands in valley and foothill grasslands.	Likely to occur in vernal pools on site. Documented CNDDB occurrences in immediate project vicinity (i.e., within 1 mile).
Vernal pool tadpole shrimp *Lepidurus packardi*	E	–	Vernal pools and other seasonal wetlands in valley and foothill grasslands.	Likely to occur in vernal pools on site. Documented CNDDB locations abutting western SPA boundary.
Conservancy fairy shrimp *Branchinecta conservatio*	E	–	Vernal pools and other seasonal wetlands in valley and foothill grasslands.	Could occur; suitable habitat is present in vernal pools on site.
Amphibians and Reptiles				
Western pond turtle *Actinemys marmorata*	–	SC	Forage in ponds, marshes, slow-moving streams, sloughs, and irrigation/drainage ditches; nest in nearby uplands with low, sparse vegetation.	Known to occur. Documented in an on-site pond by ECORP (The Hodgson Company 2007a) and less than 1 mile downstream of the SPA (GenCorp 2007c), within Alder Creek.
California red-legged frog *Rana aurora draytonii*	T	SC	Foothill streams with dense shrubby or emergent riparian vegetation, minimum 11–20 weeks of water for larval development, and upland refugia for aestivation.	Unlikely to occur. Presumed extirpated from the valley floor. Nearest reproducing population is 30 miles east near Pollock Pines.
Western spadefoot *Spea hammondii*	–	SC	Vernal pools and other seasonal ponds with a minimum 3-week inundation period in valley and foothill grasslands.	Could occur; suitable habitat present on site. Nearest documented occurrences are more than 5 miles away in Roseville, Phoenix Park, and Mather Park areas.
Giant garter snake *Thamnophis gigas*	T	T	Slow-moving streams, sloughs, ponds, marshes, inundated floodplains, rice fields, and irrigation/drainage ditches on the Central Valley floor with mud bottoms, earthen banks, emergent vegetation, abundant small aquatic prey and absence or low numbers of large predatory fish. Also require upland refugia not subject to flooding during the snake's inactive season.	Unlikely to occur; suitable habitat absent on SPA and associated off-site areas evaluated in this EIR/EIS.

Table 3A.3-2
Special-Status Wildlife with Potential to Occur in the SPA and Off-Site Elements

Species	Listing Status[1]		Habitat	Potential for Occurrence[2]
	Federal	State		
California tiger salamander *Ambystoma californiense*	T	C	Vernal pools and seasonal wetlands with a minimum 10-week inundation period and surrounding uplands, primarily grasslands, with burrows and other belowground refugia (e.g., rock or soil crevices).	Unlikely to occur. Nearest known occurrence is 15 miles to the south and extensive surveys in the project vicinity have not detected the species north of the Cosumnes River (USFWS 2004).
Birds				
Tricolored blackbird *Agelaius tricolor* (nesting colony)	–	SC	Forages in agricultural lands and grasslands; nests in marshes, riparian scrub, and other areas that support cattails or dense thickets of shrubs or herbs.	Could nest on site; suitable marsh and blackberry bramble habitats for nesting and grassland foraging habitat is present and species has been documented at 4 locations within 5 miles of the SPA.
Grasshopper sparrow *Ammodramus savannarum* (nesting)	–	SC	Nests and forages in dense grasslands; favors a mix of native grasses, forbs, and scattered shrubs.	Could nest in grassland communities in the SPA, especially within valley needlegrass grassland if present.
Golden eagle *Aquila chrysaetos*	–	FP	Forages in large open areas of foothill shrub and grassland habitats and occasionally croplands. Does not nest in the Central Valley.	Unlikely to nest on site; migrating and nonbreeding individuals could forage in the grasslands on site.
Burrowing owl *Athene cunicularia* (burrow sites)	–	SC	Nests and forages in grasslands, agricultural lands, open shrublands, and open woodlands with existing ground squirrel burrows or friable soils.	Known to occur in grasslands on site; winter foraging documented by Foothill Associates (MJM Properties 2006b). Likely to nest on site; suitable nesting and foraging habitat present.
Swainson's hawk *Buteo swainsoni* (nesting)	–	T	Forages in grasslands and agricultural lands; nests in riparian and isolated trees.	Likely to nest on site; suitable nesting and foraging habitat present.
Northern harrier *Circus cyaneus* (nesting)	–	SC	Nests and forages in grasslands, agricultural fields, and marshes.	Known to occur; winter foraging documented by Foothill Associates (MJM Properties 2006b). Likely to nest on site; suitable nesting and foraging habitat present.
White-tailed kite *Elanus leucurus* (nesting)	–	FP	Forages in grasslands and agricultural fields; nests in riparian zones, oak woodlands, and isolated trees.	Likely to nest on site; suitable grassland foraging habitat and suitable nest trees present in blue oak woodland and riparian areas. Several CNDDB-documented nest sites in project vicinity.
Southern bald eagle *Haliaeetus leucocephalus leucocephalus* (nesting and wintering)	D	E	Forage primarily in large inland fish-bearing waters with adjacent large trees or snags; occasionally in uplands with abundant rabbits, other small mammals, or carrion. Often roosts communally in winter.	Unlikely to occur: foraging habitat is marginal, and the species does not nest on the Central Valley floor. However, could be a rare and irregular foraging visitor.

Table 3A.3-2
Special-Status Wildlife with Potential to Occur in the SPA and Off-Site Elements

Species	Listing Status[1]		Habitat	Potential for Occurrence[2]
	Federal	State		
Loggerhead shrike *Lanius ludovicianus* (nesting)	–	SC	Forages and nests in grasslands, shrublands, and open woodlands.	Likely to nest on site; suitable foraging and nesting habitat present on the site. Foraging documented adjacent to SPA along Alder Creek by Matus 1981.
California black rail *Laterallis jamaicensis coturniculus* (year round)	–	T	Freshwater marshes, wet meadows, and shallow margins of saltwater marshes. Requires consistent water depth of 1 inch and dense vegetation to nest.	Unlikely to occur; nearest known occurrence was documented in Clover Valley, Placer County in 2006 and was a southern range extension. Specific microhabitat conditions for nesting not present on site.
Modesto song sparrow (*Melospiza melodia*) (year round)		SC	Nests and forages primarily in emergent marsh, riparian scrub, and early successional riparian forest habitats in the north-central portion of the Central Valley; infrequently in mature riparian forest and sparsely vegetated ditches and levees.	Could occur; potentially suitable nesting habitat present along Alder Creek and a few other on-site wetlands. However, the SPA is on the fringes of the geographic range, and there is scientific uncertainty as to whether song sparrows in eastern Sacramento County above 200 feet in elevation are of the Modesto form (Grinnell and Miller 1944, Shuford and Gardali 2008:400-402).
Purple martin *Progne subis* (nesting)	–	SC	Nests in tree cavities, bridges, utility poles, lava tubes, and buildings. Forages in foothill and low montane oak and riparian woodlands; less frequently in coniferous forests and open or developed habitats.	Unlikely to nest on site. Only known breeding colonies in the region are in the City of Sacramento where they nest in hollow-box bridges (Shuford and Gardali 2008:332-334) and in a highway overpass in the City of Rocklin.
Bank swallow *Riparia riparia* (nesting)	–	T	Nests in colonies in unvegetated vertical banks with fine-textured, sandy soils, typically next to streams, rivers, or lakes, occasionally in gravel quarries or other eroding bluffs. Forages in a variety of habitats near nests.	Unlikely to occur due to lack of suitable habitat. On-site creek banks are sloping and vegetated.
Mammals				
Pallid bat *Anthrozous pallidus*	–	SC	Deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats. Roosts in rock crevices, oak hollows, bridges, or buildings.	Could occur on site; potentially suitable roosting habitat in oak trees and mine shaft.
Ringtail *Bassariscus astutus*	–	FP	Large acreages of oak woodland, riparian and other dense brush habitats with rock recesses or hollow snags for cover.	Unlikely to occur on site due to marginal habitat quality, open understory, proximity to urban Folsom, and lack of connectivity to other riparian forest or oak woodland habitats.

Table 3A.3-2
Special-Status Wildlife with Potential to Occur in the SPA and Off-Site Elements

Species	Listing Status[1]		Habitat	Potential for Occurrence[2]
	Federal	State		
Townsend's big-eared bat *Corynorhinus townsendii*	–	SC	Typically roosts in caves; however, colonies of <100 individuals occasionally nest in buildings or bridges. Forages in all habitats except alpine and subalpine, though most commonly in mesic forests and woodlands.	Could occur on site; potentially suitable roosting habitat in oak trees and mine shaft.
Western mastiff bat *Eumops perotis californicus*	–	SC	Typically roosts in high cliffs and rock crevices in small colonies of <100 individuals. Forages in a variety of grassland, shrub and wooded habitats including riparian and urban areas, though most commonly in open, arid lands.	Could forage on site; site unlikely to provide suitable roosting habitat.
Western red bat *Lasiurus blossevilli*	–	SC	Roosts primarily in tree foliage, especially in cottonwood, sycamore, and other riparian trees or orchards (Pierson et al. 2004). Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging, including grasslands, shrublands, and open woodlands.	Could forage on site; unlikely roost on site due to lack of riparian woodland.
American badger *Taxidea taxus*	–	SC	Drier open shrub, forest, and herbaceous habitats with friable soils.	Could occur; suitable habitat present. Documented adjacent to the SPA by Matus 1981. Nearest CNNDB occurrence (1990) is 10 miles to the southwest in Rancho Cordova.

Note: CNDDB = California Natural Diversity Database; USFWS = U.S. Fish and Wildlife Service

[1] Legal Status Definitions

Federal:	State:
PD Proposed for Delisting	C Candidate for listing (legally protected)
D Delisted (no ESA protection)	FP Fully protected (legally protected)
E Endangered (legally protected)	SC Species of special concern (no formal protection other than CEQA consideration)
T Threatened (legally protected)	T Threatened (legally protected)

[2] Potential for Occurrence Definitions

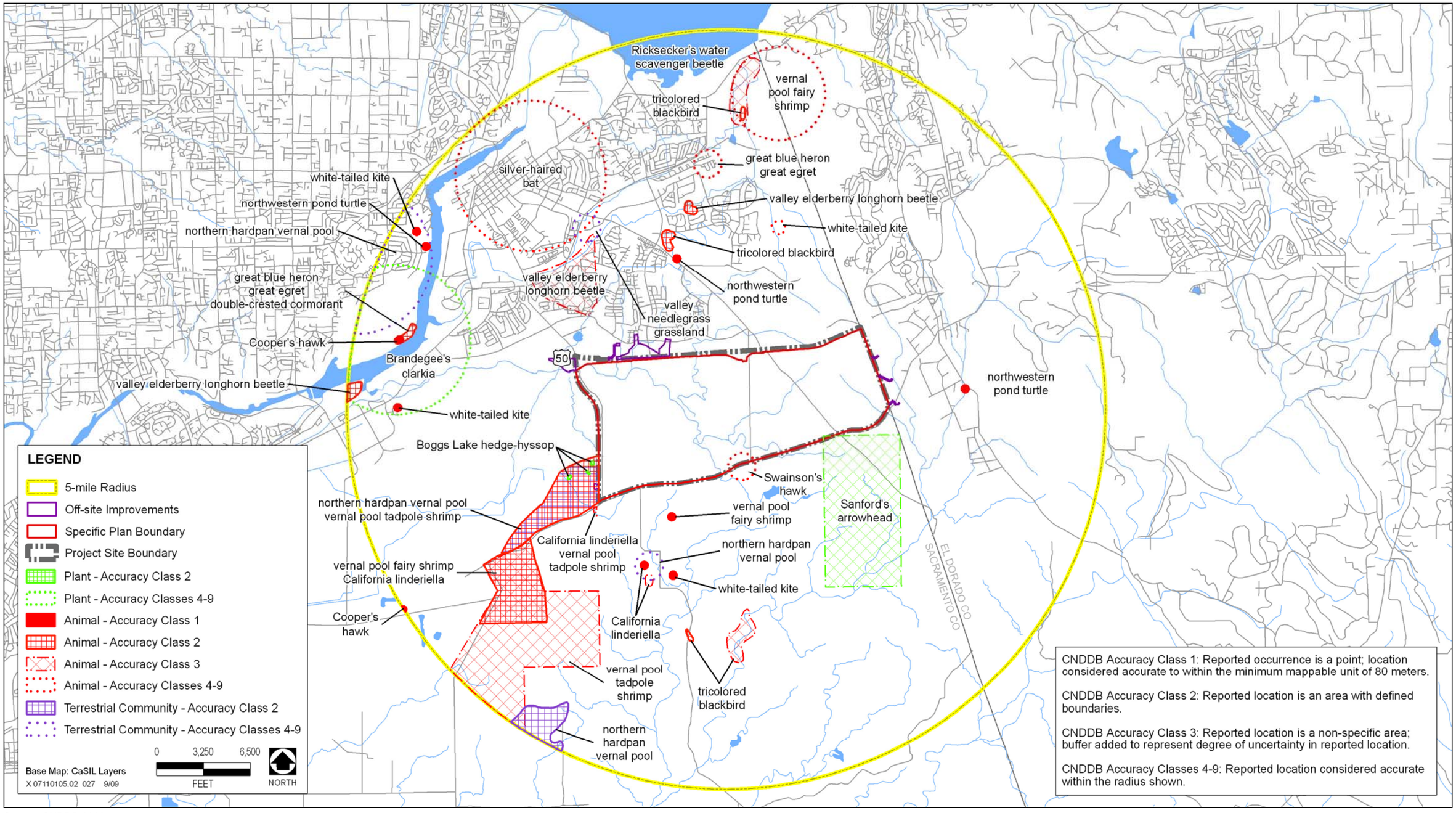
Unlikely to occur: Species is unlikely to be present in the SPA due to poor habitat quality, lack of suitable habitat features, or restricted current distribution of the species.

Could occur: Suitable habitat is available at the SPA; however, there are little to no other indicators that the species might be present.

Likely to occur: Habitat conditions, behavior of the species, known occurrences in the project vicinity, or other factors indicate a relatively high likelihood that the species would occur at the SPA.

Known to occur: The species, or evidence of its presence, was observed at the SPA during reconnaissance surveys, or was reported by others.

Source: CNDDB 2008; Holloway Rassmusson Molondanof 2005; GenCorp 2007a-d; Centex Homes 2006a; Foothill Associates 1998, Woodside Homes 2004; MJM Properties 2006 b and d, 2007; Colliers International 2006; Matus 1981 (cited in GenCorp 2007c); Shuford and Gardali 2008; USFWS 2008; data compiled by AECOM in 2009



Source: CNDDB 2009

CNNDB Occurrences within a Five-Mile Radius of the SPA **Exhibit 3A.3-2**

Special-Status Plants

The CNDDB and CNPS contain records for 22 special-status plant species in the nine quadrangles containing and surrounding the SPA. Based on the habitat and elevation range of the SPA, it was determined that 13 of these species have at least some potential to be present in the SPA (Table 3A.3-1). Two of these 13 species, Bogg's Lake hedge hyssop and Sanford's arrowhead, have a high likelihood of occurring in the SPA because they have been documented immediately adjacent to the site in similar habitats. Bogg's Lake hedge hyssop, a species that is state listed as endangered, has been documented in very close proximity to the proposed off-site detention basin location outside the southwest corner of the SPA. Potentially suitable habitat for Bogg's Lake hedge hyssop is present on the proposed detention basin site and there is high potential for this species to be present. Nine species listed in the CNDDB or CNPS Inventory as occurring in the vicinity of the SPA are not included in Table 3A.3-1 or addressed further in this EIR/EIS because they are restricted to higher elevations or restricted to habitats (e.g., chaparral) or particular soil types (e.g., serpentinite and gabbroic soils) that are not present in the SPA or off-site elements. These species are Stebbins' morning glory (*Calystegia stebbinsii*), Pine Hill Ceanothus (*Ceanothus roderickii*), Red Hills soaproot (*Chlorogalum grandiflorum*), Pine Hill flannelbush (*Fremontodendron decumbens*), El Dorado bedstraw (*Galium californicum* ssp. *sierrae*), Bisbee Peak rush-rose (*Helianthemum suffrutescens*), Layne's ragwort (*Packera layneae*), and El Dorado County mule ears (*Wyethia reticulata*). One other species, Hartweg's golden sunburst (*Pseudobahia bahiifolia*), was documented in the nine quadrangle search area, but the species is not expected to occur in the SPA because there is just one historic record of this species in the area from 1939 in El Dorado County. All other records of this species are from Fresno, Madera, Merced, Stanislaus, and Yuba Counties (Yuba occurrence thought to be extirpated) and so the SPA is outside of the currently known range of this species.

Focused surveys for special-status plant species have been conducted on the Folsom South, Prairie City Business Park, Hillsborough, and Sacramento Country Day School sites and no special-status plant species were found. However, surveys at the Folsom South and Sacramento Country Day School sites did not include big scale balsamroot, Brandegee's clarkia, or Sanford's arrowhead as target species. Big-scale balsamroot has very low potential to occur in grassland and oak woodland habitat in the SPA because serpentine soils are not present and the nearest documented occurrences are more than 10 miles away. The potential for this species cannot be completely ruled out, however, because although big scale balsamroot is most often associated with serpentinite soils, it is not restricted to serpentine and there is potentially suitable habitat present. Species that are weak indicators of serpentine such as narrow leaf soaproot (*Chlorogalum angustifolium*) have been identified in the SPA. Suitable habitat for Brandegee's clarkia is present throughout the SPA and there are documented occurrences in the immediate vicinity. Sanford's arrowhead has been documented immediately adjacent to the SPA and has high potential to be present in on-site ponds or sluggish portions of Alder Creek and its tributaries. Surveys conducted on the Hillsborough and Prairie City Road Business Park sites targeted all of the appropriate species, except big-scale balsamroot, which again has very low potential to grow in the SPA. The remainder of the SPA and off-site elements have not been surveyed for special-status plant species.

Special-Status Wildlife

Special-Status Fish

No special-status fish species are known or have potential to occur within the Alder Creek watershed. Anadromous Chinook salmon (*Oncorhynchus tshawytscha*) and steelhead (*Oncorhynchus mykiss*) use the lower American River below Nimbus Dam for spawning and rearing. Both of these species may have historically used Alder Creek prior to the construction of Nimbus Dam; however, the natural pre-development flow patterns that were more ephemeral and intermittent likely limited habitat values for these species. Potential adverse effects on special-status fish species and fisheries resources off-site are analyzed in Section 3.18, "Water Supply" of this EIR/EIS.

Sensitive Natural Communities

Sensitive natural Communities include those that are of special concern to DFG, or that are afforded specific consideration through CEQA, Section 1602 of the California Fish and Game Code, the Porter-Cologne Water Quality Act, and/or Section 404 of the CWA. Sensitive natural communities may be of special concern to these agencies and to conservation organizations for a variety of reasons, including their locally or regionally declining status, or because they provide important habitat to common and special-status species. Many of these communities are tracked in the CNDDB.

Natural communities present in the SPA that would be considered sensitive by regulatory agencies include vernal pools, seasonal wetland swales, seasonal wetlands, freshwater marsh, seeps, riparian habitats, valley needlegrass grassland, and blue oak woodland.

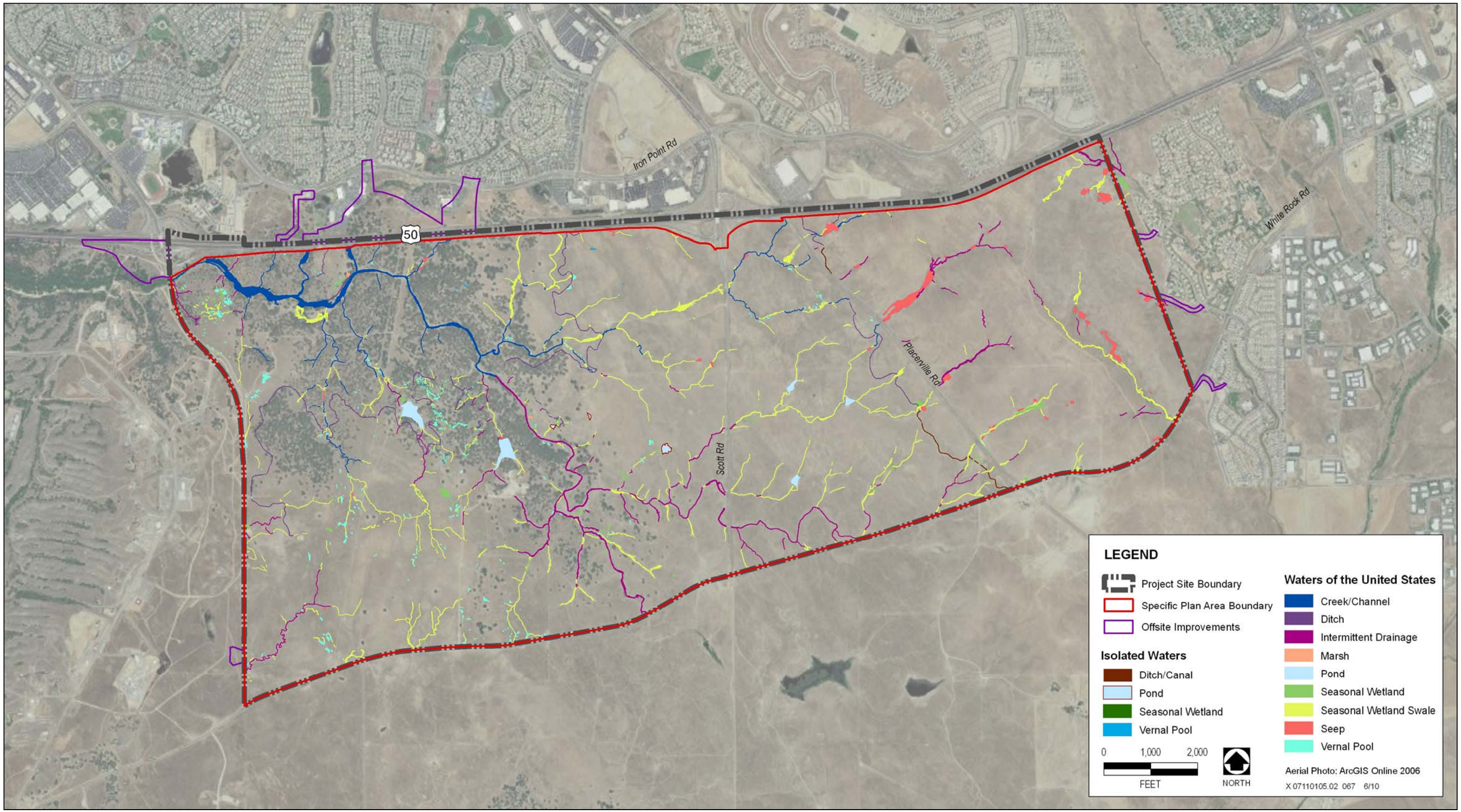
Wetlands and Other Waters of the U.S.

Wetland delineations for the various parcels contained within the SPA have been conducted by ECORP, EDAW/AECOM (now AECOM), Foothill Associates, and Gibson and Skordal between June 2005 and May 2007. The delineations covered the SPA in its entirety and all of them were conducted according to the methods identified in the U.S. Army Corps of Engineers (USACE) 1987 wetlands delineation manual (Environmental Laboratory 1987). The Javanifard and Zhargami parcel and the Folsom 138 property were delineated using the 1987 delineation manual plus the Interim Arid West Regional Supplement (Environmental Laboratory 2006). All of the wetland delineations have been verified by the USACE. The delineations identified a total of 83.64 acres of waters of the U.S., including wetlands, in the SPA. Waters of the U.S. delineated in the SPA consist of 10.80 acres of seeps, 4.64 acres of vernal pools, 4.66 acres of seasonal wetlands, 25.48 acres of seasonal wetland swales, 17.19 acres of perennial stream channels (including Alder Creek), 11.72 acres of intermittent stream channels, 0.11 acre of willow scrub, 1.96 acres of ditches, 0.21 acre of freshwater marsh, and 6.87 acres of ponds.

The SPA also contains 0.03 acre of isolated vernal pool, 0.004 acre of isolated seasonal wetland, 0.40 acre of ditch, and 0.85 acre of pond, which USACE determined to be nonnavigable, isolated, and intrastate waters with no apparent interstate commerce connection and therefore not at this time considered jurisdictional waters of the U.S. (non-jurisdictional). Although these aquatic features are not subject to USACE jurisdiction under Section 404 of the CWA, they may be considered waters of the state under California's Porter-Cologne Act, and therefore subject to regulation by the Central Valley Regional Water Quality Control Board (RWQCB). The locations and extent of wetlands and other waters of the U.S., as mapped by the biological consultants, are shown in Exhibit 3A.3-3.

Wetlands and other waters of the U.S. in the SPA, as well as waters of the state, provide important ecological functions within the watershed. Wetland functions are processes or services that take place in a wetland and they fall into the broad categories of habitat, hydrologic, and water quality functions. Habitat functions are those services that benefit wildlife and include providing food, shelter, water, and breeding grounds. Hydrologic functions of the wetlands and other waters in the SPA include groundwater recharge and moderation of discharge, water storage, and reduction of flow velocity. Water quality functions include nutrient cycling, removal of nutrients and compounds, and trapping sediment. Many wetland functions are interdependent and if one function becomes impaired, it can adversely affect other wetland functions.

In addition to waters of the U.S. in the SPA, it is estimated that the Off-site Elements (i.e., Prairie City Road, Oak Avenue, and Empire Ranch Interchanges, improvements to Prairie City and White Rock Roads, and an off-site detention basin) support approximately 5.85 acres of waters of the U.S. consisting of 0.59 acre of vernal pools, 0.25 acre of seasonal wetlands, 0.55 acre of seasonal wetland swales, 1.94 acres of freshwater marsh, 0.04 acre of intermittent drainage channels, 0.01 acre of ditch, and 2.47 acres of perennial stream channel. The wetlands and other waters within these off-site elements have not yet been delineated according to USACE methodology, so these numbers are approximate and have not been verified by USACE. An estimated 0.47 acre



Source: ECORP 2008, RRM Design Group 2008

Wetlands and Other Waters of the United States **Exhibit 3A.3-3**

of waters of the U.S. consisting of 0.003 acre vernal pool, 0.24 acre seasonal wetland, 0.14 acre intermittent drainage, and 0.09 acre freshwater marsh are present adjacent to a proposed off-site road extending from the eastern SPA boundary and connecting to Stonebriar Drive in El Dorado County (Road Connection No. 2). These features range from 10 to 70 feet in distance from the proposed road footprint. Waters of the U.S. within the location of road connections to El Dorado County were delineated according to USACE methodology, but these delineations have not been verified by USACE. Waters of the U.S. were not identified within the remaining Off-site Element locations (i.e., Rowberry Drive Overcrossing, sewer force main, and Road Connection No. 1 to El Dorado County).

3A.3.2 REGULATORY FRAMEWORK

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

Federal Endangered Species Act

USFWS and the National Marine Fisheries Service have authority over projects that may result in take of a species listed as threatened or endangered under ESA (i.e., a Federally listed species). In general, persons subject to ESA (including private parties) are prohibited from "taking" endangered or threatened fish and wildlife species on private property, and from "taking" endangered or threatened plants in areas under Federal jurisdiction or in violation of state law. Under ESA, the definition of "take" is to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." USFWS has also interpreted the definition of "harm" to include significant habitat modification that could result in take. If a proposed project would result in take of a Federally listed species, the project applicant must acquire either an incidental-take permit, under Section 10(a) of ESA, or a Federal interagency consultation, under Section 7 of ESA before the take occurs. Such a permit typically requires various types of mitigation to compensate for or minimize the take.

Section 404 of the Clean Water Act

Section 404 of the Federal CWA requires a project applicant to obtain a permit before engaging in any activity that involves any discharge of dredged or fill material into waters of the U.S., including wetlands. Fill material is material placed in waters of the U.S. where the material has the effect of replacing any portion of a water of the United States with dry land, or changing the bottom elevation of any portion of a water of the United States. Waters of the U.S. include navigable waters of the U.S.; interstate waters; all other waters where the use, degradation, or destruction of the waters could affect interstate or foreign commerce; tributaries to any of these waters, and wetlands adjacent to these waters. Wetlands are defined as those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Potentially jurisdictional wetlands must meet three wetland delineation criteria: hydrophytic vegetation, hydric soil types, and wetland hydrology. Wetlands that meet the delineation criteria may be jurisdictional under Section 404 of CWA pending USACE and U.S. Environmental Protection Agency (EPA) review.

As part of the review of a project, USACE must ensure compliance with applicable Federal laws, including EPA's Section 404(b)(1) Guidelines, which are described in Chapter 2, "Alternatives," Section 2.2.2. USACE regulations require that impacts to waters of the U.S. are avoided and minimized to the maximum extent practicable, and that unavoidable impacts are compensated (33 CFR 320.4[r]).

In 2008, USACE and EPA issued regulations governing compensatory mitigation for activities authorized by permits issued by USACE (33 CFR 332). The rule establishes a preference for the use of mitigation banks because they provide established wetland habitats that have already met success criteria thereby reducing some of the risks and uncertainties associated with compensatory mitigation involving creation of new wetlands that cannot yet demonstrate functionality at the time of project implementation. The rule also establishes a preference for providing compensatory mitigation within the affected watershed. Ideally, compensatory mitigation would

take place at a mitigation bank within the same watershed as the waters to be replaced. If mitigation banks are not available within the affected watershed, then compensatory mitigation involving creation or restoration within the affected watershed may be preferable to using a mitigation bank outside the affected watershed.

Section 401 Water Quality Certification

Under Section 401 of the CWA, an applicant for a Section 404 permit must obtain a certificate from the appropriate state agency stating that the intended dredging or filling activity is consistent with the state's water quality standards and criteria. In California, the authority to grant water quality certification is delegated by the State Water Resources Control Board to the nine RWQCBs.

Wetland Conservation Provision (Swampbuster) of the Food Securities Act

The Wetland Conservation provision of the 1985 and 1990 farm bills requires all agricultural producers to protect wetlands on the farms they own or operate to be eligible for U.S. Department of Agriculture (USDA) farm program benefits. Producers will not be eligible if they plant an agricultural commodity on a wetland converted by drainage, leveling, or any other means after December 23, 1985, or convert a wetland for the purpose of or to make agricultural production possible after November 28, 1990. The Natural Resources Conservation Service (NRCS) is the lead Federal agency responsible for wetland delineations on agricultural land for both Swampbuster and Section 404. Generally, areas subject to regulation under Swampbuster and Section 404 are the same, but some activities that are exempt under Swampbuster may require permitting under Section 404. Many ongoing, normal farming activities, such as plowing, harvesting, seeding, and construction and maintenance of irrigation ditches, stock ponds, and farm roads are exempt from Section 404 of the CWA under the condition they would not result in bringing a wetland into agricultural production or converting an agricultural wetland to a non wetland area. Farmers are required to contact either NRCS or USACE before conducting any activities that could affect wetlands to verify applicability of exemptions and determine if permits are needed.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA), first enacted in 1918, provides for protection of international migratory birds and authorizes the Secretary of the Interior to regulate the taking of migratory birds. The MBTA provides that it shall be unlawful, except as permitted by regulations, to pursue, take, or kill any migratory bird, or any part, nest, or egg of any such bird. The current list of species protected by the MBTA can be found in Title 50 of the Code of Federal Regulations (CFR), Section 10.13 (50 CFR 10.13). The list includes nearly all birds native to the United States.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

California Endangered Species Act

The California Endangered Species Act (CESA) directs state agencies not to approve projects that would jeopardize the continued existence of an endangered or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of a species. Furthermore, CESA states that reasonable and prudent alternatives shall be developed by DFG, together with the project proponent and any state lead agency, consistent with conserving the species, while at the same time maintaining the project purpose to the greatest extent possible. A "take" of a species, under CESA, is defined as an activity that would directly or indirectly kill an individual of a species. The CESA definition of take does not include "harm" or "harass" as is included in the Federal act. As a result, the threshold for a take under CESA may be higher than under ESA because habitat modification is not necessarily considered take under CESA.

California Public Resources Code Section 21083.4 (Oak Woodlands)

Section 21083.4 of the California Public Resources Code requires counties to determine if a project within their jurisdiction may result in conversion of oak woodlands that would have a significant adverse effect on the environment. If the lead agency determines that a project would result in a significant adverse effect on oak woodlands, mitigation measures to reduce the significant adverse effect of converting oak woodlands to other land uses are required.

Section 1602 of the California Fish and Game Code

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources are subject to regulation by DFG under Section 1602 of the California Fish and Game Code. Under Section 1602, it is unlawful for any person to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by DFG, or use any material from the streambeds, without first notifying DFG of such activity and obtaining a final agreement authorizing such activity. "Stream" is defined as a body of water that flows at least periodically or intermittently through a bed or channel having banks and that supports fish or other aquatic life. DFG's jurisdiction within altered or artificial waterways is based on the value of those waterways to fish and wildlife. A DFG streambed alteration agreement must be obtained for any project that would result in an impact on a river, stream, or lake.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act requires that each of the nine RWQCBs prepare and periodically update basin plans for water quality control. Each basin plan sets forth water quality standards for surface water and groundwater and actions to control nonpoint and point sources of pollution to achieve and maintain these standards. Basin plans offer an opportunity to protect wetlands through the establishment of water quality objectives. The RWQCB's jurisdiction includes Federally protected waters as well as areas that meet the definition of "waters of the state." Waters of the state is defined as any surface water or groundwater, including saline waters, within the boundaries of the state. The RWQCB has the discretion to take jurisdiction over areas not Federally protected under Section 401 provided they meet the definition of waters of the state. Mitigation requiring no net loss of wetlands functions and values of waters of the state is typically required by the RWQCB.

California Fish and Game Code Section 3503.5 (Protection of Raptors)

Section 3503.5 of the California Fish and Game Code states that it is unlawful to take, possess, or destroy any raptors (i.e., species in the orders Falconiformes and Strigiformes), including their nests or eggs. Typical violations include destruction of active raptor nests as a result of tree removal and failure of nesting attempts, resulting in loss of eggs and/or young, because of disturbance of nesting pairs by nearby human activity.

REGIONAL AND LOCAL PLANS, POLICIES, REGULATIONS, AND LAWS

Sacramento County Policies and Ordinances

The following goals and policies of the Sacramento County General Plan (1993) are applicable only to the off-site detention basin east of Prairie City Road under all five action alternatives because the SPA would be annexed into the City of Folsom and would no longer be under Sacramento County jurisdiction if any of the action alternatives were implemented. There are no Sacramento County goals and policies that are applicable to the No Project Alternative because the SPA would continue to be used for cattle grazing and no development requiring County permits would take place.

Conservation Element

- **Policy CO-62.** Ensure no net loss of marsh and riparian woodland acreage, functions, and values.

- **Policy CO-83.** Ensure no net loss of vernal pool acreage, functions, and values and mitigate any loss in relation to the values of quality of habitat.

- **Policy CO-84.** Evaluate feasible on-site alternatives in the environmental review process that reduce impacts on vernal pools and provide effective on-site preservation in terms of minimum management requirements, effective size, and evaluation criteria identified in the report "Sacramento County Vernal Pools" (Sacramento County1990).

- **Policy CO-85.** Require in-kind compensation for the type and functional values of vernal pools eliminated by development.

- **Policy CO-86.** When on-site preservation or mitigation is infeasible or undesirable, require off-site mitigation at County-approved mitigation banks within Sacramento County.

- **Policy CO-112.** Channel modifications shall retain marsh and riparian vegetation whenever possible or otherwise recreate the natural stream channel consistent with the ecological integrity of the preexisting stream. Modifications resulting in wetland or riparian loss shall be mitigated.

- **Policy CO-117.** Provide a transition zone adjacent to stream corridors which incorporates:

  1) A buffer zone on each side of the stream, between the outer edge of any existing or planned riparian or wetland vegetation and more intensive uses.

  2) The transition zone for stream corridors shall provide sufficient width to allow a minimum 50 to 150 foot natural buffer, a 20 foot mowed fire break at the outer edge, sufficient additional width to provide for access for channel maintenance and flood control and for planned passive recreation uses.

  3) The width of the natural buffers shall be based on:
     a. quality and quantity of existing and planned habitat,
     b. presence of species as well as species sensitivity to human disturbance,
     c. areas for regeneration of vegetation,
     d. corridor for wildlife habitat linkage,
     e. nature of planned urban uses adjacent to the corridor,
     f. need for community greenways, and
     g. the effective use of active barriers.

  4) The transition zone shall not include containment ponds for other features implementing pollutant discharge requirements.

- **Policy CO-147.** Identify suitable habitat for threatened and endangered species through the Community and Specific Plan process.

- **Policy CO-149.** Acquisition programs for acquiring open space located within natural areas shall, wherever possible, review the significance of obtaining areas known to contain threatened, endangered, and special status species.

- **Policy CO-150.** To the extent feasible, plans for urban development and flood control projects shall incorporate habitat corridors connecting on-site or adjoining areas (if any) not designated for alteration.

Sacramento County Swainson's Hawk Ordinance

Chapter 16.130 of Title 16 of the Sacramento County Code addresses the reduction in Swainson's hawk foraging habitat within unincorporated Sacramento County. Under the County's Swainson's Hawk Mitigation Program, mitigation for impacts over 40 acres can be achieved only by providing replacement habitat. This policy would apply only to the off-site detention basin east of Prairie City Road under all five action alternatives because the SPA would be annexed into the City of Folsom and would no longer be under Sacramento County jurisdiction if any of the action alternatives were implemented. This policy would not be applicable under the No Project Alternative because the SPA would continue to be used for cattle grazing and no development requiring County permits would take place.

Sacramento County Tree Preservation Ordinance

The Sacramento County Tree Preservation Ordinance provides protection for trees meeting the following specifications:

- native oak trees with a diameter at breast height (DBH) of 6 inches or greater;
- heritage oak trees, which are defined as California oak trees with a DBH of 60 inches or greater; and
- street or public trees, which are defined as any tree that is rooted on public property or with one-half of its crown diameter (drip line) overlapping public property; and landmark trees, which are defined as especially prominent or stately trees.

This ordinance would apply only to the off-site detention basin east of Prairie City Road under all five action alternatives because the SPA would be annexed into the City of Folsom and would no longer be under Sacramento County jurisdiction if any of the action alternatives were implemented. This policy would not be applicable under the No Project Alternative because the SPA would continue to be used for cattle grazing and no development requiring County permits would take place.

El Dorado County Policies and Ordinances

The following goals and policies of the El Dorado County General Plan (2004) are applicable only to the two local roadway connections from the Folsom Heights property off-site into El Dorado Hills under the Proposed Project Alternative. There are no El Dorado County goals and policies that are applicable to the No Project Alternative or other four action alternatives because the SPA is not within El Dorado County and the Proposed Project Alternative is the only one that has off-site elements within El Dorado County.

Conservation and Open Space Element

- **Policy 7.3.3.1:** For projects that would result in the discharge of material to or that may affect the function and value of river, stream, lake, pond, or wetland features, the application shall include a delineation of all such features. For wetlands, the delineation shall be conducted using the U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual.
- **Policy 7.3.3.5:** Rivers, streams, lakes and ponds, and wetlands shall be integrated into new development in such a way that they enhance the aesthetic and natural character of the site while disturbance to the resource is avoided or minimized and fragmentation is limited.
- **Policy 7.4.1.5:** Species, habitat, and natural community preservation/conservation strategies shall be prepared to protect special status plant and animal species and natural communities and habitats when discretionary development is proposed on lands with such resources unless it is determined that those resources exist, and either are or can be protected, on public lands or private Natural Resource lands.

- **Policy 7.4.1.6:** All development projects involving discretionary review shall be designed to avoid disturbance or fragmentation of important habitats to the extent reasonably feasible. Where avoidance is not possible, the development shall be required to fully mitigate the effects of important habitat loss and fragmentation. Mitigation shall be defined in the Integrated Natural Resources Management Plan (INRMP).

Folsom Municipal Code Chapter 12.16 – Tree Preservation

Folsom Municipal Code Chapter 12.16 protects native oak trees (i.e., *Quercus lobata*, *Q. douglasii*, *Q. wislizenii*, and hybrids thereof) with a DBH of 6 inches or greater for single trunk trees or an aggregate DBH of 20 inches or greater for multiple trunk trees; landmark trees, heritage trees, and street trees. Landmark trees are trees determined by the city council to be a significant community benefit. Heritage trees are native oak trees with a DBH of 19 inches or greater for single trunk trees or an aggregate DBH of 38 inches or greater for multiple trunk trees. Street tree means any tree growing within the City's tree maintenance strip and contained on the master tree list available from the planning director. Removal of protected trees, as well as disturbances that could result in eventual death, such as trenching, grading, soil compaction, placement of fill, impervious surfaces, irrigation, and landscaping within the drip lines of protected trees requires a tree permit be obtained from the City Planning Director.

City of Folsom General Plan

The following goals and policies of the City of Folsom General Plan (1993) are applicable to the Proposed Project and the other four action alternatives. There are no City of Folsom goals or policies that would apply to the No Project Alternative.

Open Space and Conservation Element

GOAL 25: preserve, acquire, enhance, and maintain the biological resources identified below, wherever feasible, for the use and enjoyment of present and future generations:

- Sensitive habitats including riparian vegetation, vernal pools, remnant valley bunch grasslands (e.g., valley needlegrass grassland), oak savanna and woodlands, freshwater marshlands, and permanent and seasonal wetlands.

- Sensitive wildlife species including tricolored blackbird, Swainson's hawk, tiger salamander, and valley elderberry longhorn beetle.

Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon

The Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon (USFWS 2005) was released by USFWS on December 15, 2005. This plan focuses on 33 species of plants and animals that occur exclusively or primarily within vernal pool ecosystems, including the Federally listed vernal pool fairy shrimp and tadpole shrimp. The plan outlines recovery priorities and provides goals, objectives, strategies, and criteria for recovery. One of the overall objectives of the recovery plan is to promote natural ecosystem processes and functions by protecting and conserving intact vernal pools and vernal pool complexes. Habitat protection under the recovery plan includes the protection of the topographic, geographic, and edaphic features that support hydrologically interconnected systems of vernal pools, swales, and other seasonal wetlands within an upland matrix that together form hydrologically and ecologically functional vernal pool complexes. While not regulatory in nature, the Recovery Plan needs to be taken into consideration when analyzing potential impacts on vernal pools and associated biota to ensure that projects do not prevent or impair the plan's future long term implementation success. It is also used by the USFWS to determine recommendations and requirements during endangered species consultation for vernal pool dependent species.

3A.3.3 ENVIRONMENTAL CONSEQUENCES AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

The thresholds for determining the significance of impacts for this analysis are based on the environmental checklist in Appendix G of the State CEQA Guidelines. These thresholds also encompass the factors taken into account under NEPA to determine the significance of an action in terms of its context and the intensity of its impacts. The Proposed Project or alternatives under consideration were determined to result in a significant impact related to biological resources if they would do any of the following:

- have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by DFG 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 DFG or USFWS;
- have a substantial adverse effect on Federally protected waters of the U.S., including wetlands, as defined by Section 404 of the CWA through direct removal, filling, hydrological interruption, or other means;
- interfere substantially with the movement of any native resident or migratory 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;
- 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; or
- result in a conversion of oak woodland that would have a significant effect on the environment.

ANALYSIS METHODOLOGY

This analysis of impacts on biological resources resulting from implementation of the project is based on review of existing biological resources documented on or near the SPA, as listed previously in this section, information obtained from the CNDDB and CNPS databases, and a reconnaissance site visit conducted by EDAW/AECOM (now AECOM) staff on September 26, 2007. All biological resources impacts are analyzed at a program level of detail.

Analysis of impacts for the No Project Alternative is based on proposed land use development under the current Sacramento County General Plan zoning as General Agriculture - 80 acres (AG-80). This land use designation allows farming operations of no less than 80 acres with no more than one residence per 80 acres (for a total of up to 44 residences in the SPA). Compatible uses include dry land grain farming and dry or irrigated pastures, but intensive agriculture such as row crops, tree crops, and dairies are not consistent with this land use designation. Analysis of biological resources impacts for the No Project Alternative are based on the assumption that the SPA would continue to be used primarily as range land, and a Section 404 permit would not be required from USACE. Constraints to other agricultural development in the SPA include shallow soils, unreliable water supply, moderately steep topography, and fair to poor crop yield (Sacramento County 1993).

IMPACT ANALYSIS

Impacts that would occur under each alternative development scenario are identified as follows: NP (No Project), NCP (No USACE Permit), PP (Proposed Project), RIM (Resource Impact Minimization), CD (Centralized Development), and RHD (Reduced Hillside Development). The impacts for each alternative are compared relative to the PP at the end of each impact conclusion (i.e., similar, greater, lesser).

IMPACT 3A.3-1 Loss and Degradation of Waters of the U.S., including Wetlands, and Waters of the State. *Project implementation would result in the placement of fill material into jurisdictional waters of the U.S., including wetlands subject to USACE jurisdiction under the Federal CWA. Wetlands and other waters of the U.S. that would be affected by project implementation include seeps, vernal pools, seasonal wetlands and seasonal wetland swales, drainage channels, ditches, and ponds. Waters of the state would also be filled with project implementation.*

On-Site and Off-Site Elements

NP

Under the No Project Alternative, the SPA would continue to be used for cattle grazing under the existing Sacramento County General Plan designations and zoning, and no off-site water improvements would be constructed. This activity is not expected to result in discharge of fill or dredged materials into waters of the U.S. or the loss of wetlands including vernal pools. No changes in the zoned land use would be expected under the No Project Alternative and site topography would not be altered. Therefore **direct** and **indirect** impacts on waters of the U.S. and waters of the state would be **less than significant**. ***[Lesser]***

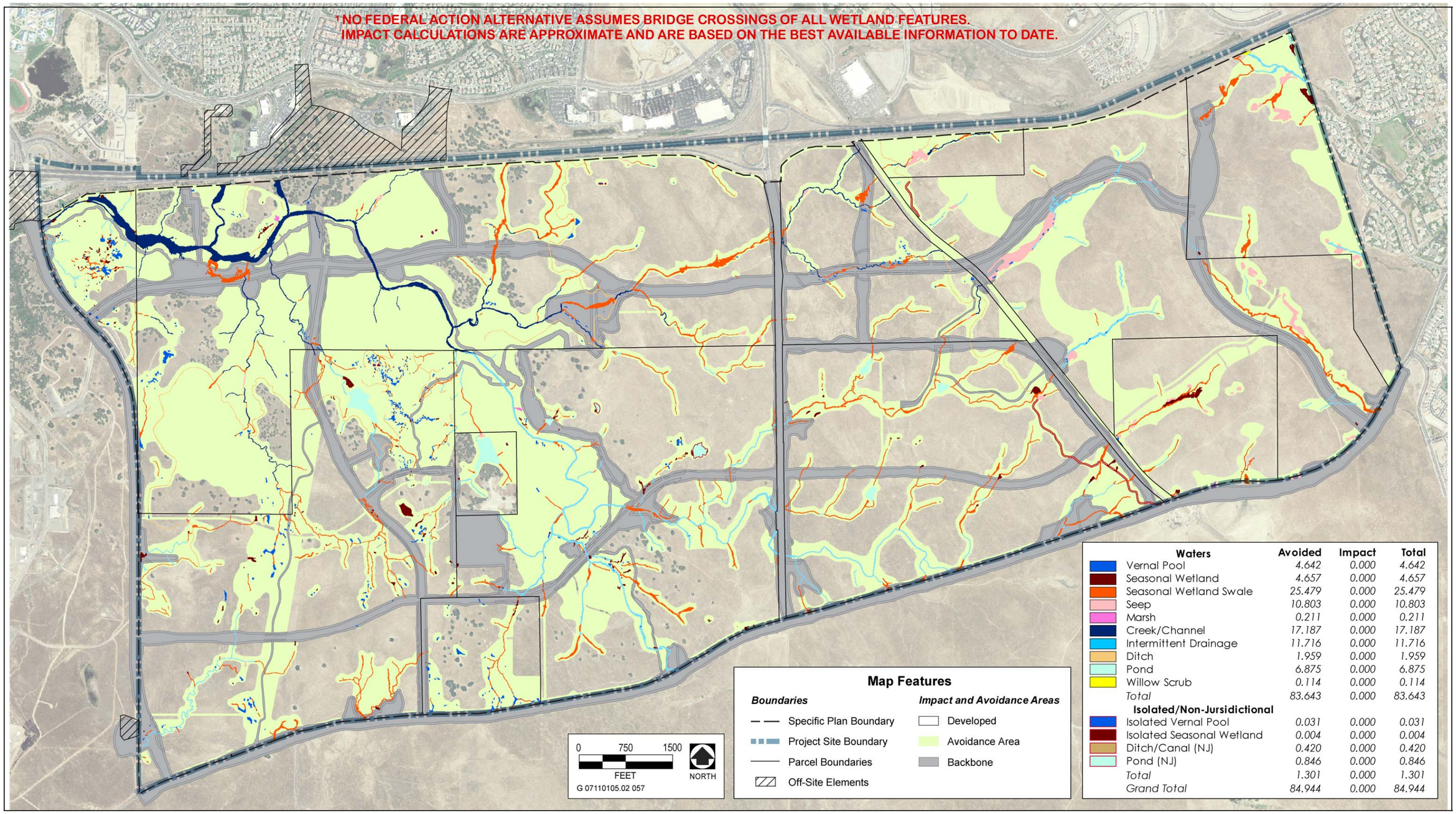
On-Site Elements

NCP

The No USACE Permit Alternative would not result in fill of wetlands or other waters subject to USACE jurisdiction under the CWA. No development would occur within 50 feet of wetland features and free spanning bridges would be constructed wherever roadways cross waters to avoid impacts on these waters. This alternative would designate an additional 456 acres of open space compared to the Proposed Project Alternative. However, mixed use development would still be constructed adjacent to aquatic resources resulting in topographic modifications, creation of impervious surfaces, urban runoff, erosion, and siltation; intrusion of humans and domestic animals; and introduction of invasive plant species that could result in habitat degradation.

Relative to the other project alternatives, excluding the No Project Alternative, the No USACE Permit Alternative would preserve a larger proportion of the wetland and drainage complexes within the SPA, provide a larger buffer to minimize impacts of adjacent land uses, and preserve a greater proportion of upland habitat to support species that use both wetland and upland habitats and provide ecological services to vernal pool species. This alternative would also preserve all of the existing acreage of isolated waters considered waters of the state. Exhibit 3A.3-4 depicts aquatic resources in the SPA relative to the open space areas and impact areas for the No USACE Permit Alternative.

Because this alternative would not result in fill of waters of the U.S., **no direct** impacts would occur. ***[Lesser]*** However, this alternative would still result in substantial changes to site topography and increased impervious surfaces and urban development would still occur. Therefore, **indirect significant** impacts would result, but to a much lesser extent than the Proposed Project Alternative. ***[Lesser]***



Source: ECORP 2009

Aquatic Resources and Open Space Areas Under the No USACE Permit Alternative **Exhibit 3A.3-4**

Mitigation Measure 3A.3-1a: Design Stormwater Drainage Plans and Erosion and Sediment Control Plans to Avoid and Minimize Erosion and Runoff to All Wetlands and Other Waters That Are to Remain in the SPA and Use Low Impact Development Features.

To minimize indirect effects on water quality and wetland hydrology, the project applicant(s) of all project phases shall include stormwater drainage plans and erosion and sediment control plans in their improvement plans and shall submit these plans to the City Public Works Department for review and approval. For off-site elements within Sacramento County or El Dorado County jurisdiction (e.g., off-site detention basin and off-site roadway connections to El Dorado Hills), plans shall be submitted to the appropriate county planning department. Before approval of these improvement plans, the project applicant(s) of all project phases shall obtain a NPDES MS4 Municipal Stormwater Permit and Grading Permit, comply with the City's Grading Ordinance and County drainage and stormwater quality standards, and commit to implementing all measures in their drainage plans and erosion and sediment control plans to avoid and minimize erosion and runoff into Alder Creek and all wetlands and other waters that would remain on-site. Detailed information about stormwater runoff standards and relevant City and County regulation is provided in Chapter 3A.9, "Hydrology and Water Quality."

The project applicant(s) of all project phases shall implement stormwater quality treatment controls consistent with the *Stormwater Quality Design Manual for Sacramento and South Placer Regions* (Sacramento Stormwater Quality Control Partnership 2007). Appropriate runoff controls such as berms, storm gates, off-stream detention basins, overflow collection areas, filtration systems, and sediment traps shall be implemented to control siltation and the potential discharge of pollutants. Development plans shall incorporate Low Impact Development (LID) features, such as pervious strips, permeable pavements, bioretention ponds, vegetated swales, disconnected rain gutter downspouts, and rain gardens, where appropriate. Use of LID features is recommended by the EPA to minimize impacts on water quality, hydrology, and stream geomorphology and is specified as a method for protecting water quality in the proposed specific plan. In addition, free spanning bridge systems shall be used for all roadway crossings over wetlands and other waters that are retained in the on-site open space. These bridge systems would maintain the natural and restored channels of creeks, including the associated wetlands, and would be designed with sufficient span width and depth to provide for wildlife movement along the creek corridors even during high-flow or flood events.

In addition to compliance with City ordinances, the project applicant(s) of all project phases shall obtain a General Construction Stormwater Permit from the Central Valley RWQCB, prepare a Stormwater Pollution Prevention Plan (SWPPP), and implement Best Management Practices (BMPs) to reduce water quality effects during construction. Detailed information about the SWPPP and BMPs are provided in Chapter 3A.9, "Hydrology and Water Quality."

Each project phase shall result in no net change to peak flows into Alder Creek and associated tributaries, or to Buffalo Creek, Carson Creek, and Coyote Creek. The project applicant(s) shall establish a baseline of conditions for drainage on-site. The baseline-flow conditions shall be established for 2-, 5-, 10-, and 20-year storm events. These baseline conditions shall be used to develop monitoring standards for the stormwater system in the SPA. The baseline conditions, monitoring standards, and a monitoring program shall be submitted to USACE and the City for their approval. Water quality and detention basins shall be designed and constructed to ensure that the performance standards, which are described in Chapter 3A.9, "Hydrology and Water Quality," are met and shall be designed as off-stream detention basins. Discharge sites into Alder Creek and associated tributaries, as well as tributaries to Carson Creek, Coyote Creek, and Buffalo Creek, shall be monitored to ensure that preproject conditions are being met. Corrective measures shall be implemented as necessary. The mitigation measures will be satisfied when the monitoring standards are met for 5 consecutive years without undertaking corrective measures to meet the performance standard.

The project applicant(s) shall design a land use plan that moves the proposed on-stream detention basin in the northeast corner of the SPA to a location that is off stream. All water quality and detention basins constructed as part of the project shall be designed and built off stream.

Mitigation for the off-site elements outside of the City of Folsom's jurisdictional boundaries must be coordinated by the project applicant(s) of each applicable project phase with the affected oversight agency(ies) (i.e., El Dorado County for the roadway connections, Sacramento County for the detention basin west of Prairie City Road, and Caltrans for the U.S. 50 interchange improvements).

Implementation: Project applicant(s) of all project phases and on-site and off-site elements.

Timing: Before approval of improvement and drainage plans, and on an ongoing basis throughout and after project construction, as required for all project phases.

Enforcement:

1. For all project-related improvements that would be located within the City of Folsom: City of Folsom Public Works Department.
2. For the two roadway connections in El Dorado Hills: El Dorado County Development Services Department.
3. For the detention basin west of Prairie City Road: Sacramento County Planning and Community Development Department.
4. For the U.S. 50 interchange improvements: Caltrans.
5. U.S. Army Corps of Engineers, Sacramento District.
6. Central Valley Regional Water Quality Control Board.

PP

Implementation of the Proposed Project Alternative would result in direct impacts from the loss of waters of the U.S. resulting from the placement of fill material into approximately 39.50 acres of Federally jurisdictional waters of the U.S. on-site, including wetlands. This constitutes 47% of the existing waters of the U.S. present in the SPA. Waters of the U.S. that would be filled consist of 2.92 acres of vernal pools, 3.87 acres of seasonal wetland, 17.63 acres of seasonal wetland swale, 0.07 acre of freshwater marsh, 4.48 acres of freshwater seep, 1.17 acres of pond, 3.38 acres of stream channel, 4.47 acres of intermittent drainage channel, 1.43 acres of ditches, and 0.11 acre of willow scrub. In addition, 1.25 out of 1.30 acres of waters that USACE determined to be non-jurisdictional would also be filled by the Proposed Project Alternative. The non-jurisdictional waters in the SPA consist of 0.03 acre of vernal pool, 0.004 acre of seasonal wetland, 0.42 acre of ditch, and 0.85 acre of pond. Though the placement of fill material into these waters does not require a permit from USACE under Section 404 of the CWA, they are considered waters of the state subject to the jurisdiction of the Central Valley RWQCB under the Porter-Cologne Act. The conversion of these waters of the U.S. to uplands from the placement of fill material would result in a complete loss of the functions of the waters of the U.S. In addition to direct impacts resulting from the placement of fill material into Federally jurisdictional waters of the U.S., the Proposed Project Alternative would also result in indirect impacts to 0.29 acres of waters of the U.S. from fragmentation. This would occur as a result of placing fill material into the upstream and downstream portions of the waters of the U.S. proposed to be placed into the open space preserve, as described below. Because the upstream and downstream portions of these preserved waters of the U.S. would be filled, indirect impacts would occur to 0.17 acre of seasonal wetland swale, 0.016 acre of perennial stream channel, 0.09 acre of intermittent drainage, and 0.012 acre of ditch resulting in a loss of/adverse indirect impacts to the functions of these waters. While fragmented stream channels could function to store surface water, recharge groundwater, and provide some habitat values, they would no longer function to

convey stormwater through the system, transport sediment, reduce flow velocity, and their nutrient cycling and other water quality functions would be diminished. Many of the features that currently convey seasonal flows could become inundated year round when cut off from other drainage channels.

The Proposed Project Alternative includes 1,050 acres of open space designed to preserve approximately 52% of the wetlands and other waters of the U.S. present in the SPA, including most of Alder Creek. Approximately 6.33 acres of freshwater seep, 1.72 acres of vernal pools, 0.78 acre of seasonal wetland, 7.85 acres of seasonal wetland swale, 13.81 acres of perennial stream channel, 7.25 acres of intermittent drainage channel, 0.55 acre of ditches, 0.14 acre of freshwater marsh, and 5.71 acres of ponds would be preserved within the open space areas. Preserved wetlands and other waters within the designated open space areas would be provided a 25-foot buffer where no project-related ground disturbance would occur. Outside of the 25-foot buffer, an additional 50 feet of no development buffer would be established; however, disturbance associated with contour grading, mitigation planting, trails, benches, and other passive recreational amenities may occur in the outer 50 feet of buffer. Exhibit 3A.3-5 depicts aquatic resources in the SPA relative to the open space areas and impact areas for the Proposed Project Alternative. Table 3A.3-3 provides a summary of impacts on wetlands and other waters of the U.S. and preservation under the Proposed Project Alternative development scenario. Table 3A.3-4 provides a side by side comparison of preserved versus affected acreage of wetlands and other waters of the U.S. for each project alternative. The open space design provides a large habitat patch that maintains stream networks and wetland complexes, provides corridors for habitat connectivity both on and off the SPA, and minimizes the perimeter-to-area ratio (i.e., edge effects).

In addition to direct impacts, the Proposed Project Alternative would result in indirect effects on wetlands from increased urbanization and population, including reduction in water quality caused by urban runoff, erosion, and siltation; intrusion of humans and domestic animals; and introduction of invasive plant species that could result in habitat degradation. On-site wetlands and other waters would be indirectly affected by substantial grading and creation of impervious surfaces proposed for adjacent uplands. All portions of the SPA, with the exception of 25-foot buffers around preserved wetlands, would be subject to contour grading, which could affect wetland hydrology and water quality. Overall site topography would be substantially altered to achieve level ground for development. These earthmoving activities and resulting gradient changes across the SPA could alter hydrologic patterns and adversely affect wetlands and drainage channels retained in the SPA, as well as off-site wetlands, by altering hydration periods, peak flows, runoff volumes, and runoff durations. Construction of a 1.4-acre on-site detention basin on an intermittent tributary to Carson Creek on the Folsom Heights site could substantially alter water quality and hydrology of Carson Creek and associated wetlands and other waters of the U.S. Construction of new roadways and roadway improvements associated with development of the backbone infrastructure and the on-stream detention basin could disrupt or eliminate hydrologic connectivity that is important to support wetlands and the plant and wildlife species that inhabit them. Although the main channel of Alder Creek would be retained, many intermittent tributaries and seasonal swales directly connected to Alder Creek would be filled. This could adversely affect the hydrology and water quality of the preserved portions of the creek.

The loss and degradation of USACE jurisdictional vernal pools and other wetland habitats and other waters of the U.S. (e.g., ponds and drainage channels) that would occur with project implementation constitutes a substantial adverse effect on Federally jurisdictional waters of the U.S., including wetlands, as defined by Section 404 of the CWA. Construction of the on-stream detention basin is a significant direct and indirect impact. Removal of 1.25 acres non USACE jurisdictional wetlands in the SPA constitutes an adverse effect on waters of the state subject to Central Valley RWQCB jurisdiction. Therefore, both **direct** and **indirect significant** impacts would occur.

Mitigation Measure: Implement Mitigation Measure 3A.3-1a.

Table 3A.3-3
Summary of Wetland Impacts and Preservation for the Proposed Project Alternative

Habitat Type	Acres Existing	Acres Filled (Direct Impact)	Acres Fragmented (Indirect Impact)	Acres Preserved	Percent Preserved
Waters of the United States (Federally Jurisdictional)					
Seep	10.80	4.48	0.00	6.33	59
Vernal pool	4.64	2.92	0.00	1.72	37
Seasonal wetland	4.66	3.87	0.00	0.78	17
Seasonal swale	25.48	17.63	0.17	7.85	31
Stream channel	17.19	3.38	0.016	13.81	80
Drainage channel	11.72	4.47	0.088	7.25	62
Ditch	1.96	1.40	0.012	0.55	28
Marsh	0.21	0.07	0.00	0.14	67
Ponds	6.87	1.17	0.00	5.71	83
Willow Scrub	0.11	0.11	0.00	0.00	0
Total waters of the United States	83.64	39.50	0.29	44.14	53
Isolated waters	1.30	1.25	0.00	0.05	3
Subtotal	**83.64**	**39.50**		**44.14**	
Waters of the State (Not Federally Jurisdictional)					
Vernal Pool	0.03	0.01	0.00	0.02	
Seasonal Wetland	0.004	0.002	0.00	0.002	
Ditch	0.42	0.39	0.00	0.03	
Pond	0.85	0.85	0.00	0.00	
Subtotal	**1.30**	**1.25**	**0.00**	**0.05**	
Grand Total	**84.94**	**40.75**	**0.287**	**44.19**	**52**

Source: ECORP 2009a

Table 3A.3-4
Summary of Wetland Impacts and Preservation for Each Project Alternative

Alternative	Acres of Impact	Acres Preserved	Percent Preserved
No Project	0.00	83.64	100
Proposed Project	39.50	44.14	53
Resource Impact Minimization	26.47	57.17	68
Centralized Development	37.05	46.59	56
Reduced Hillside Development	42.69	40.95	49
No USACE Permit	0.00	83.64	100

Source: ECORP 2009a

IMPACT CALCULATIONS ARE APPROXIMATE AND ARE BASED ON THE BEST AVAILABLE INFORMATION TO DATE.

Map Features
- Specific Plan Boundary
- Project Site Boundary
- Parcel Boundaries
- Off-Site Elements

Avoidance and Impact Components
- Developed
- Avoidance Area - Possible Temporary Disturbance
- Wetland Preserve (Avoided)
- Preserve With Grading (Impact)
- 30-foot Impact Buffer (Impact)
- Backbone Infrastructure (Impact)

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Waters	Avoided	Impact	Total
Vernal Pool	1.723	2.919	4.642
Seasonal Wetland	0.784	3.873	4.657
Seasonal Wetland Swale	7.847	17.632	25.479
Seep	6.325	4.478	10.803
Marsh	0.142	0.069	0.211
Creek/Channel	13.809	3.378	17.187
Intermittent Drainage	7.252	4.465	11.716
Ditch	0.554	1.405	1.959
Pond	5.708	1.167	6.875
Willow Scrub	0.000	0.114	0.114
Total	44.144	39.499	83.643
Isolated/Non-Jurisdictional (NJ)			
Isolated Vernal Pool	0.019	0.013	0.031
Isolated Seasonal Wetland	0.003	0.002	0.004
Ditch/Canal (NJ)	0.026	0.394	0.420
Pond (NJ)	0.000	0.846	0.846
Total	0.047	1.254	1.301
Grand Total	44.191	40.754	84.944

Source: ECORP 2009

Aquatic Resources and Open Space Areas under the Proposed Project Alternative

Exhibit 3A.3-5

Mitigation Measure 3A.3-1b: Secure Clean Water Act Section 404 Permit and Implement All Permit Conditions; Ensure No Net Loss of Functions of Wetlands, Other Waters of the U.S., and Waters of the State.

Before the approval of grading and improvement plans and before any groundbreaking activity associated with each distinct project phase, the project applicant(s) of all project phases requiring fill of wetlands or other waters of the U.S. or waters of the state shall obtain all necessary permits under Sections 401 and 404 of the CWA or the state's Porter-Cologne Act for the respective phase. For each respective phase, all permits, regulatory approvals, and permit conditions for effects on wetland habitats shall be secured before implementation of any grading activities within 250 feet of waters of the U.S. or wetland habitats, including waters of the state, that potentially support Federally listed species, or within 100 feet of any other waters of the U.S. or wetland habitats, including waters of the state. The project applicant(s) shall commit to replace, restore, or enhance on a "no net loss" basis (in accordance with USACE and the Central Valley RWQCB) the acreage of all wetlands and other waters of the U.S. that would be removed, lost, and/or degraded with implementation of project plans for that phase. Wetland habitat shall be restored, enhanced, and/or replaced at an acreage and location and by methods agreeable to USACE, the Central Valley RWQCB, and the City, as appropriate, depending on agency jurisdiction, and as determined during the Section 401 and Section 404 permitting processes.

As part of the Section 404 permitting process, a draft wetland mitigation and monitoring plan (MMP) shall be developed for the project on behalf of the project applicant(s). Before any ground-disturbing activities that would adversely affect wetlands and before engaging in mitigation activities associated with each phase of development, the project applicant(s) shall submit the draft wetland MMP to USACE, the Central Valley RWQCB, Sacramento County, El Dorado County, and the City for review and approval of those portions of the plan over which they have jurisdiction. The MMP would have to be finalized prior to issuance of a Section 404 permit. Once the final MMP is approved and implemented, mitigation monitoring shall continue for a minimum of 5 years from completion of mitigation, or human intervention (including recontouring and grading), or until the performance standards identified in the approved MMP have been met, whichever is longer.

As part of the MMP, the project applicant(s) shall prepare and submit plans for the creation of aquatic habitat in order to adequately offset and replace the aquatic functions and services that would be lost at the SPA, account for the temporal loss of habitat, and contain an adequate margin of safety to reflect anticipated success. Restoration of previously altered and degraded wetlands shall be a priority of the MMP for offsetting losses of aquatic functions in the SPA because it is typically easier to achieve functional success in restored wetlands than in those created from uplands. The MMP must demonstrate how the aquatic functions that would be lost through project implementation will be replaced.

The habitat MMP for jurisdictional wetland features shall be consistent with USACE's and EPA's April 10, 2008 *Final Rule for Compensatory Mitigation for Losses of Aquatic Resources* (33 CFR Parts 325 and 332 and 40 CFR Part 230). According to the *Final Rule*, mitigation banks should be given preference over other types of mitigation because a lot of the risk and uncertainty regarding mitigation success is alleviated by the fact that mitigation bank wetlands must be established and demonstrating functionality before credits can be sold. This also alleviates temporal losses of wetland function while compensatory wetlands are being established. Mitigation banks also tend to be on larger, more ecologically valuable parcels and are subjected to more rigorous scientific study and planning and implementation procedures than typical permittee-responsible mitigation sites (USACE and EPA, 2008). However, the *Final Rule* also establishes a preference for compensating losses of aquatic resources within the same watershed as the impact site. The SPA includes portions of the Alder Creek, Buffalo Creek, Coyote Creek, and Carson Creek Watersheds. The majority of the SPA is within the Alder Creek Watershed. Alder Creek and Buffalo Creek are part of the Lower American River Watershed. Carson Creek and Coyote Creek are part of the Cosumnes River Watershed. Mitigation credits may be available within the Cosumnes River Watershed, but not within the American River Watershed and not within the sub-watersheds of the SPA.

Therefore aquatic habitats may need to be restored or created in the SPA and adjacent off-site lands, within the affected watersheds, in order to successfully replace lost functions at the appropriate watershed scale where loss of function would occur. It is not likely feasible to provide compensatory mitigation for all aquatic resource impacts on site. Therefore, a combination of on-site and off-site permittee-responsible mitigation and mitigation banking may be necessary to achieve the no-net-loss standard.

The SPA is located within the service areas of several approved mitigation banks (e.g., Bryte Ranch, Clay Station, Fitzgerald Ranch, and Twin City). The majority of compensatory mitigation for wetland impacts is proposed to be accomplished at an agency-approved mitigation bank authorized to sell credits to offset impacts in the SPA. The applicants' biological consultant, ECORP, has identified availability of approximately 31 vernal pool credits and 228 seasonal wetland credits at mitigation banks whose service area appears to include the SPA. However, the availability of these credits has not been confirmed and availability is subject to change and, as noted above, a combination of mitigation bank credits and permittee-responsible on and off-site mitigation may be necessary to fully offset project impacts on wetlands and other waters of the U.S.

Compensatory mitigation for losses of stream and intermittent drainage channels shall be achieved through in-kind preservation, restoration, or enhancement, as specified in the *Final Rule* guidelines. The wetland MMP shall address how to mitigate impacts on vernal pool, seasonal swale, seasonal wetland, seep, marsh, pond, and intermittent and perennial stream habitat, and shall describe specific method(s) to be implemented to avoid and/or mitigate any off-site project-related impacts. The wetland compensation section of the habitat MMP shall include the following:

- Compensatory mitigation sites and criteria for selecting these mitigation sites. In General, compensatory mitigation sites should meet the following criteria, based on the *Final Rule*;
    - located within the same watershed as the wetland or other waters that would be lost;
    - located in the most likely position to successfully replace wetland functions lost on the impact site considering watershed-scale features such as aquatic habitat diversity, habitat connectivity, available water sources and hydrologic relationships, land use trends, ecological benefits, and compatibility with adjacent land uses
- A complete assessment of the existing biological resources in both the on-site preservation areas and off-site compensatory mitigation areas, including wetland functional assessment using the California Rapid Assessment Method (CRAM) (Collins et al. 2008), to establish baseline conditions;
- Specific creation and restoration plans for each mitigation site;
- In kind reference wetland habitats for comparison with compensatory wetland habitats (using performance and success criteria) to document success;
- Description of methodology used to select reference wetlands for comparison;
- Monitoring protocol, including schedule and annual report requirements, and the following elements:
    - ecological performance standards, based on the best available science, that can be assessed in a practicable manner (e.g., performance standards proposed by Barbour et al. 2007). Performance standards must be based on attributes that are objective and verifiable;
    - CRAM conducted annually for 5 years after construction or restoration of compensatory wetlands to determine whether these areas are acquiring wetland functions and to plot the performance

trajectory of preserved, restored, or created wetlands over time. CRAM scores for compensatory wetlands shall also be compared against scores for reference wetlands assessed in the same year;

- CRAM analysis conducted annually for 5 years after any construction adjacent to wetlands preserved in the SPA to determine whether these areas are retaining wetland functions. CRAM scores for wetlands preserved on site shall also be compared against scores for reference wetlands assessed in the same year;

- analysis of CRAM data, including assessment of potential stressors, to determine whether any remedial activities may be necessary;

- corrective measures if performance standards are not met;

- monitoring of plant communities as performance criteria (annual measure of success, during monitoring period) and success criteria (indicative of achievement of mitigation habitat requirement at end of monitoring period) for hydrologic function have become established and the creation site "matures" over time (the project applicants' biological consultant has developed a draft monitoring methodology and success criteria that are provided in Appendix D);

- GIS analysis of compensatory wetlands to demonstrate actual acreage of functioning wetland habitat;

- adaptive management measures to be applied if performance standards and acreage requirements are not being met;

- responsible parties for monitoring and preparing reports; and

- responsible parties for receiving and reviewing reports and for verifying success or prescribing implementation or corrective actions.

An operations and management plan (OMP) for all on- and off-site wetland preservation and mitigation areas shall be prepared and submitted to USACE and USFWS for review and approval prior to the issuance of any permits under Section 404 of the CWA. The plan shall include detailed information on the habitats present within the preservation and mitigation areas, the long-term management and monitoring of these habitats, legal protection for the preservation and mitigation areas (e.g., conservation easement, declaration of restrictions), and funding mechanism information (e.g., endowment).

USACE has determined that the project will require an individual permit. In its final stage and once approved by USACE, the MMP for the project is expected to detail proposed wetland restoration, enhancement, and/or replacement activities that would ensure no net loss of aquatic functions in the project vicinity. Approval and implementation of the wetland MMP shall aim to fully mitigate all unavoidable impacts on jurisdictional waters of the U.S., including jurisdictional wetlands. In addition to USACE approval, approval by the City, Sacramento County, El Dorado County, and the Central Valley RWQCB, as appropriate depending on agency jurisdiction, and as determined during the Section 401 and Section 404 permitting processes, will also be required. Approvals from Sacramento County and El Dorado County shall be required for impacts resulting from off-site project elements occurring in these counties, such as the off-site detention basin in Sacramento County and the roadway connections into El Dorado County. To satisfy the requirements of the City and the Central Valley RWQCB, mitigation of impacts on the nonjurisdictional wetlands beyond the jurisdiction of USACE shall be included in the same MMP. All mitigation requirements determined through this process shall be implemented before grading plans are approved. The MMP shall be submitted to USACE and approved prior to the issuance of any permits under Section 404 of the CWA.

Water quality certification pursuant to Section 401 of the CWA will be required before issuance of the record of decision and before issuance of a Section 404 permit. Before construction in any areas containing wetland features, the project applicant(s) shall obtain water quality certification for the project. Any measures required as part of the issuance of water quality certification shall be implemented.

Mitigation for the off-site elements outside of the City of Folsom's jurisdictional boundaries must be coordinated by the project applicant(s) of each applicable project phase with the affected oversight agency(ies) (i.e., Caltrans, El Dorado and/or Sacramento Counties).

Implementation: Project applicant(s) of all project phases requiring fill of wetlands or other waters of the U.S. or waters of the state.

Timing: Before the approval of grading or improvement plans or any ground-disturbing activities for any project development phase containing wetland features or other waters of the U.S. The MMP must be approved before any impact on wetlands can occur. Mitigation shall be implemented on an ongoing basis throughout and after construction, as required.

Enforcement:

1. For all project-related improvements that would be located within the City of Folsom: City of Folsom Community Development Department.
2. For the two roadway connections in El Dorado Hills: El Dorado County Development Services Department.
3. For the detention basin west of Prairie City Road: Sacramento County Planning and Community Development Department.
4. For the U.S. 50 interchange improvements: Caltrans.
5. U.S. Army Corps of Engineers, Sacramento District; Central Valley Regional Water Quality Control Board as appropriate depending on agency jurisdiction, and as determined during the Section 401 and Section 404 permitting processes and in compliance with the City's Grading Ordinance (Folsom Municipal Code 14.29), or appropriate county grading ordinance for off-site detention basin and roadway connections from Folsom Heights to El Dorado Hills.

RIM

The Resource Impact Minimization Alternative would preserve 57.17 acres (68%) of wetlands and other waters of the U.S., 13.33 acres more than would be preserved under the Proposed Project Alternative. Approximately 26.47 acres (32%) of on-site wetlands and other waters of the U.S. would be filled under this alternative compared with 39.50 acres under the Proposed Project Alternative. The Resource Impact Minimization Alternative would designate an additional 379 acres of open space, thereby preserving a greater proportion of adjacent upland habitats to provide larger wetland habitat buffers (generally at least 250 feet), preserve more of the micro watershed areas, support species that use both wetland and upland habitats, and provide ecological services to wetland species. This alternative would maintain greater hydrological functionality and wetland connectivity because more of the intermittent drainage channels and swales would be preserved and free spanning bridges would be constructed wherever roadways cross waters to avoid impacts on these waters. This alternative would also include control measures and performance standards that address stormwater flow, volume, and water quality for developed areas to minimize hydrologic and geomorphic modifications that could adversely affect wetlands and other waters that are preserved in the SPA. The Resource Impact Minimization Alternative would also result in fill of 0.53 acre of waters of the state, 0.72 acre less than would be filled under the Proposed Project Alternative. In addition to direct impacts

resulting from the placement of fill material into Federally jurisdictional waters of the U.S., the Resource Impact Minimization Alternative would also result in indirect impacts to 0.35 acre of waters of the U.S. from fragmentation. Fragmented waters under this alternative consist of 0.20 acre of seasonal wetland swale, 0.03 acre of stream channel, 0.11 acre of seasonal drainage channel, and 0.01 acre of ditch. The total acreage of fragmented waters under this alternative is 0.06 acre greater than the acreage of fragmented waters under the Proposed Project Alternative. Exhibit 3A.3-6 depicts aquatic resources in the SPA relative to the open space areas and impact areas for the Resource Impact Minimization Alternative.

Because the Resource Impact Minimization Alternative would still result in the fill of substantial acreage of waters of the U.S., including wetlands, as defined by Section 404 of the CWA, a **direct significant** impact would result, but would be substantially less compared to the Proposed Project Alternative. ***[Lesser]***

The larger, more contiguous preserve design, stormwater control measures, and preservation of a greater percentage of tributary channels and swales, would substantially reduce, but not entirely eliminate indirect effects on wetlands and other waters because major urban development and topographical modifications would still occur throughout the SPA. Therefore, the Resource Impact Minimization Alternative would result in **indirect significant** impacts, but to a much lesser extent than the Proposed Project Alternative. ***[Lesser]***

Mitigation Measure: Implement Mitigation Measures 3A.3-1a and 3A.3-1b.

CD

The Centralized Development Alternative would preserve an additional 2.45 acres of wetlands and other waters of the U.S., relative to the Proposed Project Alternative. Approximately 37.05 acres (44%) of wetlands and other waters of the U.S. would be filled under this alternative compared with 39.50 acres under the Proposed Project Alternative. The Centralized Development Alternative would designate an additional 414 acres of open space thereby preserving a greater proportion of adjacent upland habitats to provide larger wetland habitat buffers, preserve more of the micro watershed areas, support species that use both wetland and upland habitats, and provide ecological services to wetland species. The Centralized Development Alternative would result in fill of 1.28 acre of waters of the state, compared to 1.25 acres under the Proposed Project Alternative. In addition to direct impacts resulting from the placement of fill material into Federally jurisdictional waters of the U.S., the Centralized Development Alternative would also result in indirect impacts to 0.28 acre of waters of the U.S. from fragmentation. Fragmented waters under this alternative consist of 0.21 acre of seasonal wetland swale, 0.01 acre of stream channel, 0.05 acre of seasonal drainage channel, and 0.01 acre of ditch. The total acreage of fragmented waters under this alternative is 0.01 acre less than the acreage of fragmented waters under the Proposed Project Alternative. Exhibit 3A.3-7 depicts aquatic resources in the SPA relative to the open space areas and impact areas for the Centralized Development Alternative. See Table 3A.3-4 for a side by side comparison of preserved versus affected acreage of wetlands and other waters of the U.S. for each project alternative.

The Centralized Development Alternative would create two large open space areas that would reduce potential indirect effects from habitat fragmentation and edge effects, and hydrological modification from grading and impervious surfaces adjacent to wetlands. This alternative also includes control measures and performance standards that address stormwater flow, volume, and water quality for developed areas to minimize hydrologic and geomorphic modifications that could adversely affect wetlands and other waters that are preserved in the SPA. The open space design and stormwater control measures would substantially reduce, but not entirely eliminate potential indirect effects on wetlands and other waters.

Because the Centralized Development Alternative would still result in the fill of substantial acreage of waters of the U.S., including wetlands, as defined by Section 404 of the CWA, a **direct significant** impact would result. ***[Similar]***

Because a number of intermittent tributaries and seasonal swales directly connected to Alder Creek would still be filled and major urban development and topographical modifications would still occur throughout the SPA, the Centralized Development Alternative would result in **indirect significant** impacts, but to a lesser extent than the Proposed Project Alternative. ***[Lesser]***

Mitigation Measure: Implement Mitigation Measures 3A.3-1a and 3A.3-1b.

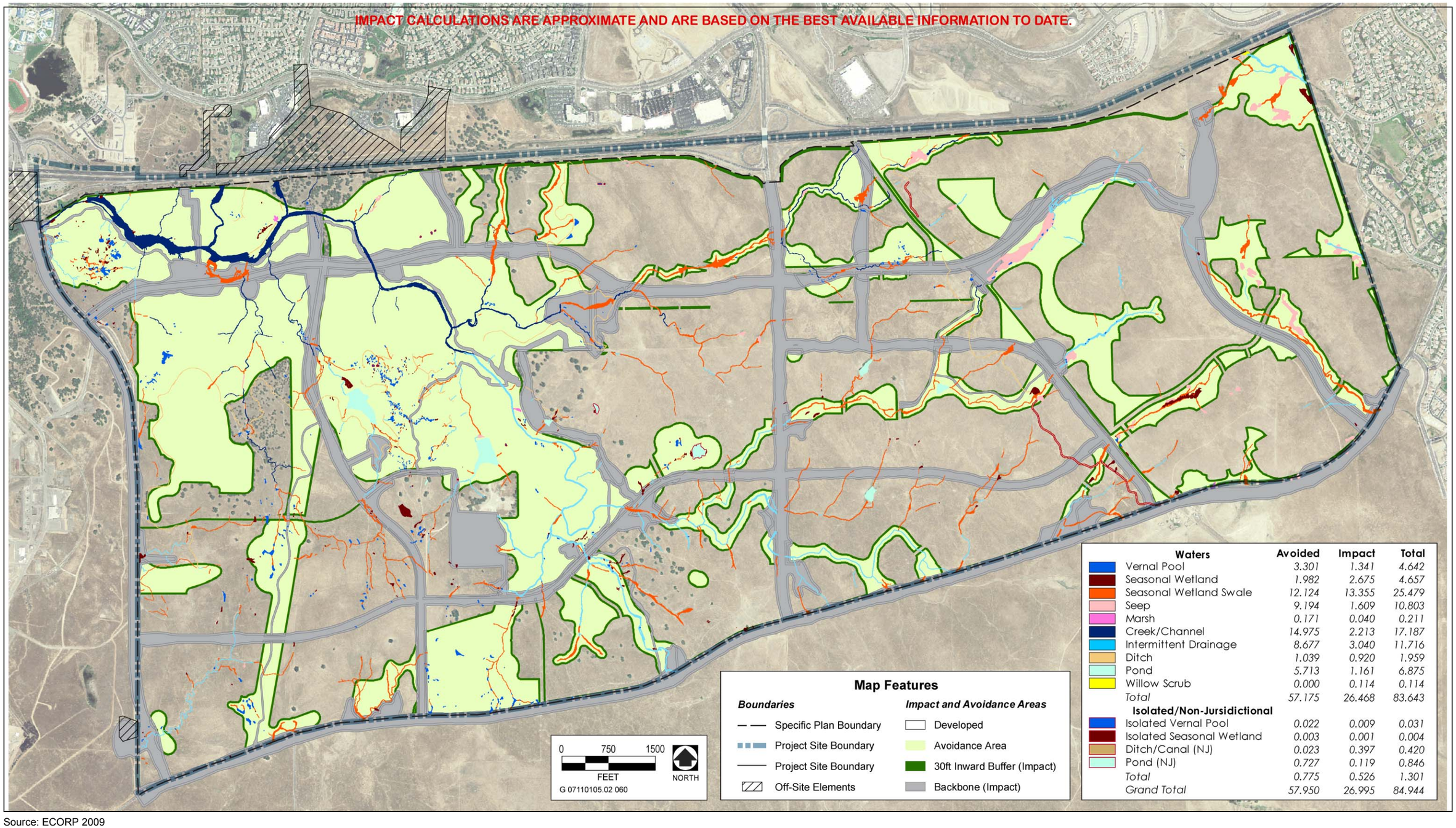
RHD

The Reduced Hillside Development Alternative would result in fill of 42.69 acres (51%) of Federally protected waters of the U.S., including wetlands. This is 3.19 acres more than would be filled under the Proposed Project Alternative. In addition, 1.28 of the existing 1.30 acres of waters of the state would be filled under this alternative; 0.02 acre more than would be filled under the Proposed Project Alternative. In addition to direct impacts resulting from the placement of fill material into Federally jurisdictional waters of the U.S., the Reduced Hillside Development Alternative would also result in indirect impacts to 0.25 acre of waters of the U.S. from fragmentation. Fragmented waters under this alternative consist of 0.17 acre of seasonal wetland swale, 0.01 acre of stream channel, 0.06 acre of seasonal drainage channel, and 0.01 acre of ditch. The total acreage of fragmented waters under this alternative is 0.04 acre less than the acreage of fragmented waters under the Proposed Project Alternative. Exhibit 3A.3-8 depicts aquatic resources in the SPA relative to the open space areas and impact areas for the Proposed Project Alternative. See Table 3A.3-4 above for a comparison of preserved versus affected acreage of wetlands and other waters of the U.S. for each project alternative.

Grading and creation of impervious surfaces in adjacent upland habitats would be the same under this alternative as under the Proposed Project Alternative. However, this alternative includes control measures and performance standards that address stormwater flow, volume, and water quality for developed areas to minimize hydrologic and geomorphic modifications that could adversely affect wetlands and other waters that are preserved in the SPA. Therefore, potential adverse effects on wetlands and other waters from altered hydrologic patterns would be lessened relative to the Proposed Project Alternative, but not substantially because major grading and topographic modifications would still occur throughout the SPA and no greater wetland buffers would be provided. More intermittent tributaries and seasonal swales directly connected to Alder Creek would be filled by implementation of this alternative, thereby eliminating natural hydrologic connectivity.

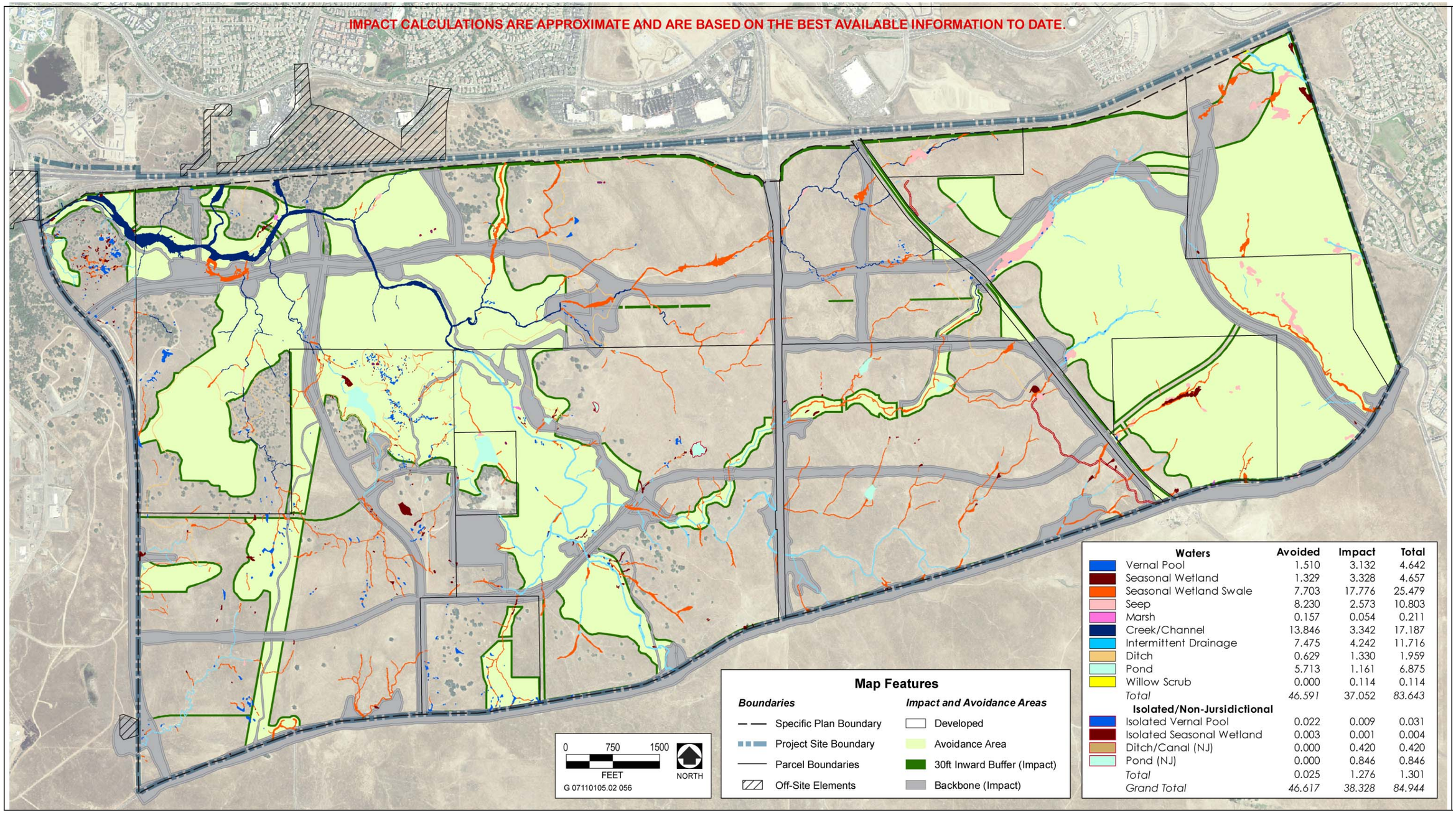
The loss and degradation of USACE jurisdictional vernal pools and other wetland habitats and other waters of the U.S. (e.g., ponds and drainage channels) that would occur with development of the Reduced Hillside Development Alternative constitutes a substantial adverse effect on Federally protected waters of the U.S., including wetlands, as defined by Section 404 of the CWA. Removal of 1.43 acres non-USACE jurisdictional wetlands in the SPA constitutes an adverse effect on waters of the state subject to Central Valley RWQCB jurisdiction. Therefore, **direct** and **indirect significant** impacts would occur. ***[Similar]***

Mitigation Measure: Implement Mitigation Measures 3A.3-1a and 3A.3-1b.



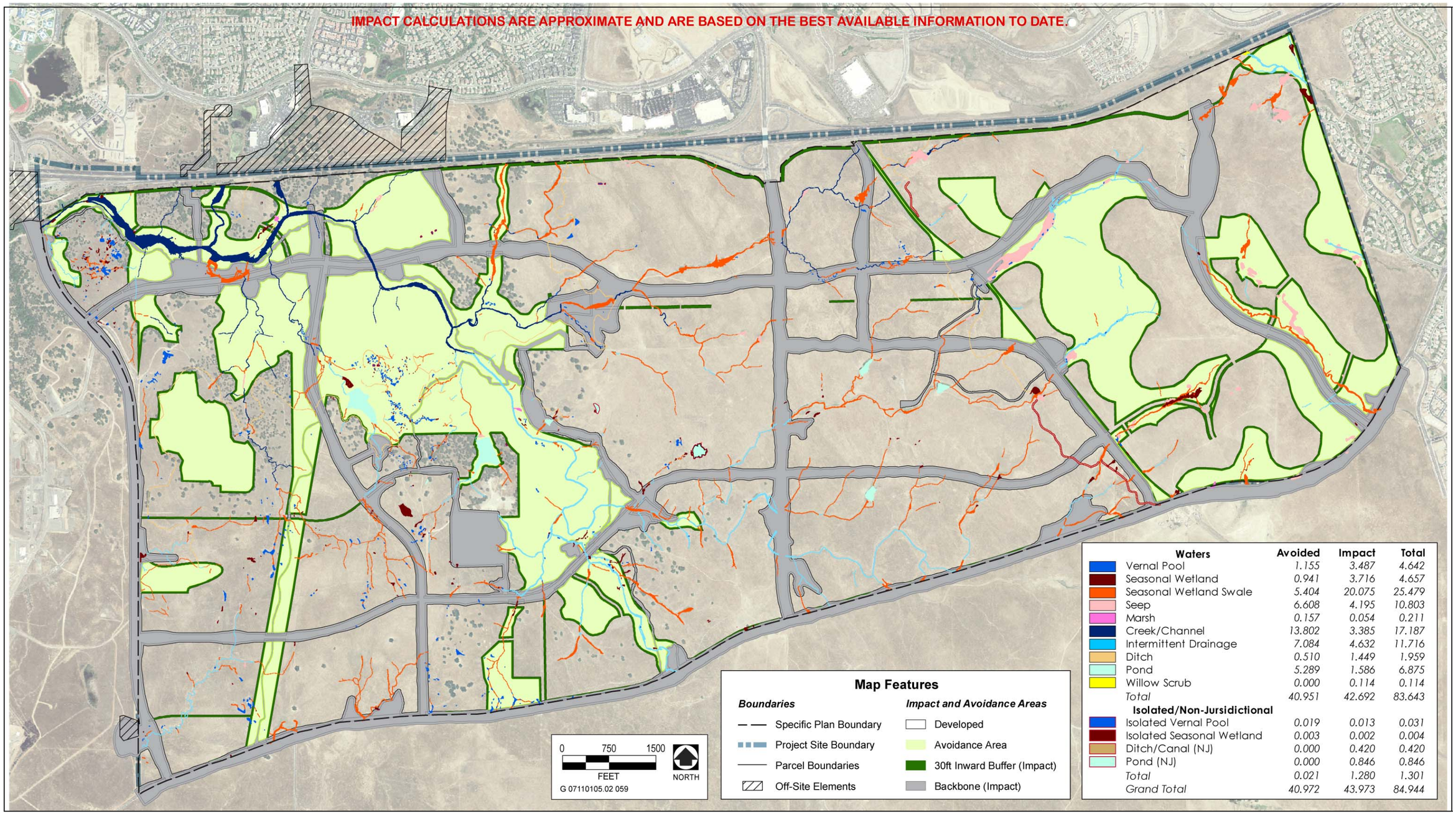
Source: ECORP 2009

Aquatic Resources and Open Space Areas under the Resource Impact Minimization Alternative **Exhibit 3A.3-6**



Source: ECORP 2009

Aquatic Resources and Open Space Areas Under the Centralized Development Alternative **Exhibit 3A.3-7**



Waters	Avoided	Impact	Total
Vernal Pool	1.155	3.487	4.642
Seasonal Wetland	0.941	3.716	4.657
Seasonal Wetland Swale	5.404	20.075	25.479
Seep	6.608	4.195	10.803
Marsh	0.157	0.054	0.211
Creek/Channel	13.802	3.385	17.187
Intermittent Drainage	7.084	4.632	11.716
Ditch	0.510	1.449	1.959
Pond	5.289	1.586	6.875
Willow Scrub	0.000	0.114	0.114
Total	40.951	42.692	83.643
Isolated/Non-Jurisdictional			
Isolated Vernal Pool	0.019	0.013	0.031
Isolated Seasonal Wetland	0.003	0.002	0.004
Ditch/Canal (NJ)	0.000	0.420	0.420
Pond (NJ)	0.000	0.846	0.846
Total	0.021	1.280	1.301
Grand Total	40.972	43.973	84.944

Source: ECORP 2009

Aquatic Resources and Open Space Areas under the Reduced Hillside Development Alternative

Exhibit 3A.3-8

Off-Site Elements

Approximately 5.85 acres of waters of the U.S., including wetlands, would be permanently filled by construction of off-site infrastructure outside the project boundary. The off-site project elements that would directly affect potential waters of the U.S. are the detention basin west of Prairie City Road and the interchange improvements to U.S. 50. Affected wetlands and other waters of the U.S. consist of 0.59 acre of vernal pools, 0.25 acre of seasonal wetlands, 0.55 acre of seasonal wetland swales, 1.94 acres of freshwater marsh, 0.04 acre of intermittent drainage channels, 0.01 acre of ditch, and 2.47 acres of perennial stream channel. Indirect impacts on another 0.47 acre of waters of the U.S. could result from construction of the two roadway connections into El Dorado Hills.

The loss and degradation of USACE jurisdictional vernal pools and other wetland habitats and other waters of the U.S. (e.g., drainage channels) that would occur with project implementation constitutes a substantial adverse effect on Federally protected waters of the U.S., including wetlands, as defined by Section 404 of the CWA. Therefore, construction of off-site elements that support project development would result in **direct** and **indirect significant** impacts on waters of the U.S.

Implementation of Mitigation Measures 3A.3-1a and 3A.3-1b would reduce significant impacts on jurisdictional wetlands and other waters of the U.S. and waters of the state under the No USACE Permit, Proposed Project Alternative, Resource Impact Minimization, Centralized Development, and Reduced Hillside Development Alternatives, but not necessarily to a less-than-significant level. After a mitigation plan has been accepted by USACE and is implemented as required (including on-site preservation and purchase of credits at a mitigation bank and/or in-lieu fee mitigation), the direct impacts resulting from project implementation could be mitigated by providing “no net loss” of overall wetland acreage resulting from the project, as required in USACE permit conditions. However, USACE requires mitigation resulting in no net loss of wetland functions. Removal of 45.35 acres (39.5 acres on site and 5.85 acres off-site) of waters of the U.S., including stream channels, vernal pools, and other similar wetland habitats is a substantial loss, especially when considered in the context of the regional rate and acreage of habitat losses. Creating compensatory wetlands cannot be guaranteed to fully replace the functions of wetlands lost and temporal losses would occur unless all impacts could be mitigated through purchase of fully functioning, established, in-kind wetlands from an approved mitigation bank. It is unknown at this time if mitigation credits are available to fully cover the loss of wetland functions resulting from project implementation. Creation and preservation of wetlands within smaller and more fragmented areas surrounded by urban development cannot fully compensate for the whole suite of ecological services provided by larger expanses of interconnected wetland complexes surrounded by open space. Also, if compensatory wetland mitigation could not be provided in the same watershed an overall loss of function up to the subbasin level could result.

Considering the rate of development in Sacramento County and the limited amount of undeveloped, unspoken for land that supports existing wetlands that could be preserved, or that is suitable for creation of compensatory aquatic habitats similar to those that would be removed by project implementation, it may not be possible to fully mitigate the loss of habitat functions provided by the nearly 45 acres of aquatic habitats that would be lost as a result of the Proposed Project. Furthermore, indirect impacts would remain significant and unavoidable for the Proposed Project Alternative because:

- the amount of habitat loss and degradation is extensive and contributes significantly to the loss of this habitat type in the region,
- micro watersheds of aquatic resources retained on the site would not be preserved,
- wetland buffers from construction impacts would only be 25 feet in some cases and not more than 75 feet in many others,
- nearly 50% of the aquatic resources in the SPA would be filled, and

- the magnitude of topographic modification that would occur across the site with project implementation is severe.

All of these factors are likely to substantially diminish the water quality, hydrologic, and habitat functions of all wetlands remaining on site and downstream in the project vicinity. Therefore, direct and indirect impacts would remain **significant and unavoidable** for the Proposed Project, Resource Impact Minimization, Centralized Development, and Reduced Hillside Development Alternatives. Under the No USACE Permit Alternative, there would be no direct impacts, but indirect impacts would remain **significant and unavoidable**. In addition, some of the off-site elements fall under the jurisdiction of El Dorado and Sacramento Counties, and Caltrans; therefore, neither the City nor the project applicant(s) would have control over their timing or implementation.

IMPACT 3A.3-2 Loss and Degradation of Habitat for Special-Status Wildlife Species and Potential Direct Take of Individuals. *Project implementation would result in the loss and degradation of habitat for several special-status wildlife species. Take of several listed species, including vernal pool invertebrates, valley elderberry longhorn beetle, and Swainson's hawk, could also occur.*

On-Site and Off-Site Elements

NP

Under the No Project Alternative, the SPA would remain as open space used for livestock grazing consistent with the current AG-80 zoning designation, and no off-site water facilities would be constructed. Continuation of existing land uses is not expected to result in changes to the types and quality of wildlife habitat available in the SPA. The AG-80 zoning designation is considered to provide 100% foraging habitat value for Swainson's hawk (Sacramento County 2006). Under the No Project Alternative, site topography would not be altered, existing vegetation would not be removed, and no loss of vernal pools or other aquatic habitats would be expected. Therefore, **direct** and **indirect** impacts would be **less than significant**. ***[Lesser]***

On-Site Elements

NCP

Wildlife Associated with Vernal Pools

The No USACE Permit Alternative would result in no permanent fill of vernal pool, seasonal wetlands, or seasonal wetland swales, which are potential habitat for vernal pool fairy shrimp, conservancy fairy shrimp, vernal pool tadpole shrimp, and western spadefoot toad. No development would occur within 50 feet of wetland features and free spanning bridges would be constructed over waterways to avoid impacts from roadways. This alternative would designate an additional 456 acres of open space compared to the Proposed Project Alternative. Compared to the other Project Alternatives, the No USACE Permit Alternative would preserve a larger portion of wetlands within the SPA, provide a larger buffer to minimize impacts of adjacent land uses, and preserve a greater proportion of upland habitat to support species that use both wetland and upland habitats. However, mixed use development would still be constructed in adjacent uplands. Although they would be lessened, indirect effects on wetlands from topographic modifications, creation of impervious surfaces, urban runoff, erosion, siltation, intrusion of humans and domestic animals, and introduction of invasive plant species could result in habitat degradation. Implementation of the No USACE Permit Alternative would result in **no direct** impacts to wildlife species associated with vernal pools; however **indirect significant** impacts would still occur because of the substantial changes to the site topography, increased impervious surfaces, and urban development adjacent to wetland habitats. ***[Lesser]***

Swainson's Hawk and Other Raptors

The No USACE Permit Alternative would result in removal of approximately 362 acres of oak woodland, which provides potential nesting habitat for Swainson's hawk and other raptors. Tree removal during the raptor breeding season (February–August) could result in mortality of eggs and chicks if an active nest were present. Other construction activities could disturb active nests near the construction area or in trees not yet removed from the SPA, potentially resulting in nest abandonment by the adults and mortality of chicks and eggs. Implementation of the No USACE Permit Alternative would result in the direct loss of approximately 1,902 acres of grassland, which provides foraging habitat for Swainson's hawk and other raptors. Some of the remaining 692 acres of grassland habitat would be directly affected by contour grading, recreational amenities, and other activities within the open space area. In addition, this alternative would result in indirect effects to the nesting and foraging habitat remaining in the SPA due to disturbance from use of adjacent development, which could reduce nest success and foraging habitat quality. Therefore, **direct** and **indirect** impacts to Swainson's hawk and other raptors would be **significant.** ***[Similar]***

Valley Elderberry Longhorn Beetle

Implementation of the No USACE Permit Alternative could result in removal of elderberry shrubs containing valley elderberry longhorn beetle larvae. Indirect impacts from ground-disturbing activities or use of herbicides could also result if the health of elderberry shrubs containing valley elderberry longhorn beetle larvae is adversely affected. Therefore, **direct** and **indirect** impacts to valley elderberry longhorn beetle would be **significant**. ***[Similar]***

Tricolored Blackbird

Construction activities during implementation of the No USACE Permit Alternative could result in disturbance to tricolored blackbird colonies, which may result in nest abandonment and loss of eggs or young. Due to the potential for large numbers of nesting tricolored blackbirds to be lost, this **direct** impact would be considered **potentially significant**. Because project activities adjacent to potential nesting habitat are not expected to result in the mortality of individuals, chicks, or eggs, **indirect** impacts would be considered **less than significant**. ***[Similar]***

Special-Status Bats

Implementation of the No USACE Permit Alternative would likely require an abandoned mine shaft to be filled or capped. If the mine shaft is used by bats as a day roost, hibernation roost, or maternity colony roost, implementation of this alternative could result in injury and mortality of pallid bat, Townsend's big-eared bat, or other common bat species. Project activities could result in **significant direct** or **indirect** impacts on special-status bat species. ***[Similar]***

Other Special-Status Species

The No USACE Permit Alternative would have a **less-than-significant direct** and **indirect** impact on western pond turtle, loggerhead shrike, grasshopper sparrow, Modesto song sparrow, and American badger because implementation of this alternative would not substantially reduce their populations. ***[Similar]***

Mitigation Measure: Implement Mitigation Measures 3A.3-1a and 3A.3-1b.

Mitigation Measure 3A.3-2a: Avoid Direct Loss of Swainson's Hawk and Other Raptor Nests.

To mitigate impacts on Swainson's hawk and other raptors (including burrowing owl), the project applicant(s) of all project phases shall retain a qualified biologist to conduct preconstruction surveys and to identify active nests on and within 0.5 mile of the SPA and active burrows in the SPA. The surveys

shall be conducted before the approval of grading and/or improvement plans (as applicable) and no less than 14 days and no more than 30 days before the beginning of construction for all project phases. To the extent feasible, guidelines provided in *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in the Central Valley* (Swainson's Hawk Technical Advisory Committee 2000) shall be followed for surveys for Swainson's hawk. If no nests are found, no further mitigation is required.

If active nests are found, impacts on nesting Swainson's hawks and other raptors shall be avoided by establishing appropriate buffers around the nests. No project activity shall commence within the buffer area until the young have fledged, the nest is no longer active, or until a qualified biologist has determined in coordination with DFG that reducing the buffer would not result in nest abandonment. DFG guidelines recommend implementation of 0.25- or 0.5-mile-wide buffers, but the size of the buffer may be adjusted if a qualified biologist and the City, in consultation with DFG, determine that such an adjustment would not be likely to adversely affect the nest. Monitoring of the nest by a qualified biologist during and after construction activities will be required if the activity has potential to adversely affect the nest.

If active burrows are found, a mitigation plan shall be submitted to the City for review and approval before any ground-disturbing activities. The City shall consult with DFG. The mitigation plan may consist of installation of one-way doors on all burrows to allow owls to exit, but not reenter, and construction of artificial burrows within the project vicinity, as needed; however, burrow owl exclusions may only be used if a qualified biologist verifies that the burrow does not contain eggs or dependent young. If active burrows contain eggs and/or young, no construction shall occur within 50 feet of the burrow until young have fledged. Once it is confirmed that there are no owls inside burrows, these burrows may be collapsed.

Mitigation for the off-site elements outside of the City of Folsom's jurisdictional boundaries must be coordinated by the project applicant(s) of each applicable project phase with the affected oversight agency(ies) (i.e., El Dorado and/or Sacramento Counties, or Caltrans).

Implementation: Project applicant(s) of all project phases.

Timing: Before the approval of grading and improvement plans, before any ground-disturbing activities, and during project construction as applicable for all project phases.

Enforcement:

1. California Department of Fish and Game.
2. For all project-related improvements that would be located within the City of Folsom: City of Folsom Community Development Department.
3. For the two roadway connections in El Dorado Hills: El Dorado County Development Services Department.
4. For the U.S. 50 interchange improvements: Caltrans.
5. For the detention basin west of Prairie City Road: Sacramento County Planning and Community Development Department.

Mitigation Measure 3A.3-2b: Prepare and Implement a Swainson's Hawk Mitigation Plan.

To mitigate for the loss of Swainson's hawk foraging habitat, the project applicant(s) of all project phases shall prepare and implement a Swainson's hawk mitigation plan including, but not limited to the requirements described below.

Before the approval of grading and improvement plans or before any ground-disturbing activities, whichever occurs first, the project applicant(s) shall preserve, to the satisfaction of the City or Sacramento County, as appropriate depending on agency jurisdiction, suitable Swainson's hawk foraging habitat to ensure 1:1 mitigation of habitat value for Swainson's hawk foraging habitat lost as a result of the project, as determined by the City, or Sacramento County, after consultation with DFG and a qualified biologist.

The 1:1 habitat value shall be based on Swainson's hawk nesting distribution and an assessment of habitat quality, availability, and use within the City's planning area, or Sacramento County jurisdiction. The mitigation ratio shall be consistent with the 1994 DFG Swainson's Hawk Guidelines included in the *Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (*Buteo swainsoni*) in the Central Valley of California*. Such mitigation shall be accomplished through either the transfer of fee title or perpetual conservation easement. The mitigation land shall be located within the known foraging area and within Sacramento County. The City, or Sacramento County if outside City jurisdiction, after consultation with DFG, will determine the appropriateness of the mitigation land.

Before approval of such proposed mitigation, the City, or Sacramento County for the off-site detention basin, shall consult with DFG regarding the appropriateness of the mitigation. If mitigation is accomplished through conservation easement, then such an easement shall ensure the continued management of the land to maintain Swainson's hawk foraging values, including but not limited to ongoing agricultural uses and the maintenance of all existing water rights associated with the land. The conservation easement shall be recordable and shall prohibit any activity that substantially impairs or diminishes the land's capacity as suitable Swainson's hawk habitat.

The project applicant(s) shall transfer said Swainson's hawk mitigation land, through either conservation easement or fee title, to a third-party, nonprofit conservation organization (Conservation Operator), with the City and DFG named as third-party beneficiaries. The Conservation Operator shall be a qualified conservation easement land manager that manages land as its primary function. Additionally, the Conservation Operator shall be a tax-exempt nonprofit conservation organization that meets the criteria of Civil Code Section 815.3(a) and shall be selected or approved by the City or County, after consultation with DFG. The City, or County, after consultation with DFG and the Conservation Operator, shall approve the content and form of the conservation easement. The City, or County, DFG, and the Conservation Operator shall each have the power to enforce the terms of the conservation easement. The Conservation Operator shall monitor the easement in perpetuity to assure compliance with the terms of the easement.

The project applicant(s), after consultation with the City, or County of jurisdiction, DFG, and the Conservation Operator, shall establish an endowment or some other financial mechanism that is sufficient to fund in perpetuity the operation, maintenance, management, and enforcement of the conservation easement. If an endowment is used, either the endowment funds shall be submitted to the City for impacts on lands within the City's jurisdiction or Sacramento County for the off-site detention basin to be distributed to an appropriate third-party nonprofit conservation agency, or they shall be submitted directly to the third-party nonprofit conservation agency in exchange for an agreement to manage and maintain the lands in perpetuity. The Conservation Operator shall not sell, lease, or transfer any interest of any conservation easement or mitigation land it acquires without prior written approval of the City and DFG. Mitigation lands established or acquired for impacts incurred at the off-site detention basin shall require approval from Sacramento County prior to sale or transfer of mitigation lands or conservation easement.

If the Conservation Operator ceases to exist, the duty to hold, administer, manage, maintain, and enforce the interest shall be transferred to another entity acceptable to the City and DFG, or Sacramento County and DFG depending on jurisdiction of the affected habitat. The City Planning Department shall ensure that mitigation habitat established for impacts on habitat within the City's planning area is properly established and is functioning as habitat by conducting regular monitoring of the mitigation site(s) for the

first 10 years after establishment of the easement. Sacramento County shall monitor habitat and ensure success for impacts on habitat at the off-site detention basin.

Mitigation for the off-site elements outside of the City of Folsom's jurisdictional boundaries must be coordinated by the project applicant(s) of each applicable project phase with the affected oversight agency(ies) (i.e., Sacramento County and Caltrans).

Implementation: Project applicant(s) of all project phases.

Timing: Before the approval of grading, improvement, or construction plans and before any ground-disturbing activity in any project development phase that would affect Swainson's hawk foraging habitat.

Enforcement:

1. For all project-related improvements that would be located within the City of Folsom: City of Folsom Community Development Department.
2. For the detention basin west of Prairie City Road: Sacramento County Planning and Community Development Department.
3. For the U.S. 50 interchange improvements: Caltrans.

Mitigation Measure 3A.3-2c: Avoid and Minimize Impacts to Tricolored Blackbird Nesting Colonies.

To avoid and minimize impacts to tricolored blackbird, the project applicant(s) of all project phases shall conduct a preconstruction survey for any project activity that would occur during the tricolored blackbird's nesting season (March 1–August 31). The preconstruction survey shall be conducted by a qualified biologist before any activity occurring within 500 feet of suitable nesting habitat, including freshwater marsh and areas of riparian scrub vegetation. The survey shall be conducted within 14 days before project activity begins.

If no tricolored blackbird colony is present, no further mitigation is required. If a colony is found, the qualified biologist shall establish a buffer around the nesting colony. No project activity shall commence within the buffer area until a qualified biologist confirms that the colony is no longer active. The size of the buffer shall be determined in consultation with DFG. Buffer size is anticipated to range from 100 to 500 feet, depending on the nature of the project activity, the extent of existing disturbance in the area, and other relevant circumstances.

Mitigation for the off-site elements outside of the City of Folsom's jurisdictional boundaries (i.e., U.S. 50 interchange improvements) must be coordinated by the project applicant(s) of each applicable project phase with the affected oversight agency(ies) (i.e., Caltrans).

Implementation: Project applicant(s) of all project phases.

Timing: Before the approval of any ground-disturbing activity within 500 feet of suitable nesting habitat as applicable for all project phases.

Enforcement:

1. For all project-related improvements that would be located within the City of Folsom: City of Folsom Community Development Department.
2. For the U.S. 50 interchange improvements: Caltrans.

Mitigation Measure 3A.3-2d: Avoid and Minimize Impacts to Special-Status Bat Roosts.

The project applicant of all project phases containing potential bat roosting habitat shall retain a qualified biologist to conduct surveys for roosting bats. Surveys shall be conducted in the fall to determine if the mine shaft is used as a hibernaculum and in spring and/or summer to determine if it is used as a maternity or day roost. Surveys shall consist of evening emergence surveys to note the presence or absence of bats and could consist of visual surveys at the time of emergence. If evidence of bat use is observed, the number and species of bats using the roost shall be determined. Bat detectors may be used to supplement survey efforts. If no bat roosts are found, then no further study shall be required.

If roosts of pallid bat or Townsend's big-eared bats are determined to be present and must be removed, the bats shall be excluded from the roosting site before the mine shaft is removed. A mitigation program addressing compensation, exclusion methods, and roost removal procedures shall be developed in consultation with DFG before implementation. Exclusion methods may include use of one-way doors at roost entrances (bats may leave but not reenter), or sealing roost entrances when the site can be confirmed to contain no bats. Exclusion efforts may be restricted during periods of sensitive activity (e.g., during hibernation or while females in maternity colonies are nursing young). The loss of each roost (if any) will be replaced in consultation with DFG and may include construction and installation of bat boxes suitable to the bat species and colony size excluded from the original roosting site. Roost replacement will be implemented before bats are excluded from the original roost sites. Once the replacement roosts are constructed and it is confirmed that bats are not present in the original roost site, the mine shaft may be removed.

Implementation: Project applicant(s) of all project phases containing potential bat roosting habitat.

Timing: Before the approval of removal or fill of the mine shaft in the SPA.

Enforcement: City of Folsom Community Development Department.

Mitigation Measure 3A.3-2e: Obtain an Incidental Take Permit under Section 10(a) of ESA; Develop and Implement a Habitat Conservation Plan to Compensate for the Loss of Vernal Pool Habitat.

The project applicant(s) for all project phases shall obtain an incidental take permit under Section 10(a) of ESA. No project construction shall proceed in areas supporting potential habitat for Federally listed vernal pool invertebrates, or within adequate buffer areas (250 feet or lesser distance deemed sufficiently protective by a qualified biologist with approval from USFWS), until a BO has been issued by USFWS and the project applicant(s) have abided by conditions in the BO (including all conservation and minimization measures). Conservation and minimization measures are likely to include preparation of supporting documentation describing methods to protect existing vernal pools during and after project construction.

Under the No USACE Permit Alternative, interagency consultation under Section 7 of ESA would not occur; therefore, the project applicant(s) would be required to develop a habitat conservation plan to mitigate impacts on Federally listed vernal pool invertebrates. The project applicant(s) shall complete and implement, or participate in, a habitat conservation plan that shall compensate for the loss of acreage, function, and value of affected vernal pool habitat. The habitat conservation plan shall be consistent with the goals of the *Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon* (USFWS 2005) and must be approved by USFWS.

The project applicant(s) for all project phases shall ensure that there is sufficient upland habitat within the target areas for creation and restoration of vernal pools and vernal pool complexes to provide ecosystem health. The land used to satisfy this mitigation measure shall be protected through a fee title or conservation easement acceptable to the City and USFWS.

The project applicant(s) for all project phases shall identify the extent of indirectly affected vernal pool and seasonal wetland habitat, either by identifying all such habitat within 250 feet of project construction activities or by providing an alternative technical evaluation in support of a lesser indirect impact distance. If a lesser distance is pursued, this distance shall be approved by USFWS. The project applicant(s) shall preserve 2 wetted acres of vernal pool habitat for each wetted acre of any indirectly affected vernal pool habitat. This mitigation shall occur before the approval of any grading or improvement plans for any project phase that would allow work within 250 feet of such habitat, and before any ground-disturbing activity within 250 feet of the habitat. The project applicant(s) will not be required to complete this mitigation measure for direct or indirect impacts that have already been mitigated to the satisfaction of USFWS through another BO or mitigation plan.

A standard set of BMPs shall be applied to construction occurring in areas within 250 feet of off-site vernal pool habitat, or within any lesser distance deemed adequate by a qualified biologist (with approval from USFWS) to constitute a sufficient buffer from such habitat. Refer to Section 3A.9, "Hydrology and Water Quality - Land" for the details of BMPs to be implemented.

Mitigation for the off-site elements outside of the City of Folsom's jurisdictional boundaries must be coordinated by the project applicant(s) of each applicable project phase with the affected oversight agency(ies) (i.e., El Dorado and/or Sacramento Counties or Caltrans).

Implementation: Project applicant(s) of all project phases and on-site and off-site elements.

Timing: Before the approval of any grading or improvement plans, before any ground-disturbing activities within 250 feet of said habitat, and on an ongoing basis throughout construction as applicable for all project phases as required by the habitat conservation plan and/or BO.

Enforcement:

1. U.S. Fish and Wildlife Service.
2. For all project-related improvements that would be located within the City of Folsom: City of Folsom Community Development Department.
3. For the two roadway connections in El Dorado Hills: El Dorado County Development Services Department.
4. For the detention basin west of Prairie City Road: Sacramento County Planning and Community Development Department.
5. For the U.S. 50 interchange improvements: Caltrans.

Mitigation Measure 3A.3-2f: Obtain an Incidental Take Permit under Section 10(a) of ESA; Develop and Implement a Habitat Conservation Plan to Compensate for the Loss of VELB Habitat.

As long as valley elderberry longhorn beetle remains a species protected under ESA, the project applicant(s) of all project phases containing elderberry shrubs shall obtain an incidental take permit under Section 10(a) of ESA for valley elderberry longhorn beetle. No project construction shall proceed in areas potentially containing valley elderberry longhorn beetle until a BO has been issued by USFWS, and the project applicant(s) for all project phases have abided by all pertinent conditions in the BO relating to the proposed construction, including all conservation and minimization measures. Conservation and minimization measures are likely to include preparation of supporting documentation that describes methods for relocation of existing shrubs and maintaining existing shrubs and other vegetation in a conservation area.

Under the No USACE Permit Alternative, interagency consultation under Section 7 of ESA would not occur; therefore, the project applicant(s) would be required to develop a habitat conservation plan to mitigate impacts on valley elderberry longhorn beetle. The project applicant(s) shall complete and implement a habitat conservation plan that will compensate for the loss of valley elderberry longhorn beetle. Relocation of existing elderberry shrubs and planting of new elderberry seedlings shall be implemented on a no-net-loss basis. Detailed information on monitoring success of relocated and planted shrubs and measures to compensate (should success criteria not be met) would also likely be required in the BO. Ratios for mitigation of valley elderberry longhorn beetle habitat will ultimately be determined through the ESA Section 10(a) consultation process with USFWS, but shall be a minimum of "no net loss."

Mitigation for the off-site elements outside of the City of Folsom's jurisdictional boundaries (i.e., U.S. 50 interchange improvements) must be coordinated by the project applicant(s) of each applicable project phase with the affected oversight agency(ies) (i.e., Caltrans).

Implementation: Project applicant(s) of all project phases potentially containing elderberry shrubs.

Timing: Before the approval of any grading or improvement plans or any ground-disturbing activity within 100 feet of valley elderberry longhorn beetle habitat as applicable for all project phases, and on an ongoing basis as required by the habitat conservation plan and/or BO.

Enforcement:
1. U.S. Fish and Wildlife Service
2. City of Folsom Community Development Department.
3. For the U.S. 50 interchange improvements: Caltrans.

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Development under the Proposed Project Alternative would result in an increase in development and human population that would result in adverse effects on a number of special-status wildlife species. Special-status wildlife listed under ESA that could be substantially affected by the Proposed Project Alternative include vernal pool fairy shrimp, vernal pool tadpole shrimp, conservancy fairy shrimp, and valley elderberry longhorn beetle. Swainson's hawk, which is listed under CESA as threatened, could also be adversely affected by the Proposed Project Alternative. Impacts on these five listed species would be considered significant and are discussed in detail below. Special-status raptors, western spadefoot, tricolored blackbird, and special-status bats could also be adversely affected, and are discussed further below. Impacts on all other special-status wildlife species are considered less than significant because potential loss of a few individuals is not likely to result in a substantial adverse affect on the population.

Wildlife Associated with Vernal Pools

The SPA contains approximately 5 acres of vernal pools, 5 acres of seasonal wetlands, and 26 acres of seasonal wetland swales that are considered potential habitat for vernal pool fairy shrimp, conservancy fairy shrimp, vernal pool tadpole shrimp, and western spadefoot toad. Vernal pool tadpole shrimp and conservancy fairy shrimp are Federally listed as endangered. Vernal pool fairy shrimp is Federally listed as threatened. Western spadefoot is a California species of special concern. Vernal pool tadpole shrimp have been documented directly adjacent to the southwest corner of the SPA, and vernal pool fairy shrimp have been documented less than one mile to the south of the SPA (CNDDB 2008). Western spadefoot are known to occur in Mather Regional Park, more than 5 miles from the SPA.

California tiger salamander is not expected to occur in the SPA. Although there is potentially suitable breeding habitat in some vernal pools, seasonal wetlands, and ponds and suitable uplands in the grasslands on site, California tiger salamander have not been detected in Sacramento County north of the Cosumnes River (USFWS 2004). In a survey transect that extended along the west side of the Sacramento Valley from Shasta County to Solano County, California tiger salamanders were recorded only at the Jepson Prairie in Solano County (Watts 2008). Surveys of vernal pool habitats on and near the SPA have not incidentally detected California tiger salamander. Given that the closest known population is 15 miles to the south of the SPA and the lack of known populations in the project region, it is unlikely for California tiger salamander to occur in the SPA.

Protocol surveys (two wet-seasons or consecutive wet- and dry-season surveys) for Federally listed vernal pool crustaceans have been conducted on over 70% of the SPA and no listed adults or cysts were detected (MJM Properties 2007a, MJM Properties 2007b, Colliers International 2007a, Gibson and Skordal 2009). However, vernal pool fairy shrimp have been detected in two locations within the Prairie City Business Park property at the northwest corner of the SPA during wet-season surveys in 2008-2009 (ECORP 2009b). At least one wet-season survey has been conducted in other areas along the western portion of the site, but no listed vernal pool crustaceans have been detected (ECORP 2009b). Federally listed vernal pool crustaceans could occur elsewhere in the SPA where suitable habitat is present (Holloway Rassmusson Molondanof 2005 and The Hodgson Company 2007a). Although surveys over the majority of the SPA in suitable habitat indicate that listed vernal pool crustaceans may be absent from most of the site, vernal pool fairy shrimp is known to occur in at least one watershed, which is connected to other suitable habitats on the site. In addition, many of the wetlands surveyed contained linderiella, which is not a listed species, but is often found in association with listed crustaceans. Therefore, there remains potential for listed vernal pool crustaceans to occur in suitable habitats in the SPA.

Focused surveys for western spadefoot were conducted in April 2006 on approximately 40% of the SPA and were not detected (MJM Properties 2006d). The aquatic habitats surveyed were determined to be unsuitable for western spadefoot due to the abundance of predatory bullfrogs. Although habitat conditions may not be suitable for successful reproduction of western spadefoot, the species may be present in vernal pools or other seasonal wetlands in the SPA.

Implementation of the Proposed Project Alternative would permanently remove approximately 25 acres of potential habitat for special-status vernal pool crustaceans and western spadefoot, which includes approximately 3 acres of vernal pools, 4 acres of seasonal wetland, and 18 acres of seasonal wetland swale, as discussed under Impact 3A.3-1 “Loss and Degradation of Jurisdictional Wetlands and Other Waters of the U.S., and Waters of the State.” Approximately 2 acres of vernal pools, 1 acre of seasonal wetland, and 8 acres of seasonal wetland swale would be preserved in open space areas. Preserved wetlands within the designated open space areas would be provided with a 25-foot-wide buffer where no project-related ground disturbance would occur. Outside of the 25-foot-wide buffer, an additional 50 feet of “no-development” buffer would be established; however disturbance associated with contour grading, mitigation planting, trails, benches, and other passive recreational amenities may occur in this 50-foot “no development” buffer.

In addition to the direct effect of habitat loss or injury to individuals by filling suitable habitat, vernal pool species could be indirectly affected by project activities that occur adjacent to wetland habitats. Indirect effects include habitat degradation that could result from reduction in water quality caused by urban runoff, erosion, and siltation; intrusion of humans and domestic animals; and introduction of invasive plant species. In addition, the hydrology of the wetland habitats for vernal pool crustaceans and western spadefoot could be altered by substantial grading of the site, including within the open space areas, and creation of impervious surfaces proposed for adjacent uplands. All portions of the SPA, with the exception of 25-foot-wide buffers around preserved wetlands, would be subject to contour grading, which could affect wetland hydrology and water quality. Overall site topography would be substantially altered to achieve level ground for development. These earthmoving activities and resulting gradient changes across the SPA could alter hydrologic patterns and adversely affect wetlands and drainage channels retained in the SPA, as well as off-site wetlands, by altering hydration periods, peak flows, runoff volumes, and runoff durations. Construction of new roadways and roadway improvements associated with

development of the backbone infrastructure could disrupt or eliminate hydrologic and biological connectivity that is important to support wetlands and associated wildlife species. In addition, western spadefoot, if they occur in the SPA, could be indirectly affected by an increase in vehicular traffic on the site, which could result in mortality during dispersal or seasonal movements between aquatic and upland habitats.

Therefore, **direct** and **indirect** impacts to vernal pool fairy shrimp, conservancy fairy shrimp, vernal pool tadpole shrimp, and western spadefoot toad would be **significant.**

Swainson's Hawk and Other Raptors

Swainson's hawk, a species state-listed as threatened, is one of several raptors that are likely to nest and/or forage in the SPA. Two California species of special concern (western burrowing owl and northern harrier) have been documented foraging on the site (MJM Properties 2006b), and are expected to nest on site. White-tailed kite, which is fully protected under the California Fish and Game Code, is also expected to nest and forage on site. One additional California species of special concern, golden eagle, may forage on site outside of the breeding season. All raptors and their nests are protected under Section 3503.5 of the California Fish and Game Code. Common raptors that could nest in the SPA include Cooper's hawk, American kestrel, red-tailed hawk, red-shouldered hawk, western screech-owl, great horned owl, and barn owl.

Implementation of the Proposed Project Alternative would have a substantial adverse effect on nesting and foraging habitat for raptors. Of the approximately 642 acres of existing oak woodland that is considered potential nesting habitat for Swainson's hawk and other tree-nesting raptors, approximately 243 acres (37%) would be removed. If trees are to be removed during the raptor breeding season (February–August), mortality of eggs and chicks could result if an active nest were present. In addition, project construction could disturb active nests near the construction area or in trees not yet removed from the SPA, potentially resulting in nest abandonment by the adults and mortality of chicks and eggs. Indirect effects to nesting raptors include increased nest failure due to disruption of essential breeding and foraging behavior resulting from human disturbances in adjacent developed areas and increased nest predation by wildlife species associated with human development, such as crows and raccoons, as well as domestic cats (and dogs for ground-nesting raptors such as burrowing owl and northern harrier). The 2,594 acres of grassland habitat present in the SPA is considered foraging habitat for raptors and could be used for nesting by burrowing owl and northern harrier. The grading, paving, and other ground disturbances in the project footprint could indirectly affect nesting and foraging raptors by reducing the population of the small mammal prey base of many raptors over the entire SPA through conversion of natural vegetation cover. Large raptors generally require large areas of suitable foraging habitat. The remaining grassland in the open space areas would be fragmented by the development, which may cause the habitat to be unsuitable for raptor foraging.

As a consequence of direct loss of nesting and foraging habitat and indirect effects to nest success and foraging habitat quality, implementation of the Proposed Project Alternative could eventually lead to the permanent displacement of some raptors from the SPA. Therefore, the Proposed Project Alternative would result in **significant direct** and **indirect** impacts on Swainson's hawk and other raptors.

Valley Elderberry Longhorn Beetle

The valley elderberry longhorn beetle is Federally listed as threatened, but has been proposed for delisting. Several elderberry shrubs with stems greater than 1.0 inch in diameter at ground level, which provide potential habitat for valley elderberry longhorn beetle (USFWS 1999), have been documented throughout the SPA (GenCorp 2007d,e; MJM Properties 2006b; Colliers International 2006). Valley elderberry longhorn beetles have been documented within two miles of the site (CNDDB 2008), and beetle exit holes potentially created by valley elderberry longhorn beetles have been observed in elderberry shrubs adjacent to the SPA (ECORP 2007d).

Implementation of the Proposed Project Alternative could result in the direct or indirect loss of valley elderberry longhorn beetles or their habitat. Six elderberry shrubs have been mapped in the SPA (Exhibit 3A.3-1), but at

least one unmapped shrub is known to occur on site (GenCorp 2007d), and additional shrubs may also be present because thorough, focused surveys have not been conducted. Although a portion of the SPA including one mapped elderberry shrub has been set aside for preservation, at least four elderberry shrubs are known to be located within areas proposed for development, and additional shrubs may also be located within development and/or grading areas. If elderberry shrubs containing valley elderberry longhorn beetle larvae are removed while listed, direct take of this Federally-threatened species would result, which would constitute a significant impact. It is conceivable that over the 20-year buildout period, the species could become delisted. Indirect impacts could also result if the health of elderberry shrubs containing valley elderberry longhorn beetle larvae is adversely affected. Indirect impacts could occur if herbicides or insecticides are used in habitats adjacent to elderberry shrubs, if earthmoving activities disturb elderberry shrub roots, or if the topography and/or hydrology of the surrounding area are altered to the extent that it reduces the soil moisture surrounding the elderberry shrub. Therefore, direct and indirect impacts to valley elderberry longhorn beetle are considered to be significant. If delisting occurs, this **direct** and **indirect** impact would be less than significant, however for purposes of this EIR/EIS, this direct and indirect impact is considered **significant**.

Tricolored Blackbird

Nesting habitat for tricolored blackbird is found in riparian habitat and blackberry brambles along Alder Creek and adjacent to several ponds in the SPA. Tricolored blackbirds nest in colonies of 100s to 10,000s of individuals. Nesting colonies will often occur in the same location over many years, but colonies may also shift locations if nest failure occurs. An abundant insect source near the nesting colony is an important habitat component and nesting colonies are often associated with dairies, feedlots, or wastewater treatment ponds. Although tricolored blackbirds are not known to nest on the site and suitable nesting and foraging habitat is limited, several tricolored blackbird colonies are known from within 5 miles of the SPA (CNDDB 2008). Disturbance during construction could result in nest abandonment and loss of eggs or young if an active tricolored blackbird nesting colony were to be present during ground-disturbing activities. Due to the potential for large numbers of nesting tricolored blackbirds to be lost, this **direct** impact would be considered **potentially significant**. Because project activities adjacent to potential nesting habitat are not expected to result in the mortality of individuals, chicks, or eggs, **indirect impacts** would be considered **less than significant**.

Special-Status Bats

Several special-status bat species have potential to occur in the SPA, including pallid bat, Townsend's big-eared bat, western mastiff bat, and western red bat. These species may forage over open grassland and woodland areas, as well as riparian areas. Roosting habitat is typically a limiting factor to bat distribution. Western mastiff bat is unlikely to roost on site due to habitat preference to use tall cliffs and rocks, which are absent from the site. Western red bat roosts in tree foliage, especially in cottonwoods, sycamore, and other broad-leaved deciduous riparian trees (Pierson et al. 2004); suitable roosting habitat for western red bat is lacking from the site, as the riparian habitat along Alder Creek mostly consists of willow and blackberry scrub. An abandoned mine shaft is present in the south central portion of the site and would likely be filled or capped due to public safety issues. It is unknown if this mine shaft provides suitable thermal or structural conditions for roosting bats. However, if the mine shaft is used as a day roost, hibernation roost, or maternity colony roost, implementation of the Proposed Project Alternative could result in injury and mortality of pallid bat, Townsend's big-eared bat, or other common bat species. Day roosts are used throughout the spring and summer and maternity colony roosts can be active from approximately early April until mid-October. Hibernation roosts may be used from approximately November to early March. Loss of individual bats would be considered a **potentially significant, direct** impact. There would be **no indirect** impact on special-status bat species.

Other Special-Status Species

Several other special-status species have potential to occur in the SPA: western pond turtle, loggerhead shrike, grasshopper sparrow, Modesto song sparrow, and American badger, as discussed below.

Suitable habitat for western pond turtle occurs in two large ponds within the oak woodland community in the west-central portion of the site and in perennial portions of Alder Creek and tributaries. Western pond turtles are known to occur in at least one pond in the SPA and have been documented in Alder Creek immediately downstream of the SPA (GenCorp 2007e). No turtles were observed during focused surveys in the eastern central portion of the SPA (MJM Properties 2006b) and suitable habitat was determined to be absent in the southern and eastern portions of the site (MJM Properties 2006b, Centex Homes 2006a, Holloway Rassmusson Molondanof 2005). Implementation of the Proposed Project Alternative would not directly fill the occupied or suitable ponds in the western-central portion of the site or the perennial portions of Alder Creek and its tributaries, and upland habitats suitable for nesting would be retained in proximity to aquatic habitat. **Direct** and **indirect** impacts to western pond turtle are considered **less than significant**.

The SPA provides potential nesting habitat for loggerhead shrike, grasshopper sparrow, and Modesto song sparrow. Individuals of these species may nest in open woodland, grassland, or riparian habitats, respectively, on site. Portions of these habitats would be removed by project implementation, but large areas of oak woodland, grassland, and riparian habitat would be preserved in the open space areas, especially along Alder Creek. **Direct** and **indirect** impacts of project implementation on these species are considered **less than significant** because potential loss of a few individuals is not likely to result in a substantial effect on their populations.

American badger is a wide-ranging species that uses grassland and oak woodland habitats. American badger has been documented adjacent to the SPA by Matus (1981, cited in GenCorp 2007e), and nearly the entire SPA provides suitable habitat. It is unknown if the species currently occurs in the SPA. Although implementation of the Proposed Project Alternative would result in loss of habitat for American badger, oak woodland and grassland habitat would be preserved in the open space areas and abundant grassland habitat is present to the south of the SPA. The loss of habitat from the SPA would not be likely to cause loss of individuals because there would still be adequate suitable foraging and denning habitat in the area to support the local population. Therefore, **direct** and **indirect** impacts to American badger are considered **less than significant**.

Mitigation Measure: Implement Mitigation Measures 3A.3-1a, 3A.3-1b, 3A.3-2a, 3A.3-2b, 3A.3-2c, and 3A.3-2d.

Mitigation Measure 3A.3-2g: Secure Take Authorization for Federally Listed Vernal Pool Invertebrates and Implement All Permit Conditions.

No project construction shall proceed in areas supporting potential habitat for Federally listed vernal pool invertebrates, or within adequate buffer areas (250 feet or lesser distance deemed sufficiently protective by a qualified biologist with approval from USFWS), until a biological opinion (BO) has been issued by USFWS and the project applicant(s) of all project phases have abided by conditions in the BO (including conservation and minimization measures) intended to be completed before on-site construction. Conservation and minimization measures shall include preparation of supporting documentation describing methods to protect existing vernal pools during and after project construction, a detailed monitoring plan, and reporting requirements.

As described under Mitigation Measure 3A.3-1a, an MMP shall be developed that describes details how loss of vernal pool and other wetland habitats shall be offset, including details on creation of habitat, account for the temporal loss of habitat, contain performance standards to ensure success, and outline remedial actions if performance standards are not met.

The project applicant(s) of all project phases shall complete and implement a habitat MMP that will result in no net loss of acreage, function, and value of affected vernal pool habitat. The final habitat MMP shall be consistent with guidance provided in *Programmatic Formal Endangered Species Act Consultation on Issuance of 404 Permits for Projects with Relatively Small Effects on Listed Vernal Pool Crustaceans within the Jurisdiction of the Sacramento Field Office, California* (USFWS 1996) or shall provide an

alternative approach that is acceptable to the City, USACE, and USFWS and accomplishes no net loss of habitat acreage, function, and value.

The project applicant(s) of all project phases shall ensure that there is sufficient upland habitat within the target areas for creation and restoration of vernal pools and vernal pool complexes to provide ecosystem health. The project applicant(s) of all project phases shall identify the extent of indirectly affected vernal pool and seasonal wetland habitat, either by identifying all such habitat within 250 feet of project construction activities or by providing an alternative technical evaluation. If a lesser distance is pursued, this distance shall be approved by USFWS. The project applicant(s) shall preserve acreage of vernal pool habitat for each wetted acre of any indirectly affected vernal pool habitat at a ratio approved by USFWS at the conclusion of the Section 7 consultation. This mitigation shall occur before the approval of any grading or improvement plans for any project phase that would allow work within 250 feet of such habitat, and before any ground-disturbing activity within 250 feet of the habitat. The project applicant(s) will not be required to complete this mitigation measure for direct or indirect impacts that have already been mitigated to the satisfaction of USFWS through another BO or mitigation plan (i.e., if impacts on specific habitat acreage are mitigated by one project phase or element, the project applicant(s) will not be required to mitigate for it again in another phase of the project).

A standard set of BMPs shall be applied to construction occurring in areas within 250 feet of off-site vernal pool habitat, or within any lesser distance deemed adequate by a qualified biologist (with approval from USFWS) to constitute a sufficient buffer from such habitat. Refer to Section 3A.9, "Hydrology and Water Quality - Land" for the details of BMPs to be implemented.

Mitigation for the off-site elements outside of the City of Folsom's jurisdictional boundaries must be coordinated by the project applicant(s) of each applicable project phase with the affected oversight agency(ies) (i.e., El Dorado and/or Sacramento Counties, or Caltrans).

Implementation: Project applicant(s) of all project phases.

Timing: Before the approval of any grading or improvement plans, before any ground-disturbing activities within 250 feet of said habitat, and on an ongoing basis throughout construction as applicable for all project phases as required by the mitigation plan, BO, and/or BMPs.

Enforcement:

1. U.S. Army Corps of Engineers, Sacramento District; U.S. Fish and Wildlife Service.
2. For all project-related improvements that would be located within the City of Folsom: City of Folsom Community Development Department.
3. For the two roadway connections in El Dorado Hills: El Dorado County Development Services Department.
4. For the U.S. 50 interchange improvements: Caltrans.
4. For the detention basin west of Prairie City Road: Sacramento County Planning and Community Development Department.

Mitigation Measure 3A.3-2h: Obtain Incidental Take Permit for Impacts on Valley Elderberry Longhorn Beetle and Implement All Permit Conditions.

Before each phase of the project, the project applicant(s) shall have a qualified biologist identify any elderberry shrubs within 100 feet of the project footprint and conduct a survey for valley elderberry

longhorn beetle exit holes in stems greater than 1 inch in diameter. If no project activity, including grading or use of herbicides, would occur within 100 feet of an elderberry shrub, then no further mitigation shall be required for valley elderberry longhorn beetle in those areas.

If project activities would occur within 100 feet of any elderberry shrubs, consultation with USFWS under Section 7 will be required. No project construction shall proceed in areas potentially containing valley elderberry longhorn beetle until a BO has been issued by USFWS, and the project applicant(s) of all project phases have abided by all pertinent conditions in the BO relating to the proposed construction, including conservation and minimization measures, intended to be completed before on-site construction. Conservation and minimization measures are likely to include preparation of supporting documentation that describes methods for relocation of existing shrubs and maintaining existing shrubs and other vegetation in a conservation area.

Relocation of existing elderberry shrubs and planting of new elderberry seedlings shall be implemented on a no-net-loss basis. Compensatory mitigation for elderberry shrubs that would be removed from their current locations would be developed in consultation with USFWS during the Section 7 consultation process. Compensatory mitigation may include planting replacement elderberry seedlings or cuttings and associated native plants within the open space areas of the SPA, planting replacement elderberry seedlings or cuttings and associated native plants at a suitable off-site location, purchasing credits at an approved mitigation bank, or a combination thereof. Relocated and replacement shrubs and associated native plantings shall be placed in conservation areas providing a minimum of 1,800 square feet per transplanted shrub. These conservation areas shall be preserved in perpetuity as habitat for valley elderberry longhorn beetle. The number of elderberry shrubs that would be affected by implementing the project is expected to be low because there are currently a total of less than 10 shrubs known to be present in the SPA. Ratios for mitigation of valley elderberry longhorn beetle habitat will ultimately be determined through the ESA Section 7 consultation process with USFWS, but shall be a minimum of "no net loss." USFWS uses stem count data, presence or absence of exit holes, and whether the affected elderberry shrubs are located in riparian habitat to determine the number of elderberry seedlings or cuttings and associated riparian vegetation that would need to be planted as compensatory mitigation for affected elderberry longhorn beetle habitat. The final VELB mitigation plan, including transplanting procedures, long-term protection, management of the mitigation areas, and monitoring procedures shall be consistent with the *Conservation Guidelines for the Valley Elderberry Longhorn Beetle* (USFWS 1999).

The population of valley elderberry longhorn beetles, the general condition of the conservation area, and the condition of the elderberry and associated native plantings in the conservation area must be monitored over a period of either ten consecutive years or for seven years over a 15-year period. A minimum survival rate of at least 60% of the elderberry plants and 60% of the associated native plants must be maintained throughout the monitoring period. Within one year of discovering that survival has dropped below 60%, the project applicant(s) shall replace failed plantings to bring survival above this level. Detailed information on monitoring success of relocated and planted shrubs and measures to compensate (should success criteria not be met) would be required in the BO.

Mitigation for the off-site elements outside of the City of Folsom's jurisdictional boundaries (i.e., U.S. 50 interchange improvements) must be coordinated by the project applicant(s) of each applicable project phase with the affected oversight agency(ies) (i.e., Caltrans).

Implementation: Project applicant(s) of all project phases.

Timing: Before the approval of any grading or improvement plans or any ground-disturbing activity within 100 feet of valley elderberry longhorn beetle habitat as applicable for all project phases, and on an ongoing basis as required by BO.

Enforcement:

1. U.S. Army Corps of Engineers, Sacramento District; U.S. Fish and Wildlife Service.
2. For all project-related improvements that would be located within the City of Folsom: City of Folsom Community Development Department.
3. For the U.S. 50 interchange improvements: Caltrans.

RIM

Wildlife Associated with Vernal Pools

The Resource Impact Minimization Alternative would result in permanent fill of approximately 1 acre of vernal pool, 3 acres of seasonal wetlands, and 13 acres of seasonal wetland swales, which is 6 acres less of potential habitat for vernal pool fairy shrimp, conservancy fairy shrimp, vernal pool tadpole shrimp, and western spadefoot toad directly affected than the Proposed Project Alternative. Indirect effects on vernal pool species would also be less because the Resource Impact Minimization Alternative generally includes at least a 250-foot buffer around wetland habitats, resulting in an additional 379 acres of open space, which would preserve more of the micro watersheds and maintain greater hydrologic function of wetland habitats. However, permanent loss of habitat for vernal pool fairy shrimp, conservancy fairy shrimp, vernal pool tadpole shrimp, and western spadefoot would still occur, and direct take of individuals could occur, as a result of implementation of the Resource Impact Minimization Alternative. Indirect effects to these species would still occur as a result of development in uplands adjacent to wetland habitats, including alteration of the topography and hydrologic function, increased run-off from adjacent impervious surfaces, and degraded water quality from containments. Therefore **direct** and **indirect** impacts to vernal pool-associated wildlife species would be **significant.** ***[Lesser]***

Swainson's Hawk and Other Raptors

The Resource Impact Minimization Alternative would result in removal of approximately 312 acres of oak woodland, which provides potential nesting habitat for Swainson's hawk and other raptors. Tree removal during the raptor breeding season (February–August) could result in mortality of eggs and chicks if an active nest were present. Other construction activities could disturb active nests near the construction area or in trees not yet removed from the SPA, potentially resulting in nest abandonment by the adults and mortality of chicks and eggs. Implementation of the Resource Impact Minimization Alternative would result in the direct loss of almost 2,000 acres of grassland, which provides foraging habitat for Swainson's hawk and other raptors. Some of the remaining 597 acres of grassland habitat would be directly affected by contour grading, recreational amenities, and other activities within the open space area. In addition, this alternative would result in indirect effects to the nesting and foraging habitat remaining in the SPA due to disturbance from use of adjacent development, which could reduce nest success and foraging habitat quality. Therefore, **direct** and **indirect** impacts to Swainson's hawk and other raptors would be **significant.** ***[Similar]***

Valley Elderberry Longhorn Beetle

Implementation of the Resource Impact Minimization Alternative could result in removal of elderberry shrubs containing valley elderberry longhorn beetle larvae. Indirect impacts from ground-disturbing activities or use of herbicides could also result if the health of elderberry shrubs containing valley elderberry longhorn beetle larvae is adversely affected. Therefore, **direct** and **indirect** impacts to valley elderberry longhorn beetle are considered to be **significant**. ***[Similar]***

Tricolored Blackbird

Construction activities during implementation of the Resource Impact Minimization Alternative could result in disturbance to tricolored blackbird colonies, which may result in nest abandonment and loss of eggs or young. Due to the potential for large numbers of nesting tricolored blackbirds to be lost, this **direct** impact would be considered **potentially significant**. Because project activities adjacent to potential nesting habitat are not expected to result in the mortality of individuals, chicks, or eggs, **indirect impacts** would be considered **less than significant**. ***[Similar]***

Special-Status Bats

Implementation of the Resource Impact Minimization Alternative would likely require an abandoned mine shaft to be filled or capped. If the mine shaft is used by bats as a day roost, hibernation roost, or maternity colony roost, implementation of this alternative could result in injury and mortality of pallid bat, Townsend's big-eared bat, or other common bat species. Project activities could result in **significant direct** or **indirect** impacts on special-status bat species. ***[Similar]***

Other Special-Status Species

The Resource Impact Minimization Alternative would have a **less-than-significant direct** and **indirect** impact on western pond turtle, loggerhead shrike, grasshopper sparrow, Modesto song sparrow, and American badger because implementation of this alternative would not substantially reduce their populations. ***[Similar]***

> Mitigation Measure: Implement Mitigation Measures 3A.3-1a, 3A.3-1b, 3A.3-2a, 3A.3-2b, 3A.3-2c, 3A.3-2d, 3A.3-2g, and 3A.3-2h.

CD

Wildlife Associated with Vernal Pools

The Centralized Development Alternative would result in permanent fill of approximately 3 acres of vernal pool, 3 acres of seasonal wetlands, and 18 acres of seasonal wetland swales, which is about 1 acre less of potential habitat for vernal pool fairy shrimp, conservancy fairy shrimp, vernal pool tadpole shrimp, and western spadefoot toad directly affected than the Proposed Project Alternative. Indirect effects on vernal pool species would also be less slightly less than the Proposed Project Alternative because the Centralized Development Alternative would designated an additional 414 acres of open space, which would preserve more of the uplands surrounding the wetlands, providing lager buffers and maintaining more of the micro watersheds and greater hydrologic function. However, permanent loss of habitat for vernal pool fairy shrimp, conservancy fairy shrimp, vernal pool tadpole shrimp, and western spadefoot would still occur as a result of implementation of the Centralized Development Alternative. Indirect effects to these species would still occur as a result of development in uplands adjacent to wetland habitats, including alteration of the topography and hydrologic function, increased runoff from adjacent impervious surfaces, and degraded water quality from containments. Therefore **direct** and **indirect** impacts to wildlife species associated with vernal pools would be **significant.** ***[Lesser]***

Swainson's Hawk and Other Raptors

The Centralized Development Alternative would result in removal of approximately 395 acres of oak woodland, which provides potential nesting habitat for Swainson's hawk and other raptors. Tree removal during the raptor breeding season (February–August) could result in mortality of eggs and chicks if an active nest were present. Other construction activities could disturb active nests near the construction area or in trees not yet removed from the SPA, potentially resulting in nest abandonment by the adults and mortality of chicks and eggs. Implementation of the Centralized Development Alternative would result in the direct loss of approximately 1,860

acres of grassland, which provides foraging habitat for Swainson's hawk and other raptors. Some of the remaining 734 acres of grassland habitat would be directly affected by contour grading, recreational amenities, and other activities within the open space area. In addition, this alternative would result in indirect effects to the nesting and foraging habitat remaining in the SPA due to disturbance from use of adjacent development, which could reduce nest success and foraging habitat quality. Therefore, **direct** and **indirect** impacts to Swainson's hawk and other raptors would be **significant.** ***[Similar]***

Valley Elderberry Longhorn Beetle

Implementation of the Centralized Development Alternative could result in removal of elderberry shrubs containing valley elderberry longhorn beetle larvae. Indirect impacts from ground-disturbing activities or use of herbicides could also result if the health of elderberry shrubs containing valley elderberry longhorn beetle larvae is adversely affected. Therefore, **direct** and **indirect** impacts to valley elderberry longhorn beetle would be **significant**. ***[Similar]***

Tricolored Blackbird

Construction activities during implementation of the Centralized Development Alternative could result in disturbance to tricolored blackbird colonies, which may result in nest abandonment and loss of eggs or young. Due to the potential for large numbers of nesting tricolored blackbirds to be lost, this **direct** impact would be considered **potentially significant**. Because project activities adjacent to potential nesting habitat are not expected to result in the mortality of individuals, chicks, or eggs, **indirect** impacts would be considered **less than significant**. ***[Similar]***

Special-Status Bats

Implementation of the Centralized Development Alternative would likely require an abandoned mine shaft to be filled or capped. If the mine shaft is used by bats as a day roost, hibernation roost, or maternity colony roost, implementation of this alternative could result in injury and mortality of pallid bat, Townsend's big-eared bat, or other common bat species. Project activities could result in **significant direct** or **indirect** impacts on special-status bat species. ***[Similar]***

Other Special-Status Species

The Centralized Development Alternative would have a **less-than-significant direct** and **indirect** impact on western pond turtle, loggerhead shrike, grasshopper sparrow, Modesto song sparrow, and American badger because implementation of this alternative would not substantially reduce their populations. ***[Similar]***

> Mitigation Measure: Implement Mitigation Measures 3A.3-1a and 3A.3-1b, 3A.3-2a, 3A.3-2b, 3A.3-2c, 3A.3-2d, 3A.3-2g, and 3A.3-2h.

RHD

Wildlife Associated with Vernal Pools

The Reduced Hillside Development Alternative would result in permanent fill of approximately 3.5 acre of vernal pool, 4 acres of seasonal wetlands, and 20 acres of seasonal wetland swales, which is about 3 acres more of potential habitat for vernal pool fairy shrimp, conservancy fairy shrimp, vernal pool tadpole shrimp, and western spadefoot toad directly affected than the Proposed Project Alternative. Indirect effects on vernal pool species would also be similar to the Proposed Project Alternative. Major grading and topographic modifications would occur throughout the SPA and similar wetland buffers would be provided as described in the Proposed Project Alternative. However, permanent loss of habitat for vernal pool fairy shrimp, conservancy fairy shrimp, vernal

pool tadpole shrimp, and western spadefoot would still occur as a result of implementation of the Reduced Hillside Development Alternative. Although this alternative includes control measures and performance standards that address stormwater flow, volume, and water quality for development areas to minimize hydrologic and geomorphic modifications, indirect effects to vernal pool associated species would still occur as a result of development in uplands adjacent to wetland habitats, due to alteration of the topography and hydrologic function, increased run-off from adjacent impervious surfaces, and degraded water quality from containments. Therefore **direct** and **indirect** impacts to wildlife species associated with vernal pools would be **significant.** ***[Greater]***

Swainson's Hawk and Other Raptors

The Reduced Hillside Development Alternative would result in removal of approximately 444 acres of oak woodland, which provides potential nesting habitat for Swainson's hawk and other raptors. Tree removal during the raptor breeding season (February–August) could result in mortality of eggs and chicks if an active nest were present. Other construction activities could disturb active nests near the construction area or in trees not yet removed from the SPA, potentially resulting in nest abandonment by the adults and mortality of chicks and eggs. Implementation of the Reduced Hillside Development Alternative would result in the direct loss of approximately 2,181 acres of grassland, which provides foraging habitat for Swainson's hawk and other raptors. Some of the remaining 413 acres of grassland habitat would be directly affected by contour grading, recreational amenities, and other activities within the open space area. In addition, this alternative would result in indirect effects to the nesting and foraging habitat remaining in the SPA due to disturbance from use of adjacent development, which could reduce nest success and foraging habitat quality. Therefore, **direct** and **indirect** impacts to Swainson's hawk and other raptors would be **significant.** ***[Similar]***

Valley Elderberry Longhorn Beetle

Implementation of the Reduced Hillside Development Alternative could result in removal of elderberry shrubs containing valley elderberry longhorn beetle larvae. Indirect impacts from ground-disturbing activities or use of herbicides could also result if the health of elderberry shrubs containing valley elderberry longhorn beetle larvae is adversely affected. Therefore, **direct** and **indirect** impacts to valley elderberry longhorn beetle would be **significant**. ***[Similar]***

Tricolored Blackbird

Construction activities during implementation of the Reduced Hillside Development Alternative could result in disturbance to tricolored blackbird colonies, which may result in nest abandonment and loss of eggs or young. Due to the potential for large numbers of nesting tricolored blackbirds to be lost, this **direct** impact would be considered **potentially significant**. Because project activities adjacent to potential nesting habitat are not expected to result in the mortality of individuals, chicks, or eggs, **indirect** impacts would be considered **less than significant**. ***[Similar]***

Special-Status Bats

Implementation of the Reduced Hillside Development Alternative would likely require an abandoned mine shaft to be filled or capped. If the mine shaft is used by bats as a day roost, hibernation roost, or maternity colony roost, implementation of this alternative could result in injury and mortality of pallid bat, Townsend's big-eared bat, or other common bat species. Project activities could result in **significant direct** or **indirect** impacts on special-status bat species. ***[Similar]***

Other Special-Status Species

The Reduced Hillside Development Alternative would have a **less-than-significant direct** and **indirect** impact on western pond turtle, loggerhead shrike, grasshopper sparrow, Modesto song sparrow, and American badger because implementation of this alternative would not substantially reduce their populations. ***[Similar]***

Mitigation Measure: Implement Mitigation Measures 3A.3-1a and 3A.3-1b, 3A.3-2a, 3A.3-2b, 3A.3-2c, 3A.3-2d, 3A.3-2g, and 3A.3-2h.

Off-Site Elements

Wildlife Associated with Vernal Pools

The off-site elements would result in fill of approximately 0.59 acres of vernal pool, 0.25 acres of seasonal wetlands, or 0.55 acres seasonal wetland swales, which are potential habitat for vernal pool fairy shrimp, conservancy fairy shrimp, vernal pool tadpole shrimp, and western spadefoot toad. Construction of the off-site elements that support project development could result in loss of individuals or potential habitat for special-status wildlife associated with vernal pools. Indirect effects could include habitat degradation from runoff, erosion, siltation, or alteration of the hydrologic function of the wetlands. Therefore, **significant direct** and **indirect** impacts would occur.

Swainson's Hawk and Other Raptors

Construction of the off-site elements could result in disturbance to nesting Swainson's hawk or other raptors or direct removal of nest trees. Ground-disturbing activities near active nest trees could result in nest abandonment by the adults and mortality of chicks and eggs. Although the interchange improvements would result in loss of approximately 43 acres of annual grassland, these area are not likely important raptor foraging areas, as they are adjacent to existing roadways and U.S. 50 and located in hilly terrain. Loss of an active Swainson's hawk or other raptor nest would be considered a **potentially significant direct** and **indirect** impact.

Valley Elderberry Longhorn Beetle

It is unknown if suitable habitat for valley elderberry longhorn beetle would be affected by the off-site elements. However, if elderberry shrubs with stems greater than 1 inch are present in or adjacent to project construction, **significant direct** or **indirect** impacts to valley elderberry longhorn beetle larvae could occur. There are no elderberry shrubs present at the off-site detention basin site or the off-site roadway connections into El Dorado County. Elderberry shrubs are present in the U.S. 50 Prairie City Road interchange improvement footprint.

Tricolored Blackbird

Construction activities for the off-site elements could result in disturbance to tricolored blackbird colonies, which may result in nest abandonment and loss of eggs or young. Due to the potential for large numbers of nesting tricolored blackbirds to be lost, this **direct** impact would be considered **potentially significant**. **Indirect** impacts on tricolored blackbirds from off-site construction would be **less than significant** because they are not expected to result in the mortality of individuals, chicks, or eggs.

Special-Status Bats

Construction of the off-site elements would not involve modification of any existing bridge or overpass structures or other habitat that could be used by roosting bats. Therefore, **no direct** or **indirect impacts** to special-status bats would occur.

Other Special-Status Species

Construction of the off-site elements would not remove or disturb important nesting habitat for loggerhead shrike, grasshopper sparrow, or Modesto song sparrow, and would not remove or disturb a substantial amount of suitable habitat for American badger or substantially reduce their populations. In addition, no aquatic habitat for western pond turtle would be affected by the off-site elements. Therefore, **direct** and **indirect** impacts from construction of the off-site elements to these special status species would be considered **less than significant**.

Mitigation Measure: Implement Mitigation Measures 3A.3-1a and 3A.3-1b, 3A.3-2a, 3A.3-2b, 3A.3-2c, 3A.3-2d, 3A.3-2g, and 3A.3-2h.

Implementation of Mitigation Measures 3A.3-2a, 3A.3-2b, 3A.3-2c, 3A.3-2d, 3A.3-2e, 3A.3-2f, 3A.3-2g, and 3A.3-2h would lessen significant direct and indirect impacts on special-status wildlife resulting from the No USACE Permit, Proposed Project, Resource Impact Minimization, Centralized Development, and Reduced Hillside Development Alternatives; however, this impact would remain **significant and unavoidable** because the direct removal of approximately 2,700 acres and indirect effect to approximately 800 acres of potential habitat for special-status wildlife cannot be fully mitigated. In addition, some of the off-site elements (two roadway connections in El Dorado County, detention basin in Sacramento County, and U.S. 50 interchange improvements) fall under the jurisdiction of El Dorado and Sacramento Counties and Caltrans; therefore, neither the City nor the project applicant(s) would have control over their timing or implementation. The amount of habitat lost could potentially contribute to the decline of Swainson's hawk populations in the region. This decline would constitute a substantial adverse effect under CEQA.

Impacts on special-status wildlife species could be fully mitigated only through a combination of habitat preservation and restoration in the vicinity of the SPA. Parcels of similar habitat quality are currently present in the project vicinity, but these parcels would be of lesser value following development of the project because of the effects of habitat fragmentation and secondary and indirect impacts related to the project. Moreover, there would be a net loss of approximately 3,500 acres of potential habitat for special-status species regardless of the acreage preserved. Therefore, fully compensating for the impact by preserving existing habitat in the project vicinity is infeasible. The mitigation does include elements of habitat creation and enhancement that would increase the habitat value of preserved lands so that mitigation habitat could be of greater value than habitat lost and degraded, but there is not sufficient undeveloped land in the project vicinity to offset the effects of habitat fragmentation on special-status species, and thus, fully mitigate the impact, or reduce it to a less-than-significant level.

IMPACT 3A.3-3 Potential Loss or Degradation of Special-Status Plant Populations and Habitat. *Project implementation could result in direct removal of special-status plants, if they are present, through loss of suitable habitat or degradation of suitable habitat due to site alteration.*

On-Site and Off-Site Elements

NP

Under the No Project Alternative, the SPA would remain as open space used for livestock grazing consistent with the current AG-80 zoning designation, and no off-site water facilities would be constructed. Continuation of the existing land use would not result in substantial changes to the vegetation in the SPA or Water Facilities Study Area and habitat that could support special-status plants would not be removed. Therefore, potential **direct** and **indirect** impacts on special-status plants would be **less than significant**. ***[Lesser]***

NCP, PP, RIM, CD, RHD,

Eleven special-status plant species have the potential to occur in the SPA and off-site improvement areas in vernal pool, seasonal wetland, freshwater marsh, pond, oak woodland, and grassland habitats. Protocol-level surveys for eight of these species—Ahart's dwarf rush, Bogg's Lake hedge-hyssop, dwarf downingia, legenere, pincushion navarretia, Sacramento Orcutt grass, slender Orcutt grass, and Tuolumne button-celery—were conducted on the Folsom South property by ECORP in spring 2006 (MJM Properties LLC 2006) and no special-status plants were found. Protocol-level surveys were conducted on the Sacramento Country Day School property by Virginia Daines and Susan Saunders in spring 2005. Species targeted during the Country Day School surveys included the species targeted during the Folsom South surveys plus hoary navarretia (*Navarretia eriocephala*), a CNPS watch list species. No special-status plant species were found on the Sacramento Country Day School site. Neither of the

surveys included big scale balsamroot, Brandegee's clarkia, or Sanford's arrowhead as target species; therefore, these species could have been overlooked, if present during these surveys. Big scale balsamroot and Brandegee's clarkia grow in upland habitats that were not focused on during the Folsom South surveys because the target species of those surveys are associated with vernal pools or other wetland habitats. Sanford's arrowhead is an emergent species that grows in shallowly inundated areas such as pond edges or slow-moving stream channels. This species has been documented immediately adjacent to the SPA. It is unlikely that ponds were included in the Folsom South surveys, since species targeted during those surveys do not typically grow in ponds. Suitable habitat for Sanford's arrowhead is not likely present on the Sacramento Country Day School site.

In 2009, ECORP conducted protocol-level surveys at the Hillsborough and Prairie City Business Park properties for all of the target species listed previously, except for big-scale balsamroot. No special-status plant species were found during these surveys.

Protocol-level special-status plant surveys were conducted on the Carpenter Ranch property by Gibson and Skordal during April, May, and June 2009. All of the target species were included in these surveys. No special-status plant species were found during the surveys conducted on Carpenter Ranch.

Special-status plant surveys have not been conducted on any of the other properties comprising the SPA or in any of the off-site improvement areas. Bogg's Lake hedge-hyssop, a species that is state-listed as endangered, has been documented in close proximity to the proposed off-site detention basin near the southwest boundary of the SPA. Potentially suitable habitat for this species is present on the proposed off-site detention basin site and there is high potential for it to be present there. Potentially suitable habitat for special-status plants is also present in the interchange improvement areas and the roadway connections into El Dorado County. In addition, because the project would be constructed in phases over a period of approximately 15 to 20 years, special-status plants could colonize previously surveyed areas before construction begins. Therefore, the possibility that special-status plants are present, or would be present at the beginning of construction, in the SPA or off-site improvement areas cannot be eliminated at this time.

Loss of suitable habitat as a result of project development could result in direct removal or mortality of special-status plants, if they are present. Project development could also result in indirect impacts on special-status plants including impacts caused by pollutants transported by urban runoff and other means, changes in vegetation as a result of changes in land use and management practices, altered hydrology from the construction of adjacent residential development and roadways, habitat fragmentation, and the introduction of invasive species or noxious weeds from surrounding development.

Because project development would result in loss and degradation of habitat that could support special-status plant species, **direct** and **indirect** impacts on special-status plant species are considered **potentially significant**. ***[Similar]***

> Mitigation Measure 3A.3-3: Conduct Special-Status Plant Surveys; Implement Avoidance and Mitigation Measures or Compensatory Mitigation.
>
> To mitigate for the potential loss or degradation of special-status plant species and habitat, the project applicant(s) of all project phases shall adhere to the requirements described below.
>
> - The project applicant(s) of all proposed project phases, including the proposed off-site elements, shall retain a qualified botanist to conduct protocol level preconstruction special-status plant surveys for all potentially occurring species. If no special-status plants are found during focused surveys, the botanist shall document the findings in a letter report to USFWS, DFG, the City of Folsom, Caltrans (for interchange improvements to U.S. 50), El Dorado County (for roadway connections in El Dorado County), and Sacramento County (for the off-site detention basin) and no further mitigation shall be required.

- If special-status plant populations are found, the project applicant(s) of affected project phases shall consult with DFG and USFWS, as appropriate depending on species status, to determine the appropriate mitigation measures for direct and indirect impacts on any special-status plant population that could occur as a result of project implementation. Mitigation measures may include preserving and enhancing existing populations, creation of off-site populations on project mitigation sites through seed collection or transplantation, and/or restoring or creating suitable habitat in sufficient quantities to achieve no net loss of occupied habitat or individuals.

- If potential impacts on special-status plant species are likely, a mitigation and monitoring plan shall be developed before the approval of grading plans or any ground-breaking activity within 250 feet of a special-status plant population. The mitigation plan shall be submitted to Caltrans (for interchange improvements to U.S. 50), El Dorado County (for impacts in roadway connections in El Dorado County), Sacramento County (for impacts in the off-site detention basin footprint), or the City of Folsom (for on-site impacts and all other off-site elements), for review and approval. It shall be submitted concurrently to DFG or USFWS, as appropriate depending on species status, for review and comment. The plan shall require maintaining viable plant populations on-site and shall identify avoidance measures for any existing population(s) to be retained and compensatory measures for any populations directly affected. Possible avoidance measures include fencing populations before construction and exclusion of project activities from the fenced-off areas, and construction monitoring by a qualified botanist to keep construction crews away from the population. The mitigation plan shall also include monitoring and reporting requirements for populations to be preserved on site or protected or enhanced off-site.

- If relocation efforts are part of the mitigation plan, the plan shall include details on the methods to be used, including collection, storage, propagation, receptor site preparation, installation, long-term protection and management, monitoring and reporting requirements, and remedial action responsibilities should the initial effort fail to meet long-term monitoring requirements.

- If off-site mitigation includes dedication of conservation easements, purchase of mitigation credits or other off-site conservation measures, the details of these measures shall be included in the mitigation plan, including information on responsible parties for long-term management, conservation easement holders, long-term management requirements, and other details, as appropriate to target the preservation on long term viable populations.

Mitigation for the off-site elements outside of the City of Folsom's jurisdictional boundaries must be coordinated by the project applicant(s) of each applicable project phase with the affected oversight agency(ies) (i.e., Caltrans, El Dorado and/or Sacramento Counties).

Implementation: Project applicant(s) of all project phases and on- and off-site elements.

Timing: Before approval of grading or improvement plans or any ground disturbing activities, including grubbing or clearing, for any project phase, including off-site elements.

Enforcement:

1. U.S. Fish and Wildlife Service, California Department of Fish and Game.
2. For all project-related improvements that would be located within the City of Folsom: City of Folsom Community Development Department.
3. For the two roadway connections in El Dorado Hills: El Dorado County Development Services Department.
4. For the detention basin west of Prairie City Road: Sacramento County Planning and Community Development Department.

5. For the U.S. 50 interchange improvements: Caltrans.

Implementation of Mitigation Measure 3A.3-3 would reduce the potentially significant impacts on special-status plant species under the No USACE Permit, Proposed Project, Resource Impact Minimization, Centralized Development, and Reduced Hillside Development Alternatives to a **less-than-significant** level because each phase of development would be required to identify and avoid special-status plant populations or provide compensation for the loss of special-status plants through creation of off-site populations, conservation easements, or other appropriate measures. However, some of the off-site elements (U.S. 50 interchange improvements, two roadway connections in El Dorado County, and detention basin in Sacramento County) fall under the jurisdiction of Caltrans, El Dorado County, and Sacramento County, respectively. Therefore, neither the City nor the project applicant(s) would have control over their timing or implementation. Because the City does not control implementation of mitigation measures for off-site improvements constructed in areas under the jurisdiction of Caltrans, Sacramento County, or El Dorado County, this impact is considered **potentially significant and unavoidable** for off-site improvements that would be located in those jurisdictions.

IMPACT 3A.3-4 Loss of Sensitive Natural Communities (Not Already Covered under Other Impacts). *Project implementation would result in loss of riparian habitat, and valley needlegrass grassland that may be present in the SPA and could be removed by project development. These are natural communities considered sensitive by state and local resource agencies and require consideration under CEQA.*

On-Site and Off-Site Elements

NP

Under the No Project Alternative, the SPA would remain as open space used for livestock grazing consistent with the current AG-80 zoning designation, and no off-site water facilities would be constructed. Under the No Project Alternative, topography would not be altered, existing vegetation would not be removed, and no loss or alteration of vernal pools or other aquatic habitats would be expected. Therefore, potential **direct** and **indirect** impacts on sensitive natural communities would be **less than significant**. ***[Lesser]***

NCP, PP, RIM, CD, RHD

The SPA supports approximately 11 acres of riparian habitat. Implementation of the No USACE Permit and Resource Minimization Alternatives would each result in removal 0.50 acre of riparian habitat, while the Proposed Project Alternative would result in removal of approximately 0.70 acre of riparian habitat associated with Alder Creek and its tributaries. Implementation of the Centralized Development and Reduced Hillside Development Alternatives would each result in loss of 0.69 acres of riparian habitat. Construction of the Prairie City Road and Oak Avenue interchanges would result in removal of an additional 3.3 acres of riparian habitat associated with Alder Creek and tributaries. These off-site impacts would be the same under each action alternative and would not occur under the No Project Alternative because the interchanges would not be constructed or improved without project implementation. Construction of the off-site detention basin, the Rowberry Drive Overcrossing, the underground sewer force main, and two off-site roadway connections into El Dorado County would have no impact on riparian habitat. The interchange improvements to U.S. 50 at Prairie City Road would affect riparian habitat.

Potential indirect impacts on riparian habitat include degradation caused by pollutants transported by urban runoff, changes in vegetation as a result of changes in land use and management practices, altered site hydrology from the construction of adjacent residential development and roadways, and the introduction of invasive species or noxious weeds from the surrounding development, and intrusion by humans and domestic animals that could disturb riparian vegetation and reduce habitat values.

The SPA may also support valley needlegrass grassland, a community identified as sensitive by DFG and tracked in the CNDDB. Although plant communities in the SPA were mapped by ECORP, valley needlegrass grassland blends in with annual grassland and often occurs as small patches in large expanses of annual grassland. For this reason it is easily overlooked unless someone is specifically searching for it and may be present in patches too small to have been identified at the coarse scale that upland habitats were mapped. Valley needlegrass grassland has been identified adjacent to the SPA and could be present in the SPA. If present, valley needlegrass grassland could be removed as a result of project implementation. This community was not found in any of the off-site improvement areas.

The loss and degradation of riparian habitat that would occur with project implementation constitutes an adverse effect on a sensitive natural community regulated by DFG under Section 1602 of the California Fish and Game Code. Therefore, a **direct** and **indirect significant** impact would result. ***[Similar]***

The loss of valley needlegrass grassland would be an adverse affect on a sensitive natural community. Because it is unknown if this community is present in the SPA, this is considered a **potentially significant direct** impact. ***[Similar]***

Mitigation Measure: Implement Mitigation Measures 3A.3-1a and 1b.

Mitigation Measure 3A.3-4a: Secure and Implement Section 1602 Streambed Alteration Agreement.

The project applicant(s) of all project phases shall obtain a Section 1602 streambed alteration agreement from DFG for all construction activities that would occur in the bed and bank of Alder Creek and other drainage channels and ponds in the SPA. As a condition of issuance of the streambed alteration agreement, the project applicant(s) for all project phases affecting riparian habitat shall hire a qualified restoration ecologist to prepare a riparian habitat MMP. The draft MMP shall describe specific method(s) to be implemented to avoid and/or compensate for impacts on the stream channel of Alder Creek and other drainage channels within DFG jurisdiction, and the bed and banks of the on-site ponds. Mitigation measures may include establishment or restoration of riparian habitat within the project's open space areas along preserved stream corridors, riparian habitat restoration off-site, or preservation and enhancement of existing riparian habitat either on or off the SPA. The compensation habitat shall be similar in composition and structure to the habitat to be removed and shall be at ratios adequate to offset the loss of riparian habitat functions and services at the SPA. The riparian habitat compensation section of the habitat MMP shall include the following:

- compensatory mitigation sites and criteria for selecting these mitigation sites;
- complete assessment of the existing biological resources in both the on-site and off-site preservation and restoration areas;
- site-specific management procedures to benefit establishment and maintenance of native riparian plant species, including black willow, arroyo willow, white alder, and Fremont cottonwood;
- a planting and irrigation program if needed for establishment of native riparian trees and shrubs at strategic locations within each mitigation site (planting and irrigation may not be necessary if preservation of functioning riparian habitat is chosen as mitigation or if restoration can be accomplished without irrigation or planting);
- in kind reference habitats for comparison with compensatory riparian habitats (using performance and success criteria) to document success;
- monitoring protocol, including schedule and annual report requirements (compensatory riparian habitats shall be monitored for a minimum period of five years);

- ecological performance standards, based on the best available science and including specifications for native riparian plant densities, species composition, amount of dead woody vegetation gaps and bare ground, and survivorship; at a minimum, compensatory mitigation planting sites must achieve 80% survival of planted riparian trees and shrubs by the end of the five-year maintenance and monitoring period or dead and dying trees shall be replaced and monitoring continued until 80% survivorship is achieved;

- corrective measures if performance standards are not met;

- responsible parties for monitoring and preparing reports; and

- responsible parties for receiving and reviewing reports and for verifying success or prescribing implementation or corrective actions.

Any conditions of issuance of the Streambed Alteration Agreement shall be implemented as part of project construction activities that adversely affect the bed and bank and riparian habitat associated with Alder Creek and other drainage channels and ponds that are within the project area that is subject to DFG jurisdiction. The agreement shall be executed by the project applicant(s) and DFG before the approval of any grading or improvement plans or any construction activities in any project phase that could potentially affect the bed and bank of Alder Creek and other on-site or off-site drainage channels under DFG jurisdiction and their associated freshwater marsh and riparian habitat.

Mitigation for the U.S. 50 interchange improvements must be coordinated by the project applicant(s) of each applicable project phase with the Caltrans.

Implementation: Project applicant(s) of all project phases and the off-site Prairie City Road and Oak Avenue interchange improvements.

Timing: Before the approval of grading or improvement plans or any construction activities (including clearing and grubbing) that affect the bed and bank or riparian and freshwater marsh habitat associated with Alder Creek and other on-site or off-site drainage channels and ponds.

Enforcement:

1. California Department of Fish and Game,

2. City of Folsom Community Development Department.

3. Caltrans for interchange improvements to U.S. 50.

Mitigation Measure 3A.3-4b: Conduct Surveys to Identify and Map Valley Needlegrass Grassland; Implement Avoidance and Minimization Measures or Compensatory Mitigation.

The project applicant(s) of all project phases shall retain a qualified botanist to conduct preconstruction surveys to determine if valley needlegrass grassland is present in the SPA. This could be done concurrently with any special-status plant surveys conducted on site as special-status plant surveys are floristic in nature, i.e. require that all species encountered be identified, and require preparation of a plant community map. If valley needlegrass grassland is not found in the SPA, the botanist shall document the findings in a letter report to the City of Folsom, and no further mitigation shall be required. Valley needlegrass grassland was not found in any of the off-site project elements.

If valley needlegrass grassland is found in the SPA, the location and extent of the community shall be mapped and the acreage of this community type, if any, that would be removed by project implementation shall be calculated. The project applicant(s) for all project phases affecting valley needlegrass grassland

shall consult with DFG and the City of Folsom to determine appropriate mitigation for removal of valley needlegrass grassland resulting from project implementation. Mitigation measures may include establishment of valley needlegrass grassland within project's open space areas currently characterized by annual grassland, establishment of valley needlgrass grassland off-site, or preservation and enhancement of existing valley needlegrass grassland either on or off the SPA.

Implementation: Project applicant(s) of all project phases.

Timing: Before approval of grading or improvement plans or any ground-disturbing activities, including grubbing or clearing, for any project phase.

Enforcement: 1. California Department of Fish and Game,

2. City of Folsom Community Development Department.

Implementation of Mitigation Measures 3A.3-4a and 3A.3-4b would reduce significant impacts on sensitive natural communities under the No USACE Permit, Proposed Project, Resource Impact Minimization, Centralized Development, and Reduced Hillside Development Alternatives, and the off-site Prairie City Road and Oak Avenue interchange elements to a **less-than-significant** level because a mitigation and monitoring plan ensuring adequate compensation for the loss of riparian habitat would have to be developed and implemented as a condition of the streambed alteration permit and because valley needlegrass grassland would be identified and mapped in the SPA and the removed acreage of this community would be compensated through establishment elsewhere or preservation and enhancement of existing acreage of valley needlegrass grassland. However, some of the off-site elements (U.S. 50 interchange improvements) fall under the jurisdiction of Caltrans; therefore, neither the City nor the project applicant(s) would have control over their timing or implementation. Because the City does not control implementation of mitigation measures for off-site improvements constructed in areas under the jurisdiction of Caltrans, this impact is considered **potentially significant and unavoidable** for off-site improvements which would be located in Caltrans jurisdiction.

IMPACT 3A.3-5 Loss of Blue Oak Woodland and Individual Oak Trees. *Project implementation would result in the removal of blue oak woodland. In addition, individual oak trees meeting the criteria for protection under Folsom Municipal Code and the Sacramento County Tree Ordinance, but not included within the oak woodland, would also be removed.*

On-Site and Off-Site Elements

NP

Under the No Project Alternative, the SPA would remain as open space used for livestock grazing consistent with the current AG-80 zoning designation, and no off-site water facilities would be constructed. Under this alternative, site topography would not be altered and existing woodland vegetation would not be removed. Therefore, potential **direct** and **indirect** impacts on blue oak woodland and individual oak trees would be **less than significant**. ***[Lesser]***

On-Site Elements

NCP, RIM, CD

The Resource Impact Minimization, Centralized Development, and No USACE Permit Alternatives preserve a greater proportion of the on-site oak resources than the Proposed Project and Reduced Hillside Development Alternatives, but each would still result in removal of substantial acreage of blue oak woodland and protected trees.

Table 3A.3-5 provides a side-by-side comparison of the acreage of oak woodland impacts and percent preserved for each alternative. The No USACE Permit Alternative would remove the least acreage of blue oak woodland, and would preserve 79% of the existing blue oak woodland in the SPA. See Exhibits 3A.3-9, 3A.3-10, and 3A.3-11 for the habitat locations and acreages under each of the alternatives.

Table 3A.3-5
Summary of Blue Oak Woodland Impacts and Preservation for Each Project Alternative

Alternative	Acres of Existing Habitat	Acres of Impact	Acres Preserved	Percent Preserved
No Project	642.1	Unknown	Unknown	Unknown
No USACE Permit	642.1	130.1	512.1	79
Proposed Project	642.1	243.1	399.1	62
Resource Impact Minimization	642.1	154.7	487.5	75
Centralized Development	642.1	213.5	428.6	66
Reduced Hillside Development	642.1	245.8	396.4	61

Note: The acres of impact and acres and percent preserved cannot be determined under the No Project Alternative. Making such estimates would be considered too speculative for meaningful consideration because it cannot be predicted if such development under the Sacramento County General Plan would occur and the location in which it would occur. Development applications would be submitted and processed individually through the County.
Source: ECORP 2009a

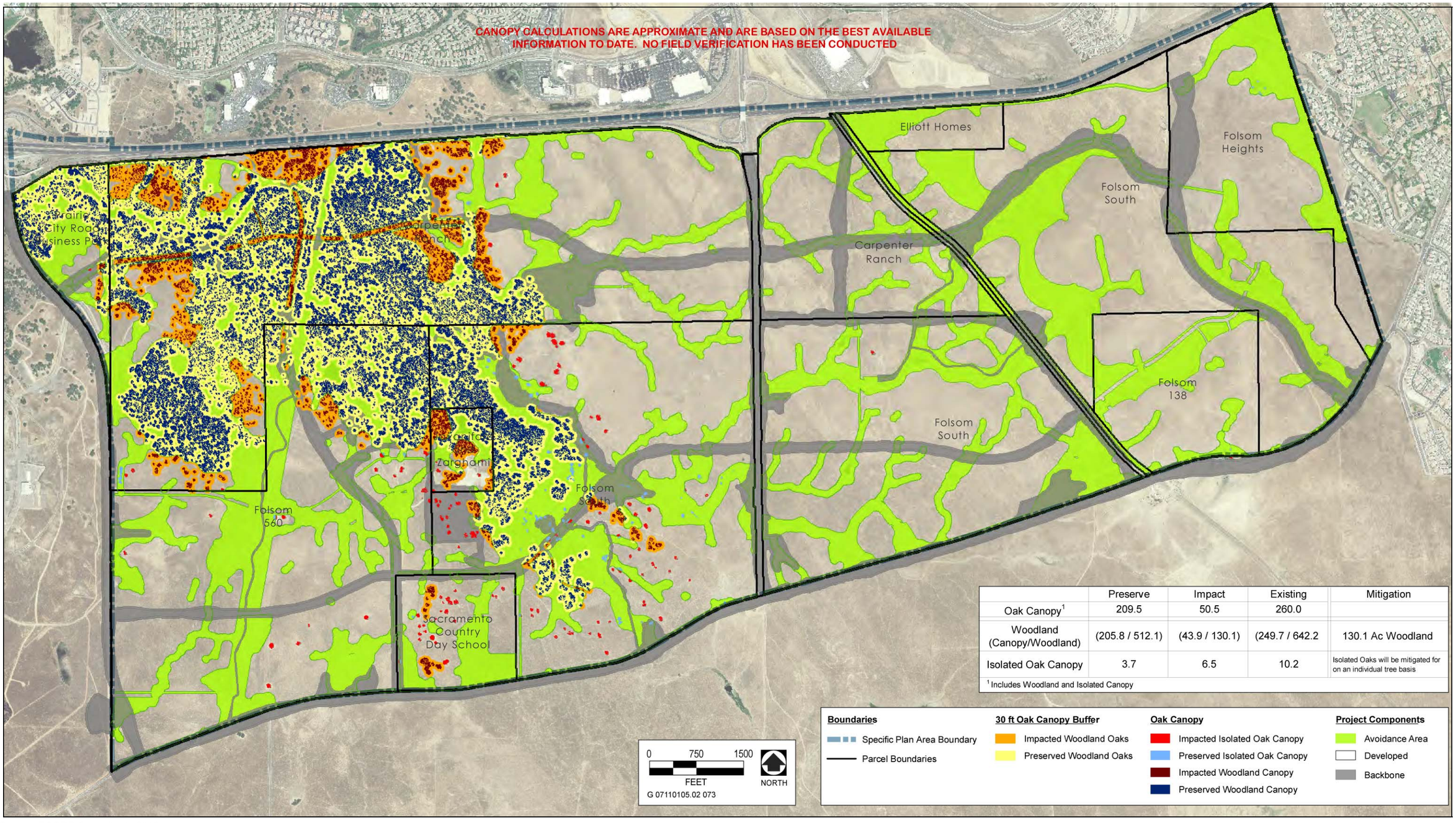
Development of the No USACE Permit, Resource Impact Minimization, and Centralized Development Alternatives would involve similar contour grading, mitigation planting, road and trail development, and creation of impervious surfaces within and immediately adjacent to open space areas as the Proposed Project Alternative. These activities could result in indirect impacts affecting oak tree root systems. Trenching, grading, soil compaction, placement of fill, impervious surfaces, irrigation, and landscaping within the drip lines of oak trees could lead to root damage ultimately resulting in death of the tree. Additional indirect impacts could result from habitat fragmentation, introduction of invasive species or noxious weeds, vegetation management practices (e.g., clearing for fire control), and intrusion by humans and domestic animals that could disturb oak woodland vegetation and reduce habitat values.

Because the No USACE Permit, Resource Impact Minimization, and Centralized Development Alternatives would result in the removal of substantial acreage of blue oak woodland and individual oak trees meeting minimum dbh criteria, a **direct significant** impact would result, but to a lesser degree than the Proposed Project Alternative. ***[Lesser]***

Because the No USACE Permit, Resource Impact Minimization, and Centralized Development Alternatives would result in urbanization adjacent to blue oak woodland and would include development activities that could mortally damage oak trees, including grading, trenching, and impervious surfaces, an **indirect significant** impact would result. ***[Similar]***

> Mitigation Measure 3A.3-5: Conduct Tree Survey, Prepare and Implement an Oak Woodland Mitigation Plan, Replace Native Oak Trees Removed, and Implement Measures to Avoid and Minimize Indirect Impacts on Oak Trees and Oak Woodland Habitat Retained On Site.
>
> The project applicant(s) shall prepare an oak woodland mitigation and monitoring plan. The project applicant(s) of all on- and off-site project phases containing oak woodland habitat shall adhere to the requirements described below, which are consistent with those outlined in California Public Resources Code 21083.4.

CANOPY CALCULATIONS ARE APPROXIMATE AND ARE BASED ON THE BEST AVAILABLE INFORMATION TO DATE. NO FIELD VERIFICATION HAS BEEN CONDUCTED



	Preserve	Impact	Existing	Mitigation
Oak Canopy[1]	209.5	50.5	260.0	
Woodland (Canopy/Woodland)	(205.8 / 512.1)	(43.9 / 130.1)	(249.7 / 642.2	130.1 Ac Woodland
Isolated Oak Canopy	3.7	6.5	10.2	Isolated Oaks will be mitigated for on an individual tree basis

[1] Includes Woodland and Isolated Canopy

Boundaries
- Specific Plan Area Boundary
- Parcel Boundaries

30 ft Oak Canopy Buffer
- Impacted Woodland Oaks
- Preserved Woodland Oaks

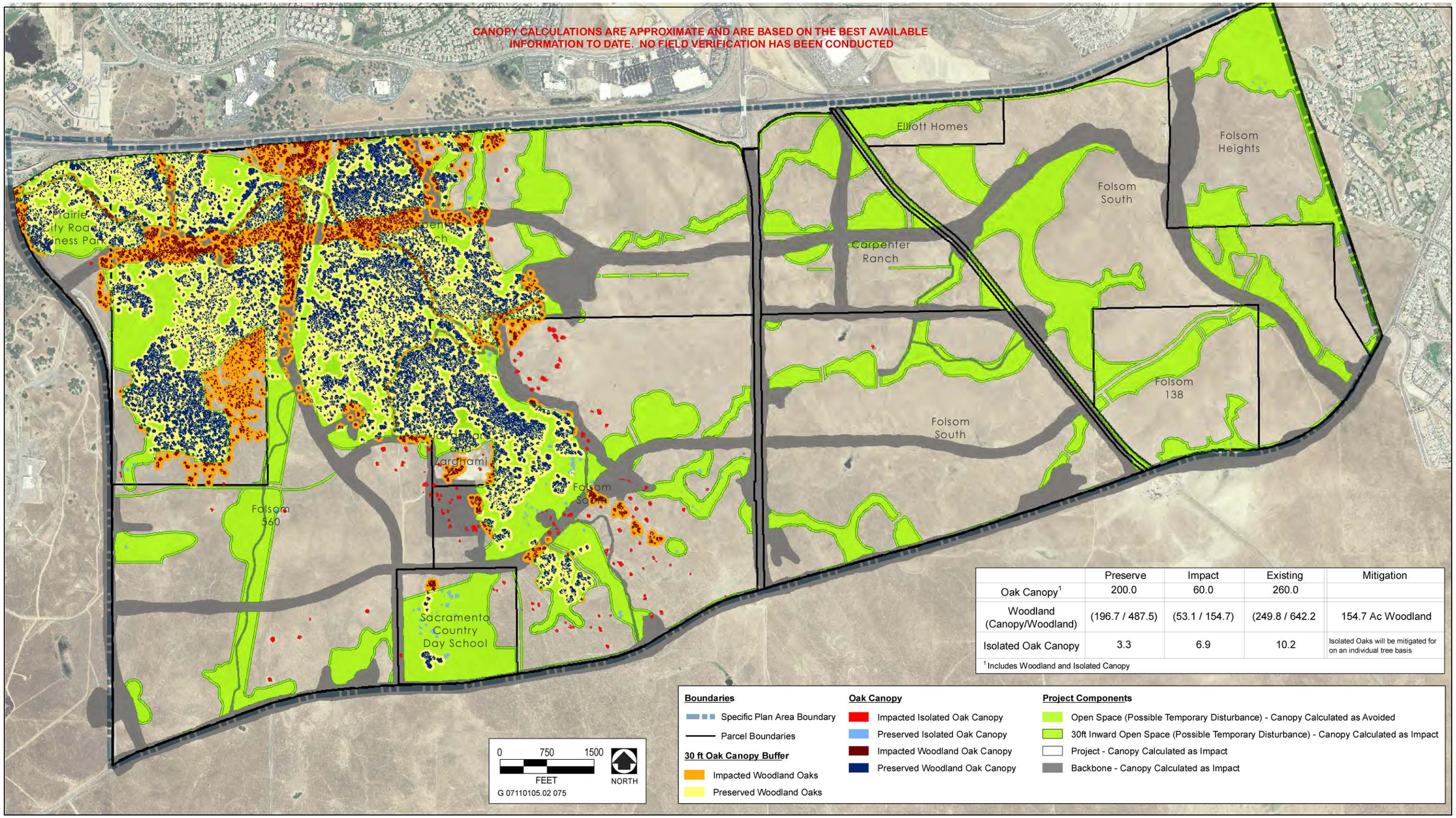
Oak Canopy
- Impacted Isolated Oak Canopy
- Preserved Isolated Oak Canopy
- Impacted Woodland Canopy
- Preserved Woodland Canopy

Project Components
- Avoidance Area
- Developed
- Backbone

Source: ECORP Consultants 2010

Oak Woodland Resources under the No USACE Permit Alternative

Exhibit 3A.3-9

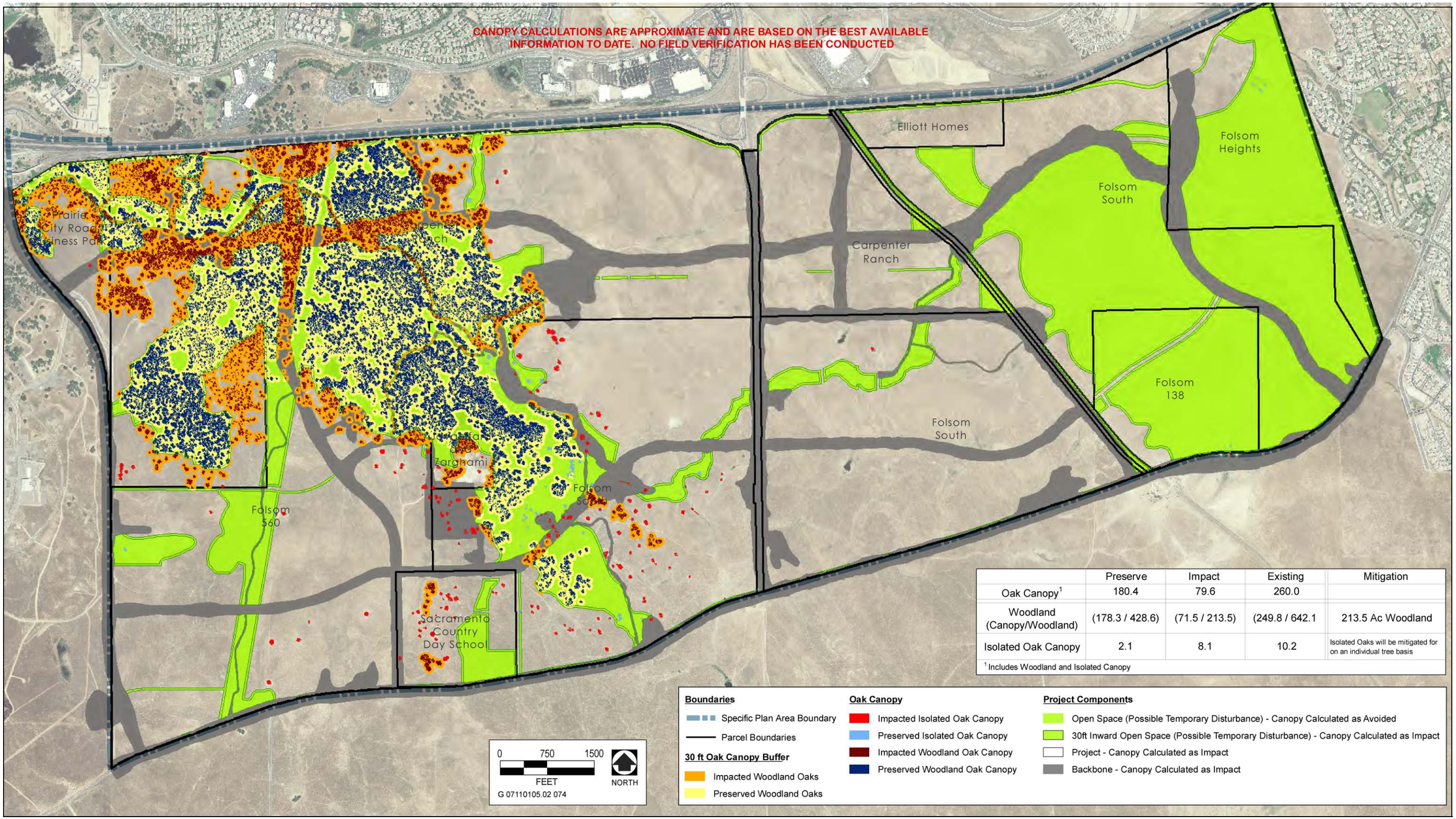


	Preserve	Impact	Existing	Mitigation
Oak Canopy[1]	200.0	60.0	260.0	
Woodland (Canopy/Woodland)	(196.7 / 487.5)	(53.1 / 154.7)	(249.8 / 642.2	154.7 Ac Woodland
Isolated Oak Canopy	3.3	6.9	10.2	Isolated Oaks will be mitigated for on an individual tree basis

[1] Includes Woodland and Isolated Canopy

Source: ECORP Consultants 2010

Oak Woodland Resources under the Resource Impact Minimization Alternative **Exhibit 3A.3-10**



	Preserve	Impact	Existing	Mitigation
Oak Canopy[1]	180.4	79.6	260.0	
Woodland (Canopy/Woodland)	(178.3 / 428.6)	(71.5 / 213.5)	(249.8 / 642.1	213.5 Ac Woodland
Isolated Oak Canopy	2.1	8.1	10.2	Isolated Oaks will be mitigated for on an individual tree basis

[1] Includes Woodland and Isolated Canopy

Source: ECORP Consultants 2010

Oak Woodland Resources under the Centralized Development Alternative **Exhibit 3A.3-11**

Pursuant to Sacramento County General Plan policy, the acreage of oak woodland habitat for determining impacts and mitigation requirements was calculated as the oak tree canopy area within stands of oak trees having greater than 10% cover plus a 30-foot-radius buffer measured from the outer edge of the tree canopy. Oak trees located in areas greater than 30 feet from stands meeting the greater than 10% tree canopy cover criterion were considered isolated trees and not part of the blue oak woodland community. Mitigation for impacts on isolated oak trees is discussed separately below.

- Preserve approximately 399 acres of existing oak woodland habitat in the SPA (this acreage is based on the extent of oak woodland habitat as determined from aerial photograph interpretation; however, following completion of ground verification by a qualified arborist, the actual amount of oak woodland present within impact areas could be slightly greater or lesser than the amount calculated from aerial photograph and, therefore, the amount preserved could also be slightly greater or lesser than 399 acres).

- Create 243 acres of oak woodland habitat in the SPA by planting a combination of blue oak acorns, seedlings, and trees in the following SPA locations:

  - Non-wooded areas that are adjacent to or contiguous with the existing oak woodland habitat.

  - Preserve and passive open space zones throughout the SPA.

  - Open space areas that are adjacent to existing oak woodlands that will be impacted by project grading (i.e. catch slopes).

  - Other practical locations within the SPA in or adjacent to open space.

  The following oak woodland mitigation planting criteria shall be used to create oak woodland habitat:

  - A minimum of 55 planting sites per acre (with a total of 70 units, as defined below) will mitigate for one acre of oak woodland impacts. A combination of acorns, seedlings, and various sizes of container trees (#1 container, #5 container, #15 container) or transplanted trees shall be incorporated into the planting design. Mitigation acreage that is planted solely with larger oak trees (no acorns) shall have a minimum of 35 planting sites per acre. The units are defined as follows:

    – One established acorn equals one unit (acorns will be over planted to maximize potential germination).

    – One oak seedling equals one unit.

    – One #1 container oak tree equals two units.

    – One #5 container oak tree equals three units.

    – One #15 container oak tree equals four units.

    – One transplanted oak tree equals four units per trunk diameter inch (dbh).

- Preserve and protect existing off-site oak woodland habitat. Existing, unprotected oak woodland habitat within Sacramento and El Dorado Counties may be secured and placed under conservation easement in lieu of onsite mitigation measures if necessary. The off-site locations would be managed as oak woodland habitat in perpetuity.

- Create oak woodlands off site. Plant a combination of blue oak acorns, seedlings, and trees at off-site location(s), if needed to achieve the creation goal of 243 acres of new blue oak woodland habitat. This measure would only be needed if 243 acres of blue oak woodland could not be created in the SPA. Off-site creation shall follow the same guidelines as outlined in the Mitigation Planting Criteria for on-site creation. Off-site tree planting shall occur at sites within Sacramento County that should naturally support blue oak woodland and shall be used to restore former blue oak woodland habitat that has been degraded or removed through human activities. Restoration shall be designed to result in species composition and densities similar to those in the SPA prior to project development. Planted areas shall be placed under conservation easement and managed as oak woodland habitat in perpetuity.

- The oak woodland mitigation plan prepared by the project applicant(s) shall include a maintenance and monitoring program for any replacement trees. The program shall include monitoring and reporting requirements, schedule, and success criteria. Replacement oak trees shall be maintained and monitored for a minimum of eight years from the date of planting and irrigation shall be provided to planted trees for the first five years after planting. Any replacement trees that die during the monitoring period shall be replaced. The mitigation planting site must achieve 80% survival of planted trees by the end of the eight-year maintenance and monitoring period or dead and dying trees shall be replaced and monitoring continued until 80% survivorship is achieved. Security acceptable to the City and sufficient to cover maintenance and monitoring costs for eight years shall be provided to the City Planning Department. The security will be forfeited if the project applicant or designated responsible party fails to provide maintenance and monitoring and meet the success criteria.

The project applicant(s) of all on-site project phases containing individual trees and the off-site Prairie City Road and Oak Avenue interchange improvements to U.S. 50; Rowberry Drive Overcrossing; and the underground sewer force main shall develop a map depicting the tree canopy of all oak trees in the survey area and identifying the acreage of tree canopy that would be preserved and the acreage that would be removed. A tree permit for removal of isolated oak trees (those not located within the delineated boundary of oak woodland habitat) shall be obtained from the City Planning Director. As a condition of the tree removal permit, project applicant(s) shall be required to develop a Planting and Maintenance Agreement. The City's Tree Preservation Code requires compensatory mitigation and the City and the project applicants have developed a plan, as set forth Section 10 of the *Folsom Plan Area Specific Plan* (attached to this EIR/EIS as Appendix N) specifically to avoid and minimize adverse effects on individual oak trees from project development and to provide compensatory mitigation for removal of protected trees in the SPA. In addition to the language contained in the *Folsom Plan Area Specific Plan*, the following elements shall be included in a protected tree mitigation plan to be developed by the project applicants and agreed upon by the City:

- Project applicant(s) of projects containing isolated oak trees shall retain a certified arborist or registered professional forester to perform a determinate survey of tree species, size (dbh), condition, and location for all areas of the project site proposed for tree removal and encroachment of development. The condition of individual trees shall be assessed according to the American Society of Consulting Arborists rating system with the following added explanations:

    - 5 = Excellent; No problems – tree has no structural problems, branches are properly spaced and tree characteristics are nearly perfect for the species.

    - 4 = Good; No apparent problems – tree is in good condition and no apparent problems from visual inspection. If potential structural or health problems are tended at this stage, future hazard can be reduced and more serious health problems can be averted.

- 3 = Fair; Minor problems – There are some minor structural or health problems that pose no immediate danger. When the recommended actions in an arborist report are completed correctly the defect(s) can be minimized or eliminated.

- 2 = Poor; Major problems – the tree is in poor condition, but the condition could be improved with correct arboricultural work including, but not limited to: pruning, cabling, bracing, bolting, guying, spraying, mistletoe removal, vertical mulching, and fertilization. If the recommended actions are completed correctly, hazard can be reduced and the rating can be elevated to a 3. If no action is taken the tree is considered a liability and should be removed.

- 1 = Hazardous or non correctable condition – the tree is in extremely poor condition and in non-reversible decline. This rating is assigned to a tree that has structural and/or health problems that no amount of tree care work or effort can change. The issues may or may not be considered a dangerous situation. The tree may also be infested with a disease or pest(s) that is non-controllable at this time and is causing an unacceptable risk of spreading the disease or pests(s) to other trees.

- 0 = Dead – the tree has no significant signs of life (dead or very close to being dead).

► The determination for whether an individual tree shall be preserved, removed without compensation, or removed with compensatory mitigation shall be based on the condition and size of the tree as follows:

- Trees rated 0 or 1 may be removed with no mitigation.

- Trees rated 2 may be removed at 50% of the normal Folsom Municipal Code mitigation.

- Trees rated 3, 4, and/or 5 may be removed at the normal Folsom Municipal Code mitigation.

- Native oaks measuring 24 inches or greater dbh for a single trunk or 40 inches or more for a multi-trunked tree and rated a 4 or 5 shall be retained. Trees of this size but having a rating of 2 or 3 shall not be removed or mitigated, unless retaining wall(s) higher than 4 feet tall (from bottom of footing to the top of the wall) would be required to protect the tree(s) from mass grading of the SPA properties.

- Native oaks measuring between 12 and 24 inches dbh and rated a 4 or 5 shall not be removed or mitigated unless wall(s) would need to be built that are higher than 4 feet tall (from bottom of footing to the top of the wall) would be required to protect the tree(s) from mass grading of the SPA properties. Trees in this size class but rated 2 or 3 shall not be removed unless unreasonable costs to save the tree(s) (greater than the normal Folsom Municipal Code mitigation) would result.

- Native oaks measuring 5 inches or greater dbh but less than 12 inches dbh shall not be removed unless unreasonable costs to save the tree(s) (greater than the normal Folsom Municipal Code mitigation) would result.

- Native oak trees measuring 1 inch or greater dbh but less than 5 inches dbh may be preserved to receive a Small Tree Preservation Credit (STPC). Any tree that is to be considered for preservation credit shall be evaluated, included in the arborist report, and shall have been found to be rated a 3, 4, or a 5. Credits shall only be accepted if the tree protection zone (TPZ) (i.e., the outer edge of the tree canopy drip line) is protected with fencing in the exact manner that 5 inches dbh and greater trees are protected on a construction site, and the spacing is equal to the proper tree spacing dictated by the Folsom Master Tree List. STPC shall not count if they the tree is in a

poor growing space due to its position within the TPZ of another protected tree to be preserved. The City shall accept the preservation of native oak trees in this size class as credit towards the total removed inches based on the following STPC criteria:

Caliper of Tree Preserved	Mitigation Tree Credit Equivalent
1 inch or greater, but less than 2 inches	One #15 container tree or two #5 container trees
2 inches or greater, but less than 3 inches	Two #15 container trees
3 inches or greater, but less than 4 inches	Three #15 container trees
4 inches or greater, but less than 5 inches	Four #15 container trees

- Folsom Municipal Code requires one of the following be planted as compensation for each diameter inch of protected tree removed:

  - half of a 24-inch box tree;
  - one #15 container tree;
  - two #5 container trees; or
  - $150 in-lieu payment or other fee set by City Council Resolution.

- The Planting and Maintenance Agreement shall include a planting plan, planting and irrigation design details, and a weaning schedule for the establishment period. The plan shall include a 5-year establishment period for trees and 8 years for planted acorns with an annual monitoring report that includes corrections needed with proposed work plan, and notice of compliance within 90-days of annual monitoring report. Security in an form acceptable to the City and sufficient to cover maintenance and monitoring costs for eight years shall be provided to the City Planning Department. The security will be forfeited if the project applicant or designated responsible party fails to fulfill the Planting and Maintenance Agreement.

- To avoid and minimize indirect impacts on protected trees to remain in the SPA, the project applicant(s) of all affected project phases shall install high visibility fencing outside the outer edge of the drip lines of all trees to be retained in the SPA during project construction. The fencing may be installed around groups or stands of trees or whole wooded areas, but must be installed so that the drip lines of all trees are protected. Grading, trenching, equipment or materials storage, parking, paving, irrigation, and landscaping shall be prohibited within the fenced areas (i.e. drip lines of protected trees). If the activities listed cannot be avoided within the drip line of a particular tree, that tree shall be counted as an affected tree and compensatory mitigation shall be provided, or the tree in question shall be monitored for a period of five years and replaced only if the tree appears to be dead or dying within five years of project implementation.

Through a combination of the mitigation options presented above along with the proposed on-site preservation of blue oak woodland habitat in the open space areas, the project applicant(s) can satisfy the mitigation requirements for removal of trees protected under the Folsom Municipal Code while also mitigating the impacts on oak woodland habitat, as determined through consultation with the Sacramento County Planning Department and the City of Folsom.

Mitigation for the U.S. 50 interchange improvements must be coordinated by the project applicant(s) of each applicable project phase with Caltrans.

Implementation: Project applicant(s) of all project phases and off-site elements affecting blue oak woodland and protected trees.

Timing: Before approval of grading or improvement plans or any ground disturbing activities, including grubbing or clearing, for any project phase containing protected trees or oak woodland.

Enforcement: 1. City of Folsom Community Development Department.

2. Caltrans for interchange improvements to U.S. 50.

PP, RHD

The Proposed Project Alternative has been designed to retain a substantial portion of the on-site blue oak woodland habitat within designated open space. However, as shown above in Table 3A.3-5, implementation of the Proposed Project Alternative would still result in the removal or disturbance of 243 acres of blue oak woodland habitat containing 81.6 acres of oak tree canopy, and another 8.4 acres of isolated native oak tree canopy not contiguous with the blue oak woodland habitat (see also Exhibit 3A.3-12). The and Reduced Hillside Development Alternative would result in removal of approximately 246 acres of blue oak woodland habitat containing 83 acres of oak tree canopy and approximately 8.7 acres of isolated oak tree canopy (Exhibit 3A.3-13). Tree surveys conducted on the Folsom 138, Folsom South, Carpenter Ranch, and Sacramento Country Day School properties identified a total of 16,605 blue oak trees, 285 interior live oak trees, 114 valley oak trees, and 1 walnut tree meeting criteria for protection under Folsom Municipal Code. Tree surveys were not conducted on all parcels containing trees, but this information provides a general idea of the woodland composition in the SPA.

Development of the Proposed Project and Reduced Hillside Development Alternatives would also involve contour grading, mitigation planting, road and trail development, and creation of impervious surfaces within and immediately adjacent to open space areas containing protected oak trees. These activities could result in indirect impacts affecting oak tree root systems such as trenching, grading, soil compaction, placement of fill, impervious surfaces, irrigation, and landscaping within the drip lines of oak trees, which can lead to root damage ultimately resulting in death of the tree. Additional indirect impacts could result from habitat fragmentation, introduction of invasive species or noxious weeds, vegetation management practices (e.g., clearing for fire control), and intrusion by humans and domestic animals that could disturb oak woodland vegetation and reduce habitat values.

Removal of blue oak woodland and individual oak trees and other trees meeting minimum DBH criteria would conflict with local ordinances, specifically Folsom Municipal Code, as would damage to the root zones of protected trees that leads to eventual death of the trees. Furthermore, blue oak woodland is considered a sensitive natural community by DFG and California Public Resources Code 21083.4 requires counties to consider the environmental effects of oak woodland conversion. Therefore, a **direct** and **indirect significant** impact would result. ***[Similar]***

Mitigation Measure: Implement Mitigation Measure 3A.3-5.

Off-Site Elements

The off-site detention basin west of Prairie City Road and the two-roadway connections from Folsom Heights off-site into El Dorado Hills would have **no direct** or **indirect** impacts on blue oak woodland or individual oak trees, because none are present at those locations.

Development of the interchange improvements to U.S. 50 would result in removal of an additional 598 blue oak trees, 43 valley oak trees, and 61 interior live oak trees meeting criteria for protection under Folsom Municipal Code. Protected trees that would be removed for off-site improvements are as follows: 173 oak trees and 2 street trees at the Prairie City Road Interchange, 527 oak trees at the Oak Avenue interchange, and 3 oak trees at the Rowberry Drive Overcrossing. An additional 32 native oak trees could be removed or damaged during construction of the underground sewer force main.

A total of 39.9 acres of oak woodland habitat would be removed as a result of implementation of the off-site project elements. This acreage consists of 6.5 acres at the Prairie City Road interchange, 31.4 acres at the Oak Avenue interchange, 0.3 acre at the Rowberry Drive Overcrossing, and 1.7 acres at the underground sewer force main.

Construction of the U.S. 50 interchange improvements and the underground sewer alignment would result in removal of blue oak woodland and individual oak trees and other trees meeting minimum dbh criteria, which would conflict with Folsom Municipal Code, as would damage to the root zones of protected trees that leads to eventual death of the trees. Furthermore, blue oak woodland is considered a sensitive natural community by DFG and California Public Resources Code 21083.4 requires counties to consider the environmental effects of oak woodland conversion. Therefore, a **direct** and **indirect significant** impact would occur from construction of the Prairie City Road and Oak Avenue interchanges, Rowberry Drive Overcrossing, and the underground sewer force main.

Mitigation Measure: Implement Mitigation Measure 3A.3-5.

Implementation of Mitigation Measure 3A.3-5 would reduce significant impacts from loss of blue oak woodland and protected trees under the No USACE Permit, Proposed Project, Resource Impact Minimization, Centralized Development, and Reduced Hillside Development Alternatives and the off-site elements, but not to a less-than-significant level because the loss of individual oak trees and blue oak woodland acreage and function would be extensive and would contribute substantially to the regional loss of this resource. It is unknown at this time if blue oak woodland habitat acreage having similar tree sizes and densities, species composition, site condition, and landscape context to the blue oak woodland to be removed would be available for purchase and preservation in perpetuity. While preserving oak woodland habitat in the SPA to the maximum extent possible is desirable and valuable, the quality of oak woodland habitat remaining on the site after project development would be diminished because it would be converted from a large, contiguous patch of oak woodland habitat surrounded by undeveloped grasslands to a smaller habitat patch dissected by paved roads and surrounded by urban development. Furthermore, planting replacement trees would result in temporal losses of oak tree resources until the replacement trees reached comparable sizes as the trees to be removed; a process that would take many decades. In addition, the U.S. 50 interchange improvements fall under the jurisdiction of Caltrans; therefore, neither the City nor the project applicant(s) would have control over their timing or implementation. Therefore, impacts on blue oak woodland and protected trees would remain **significant and unavoidable**.

IMPACT 3A.3-6 Potential Interference with Wildlife Movement. *Project implementation could interfere with the movement of native resident or migratory wildlife species or with established native resident or migratory wildlife corridors.*

On-Site and Off-Site Elements

NP

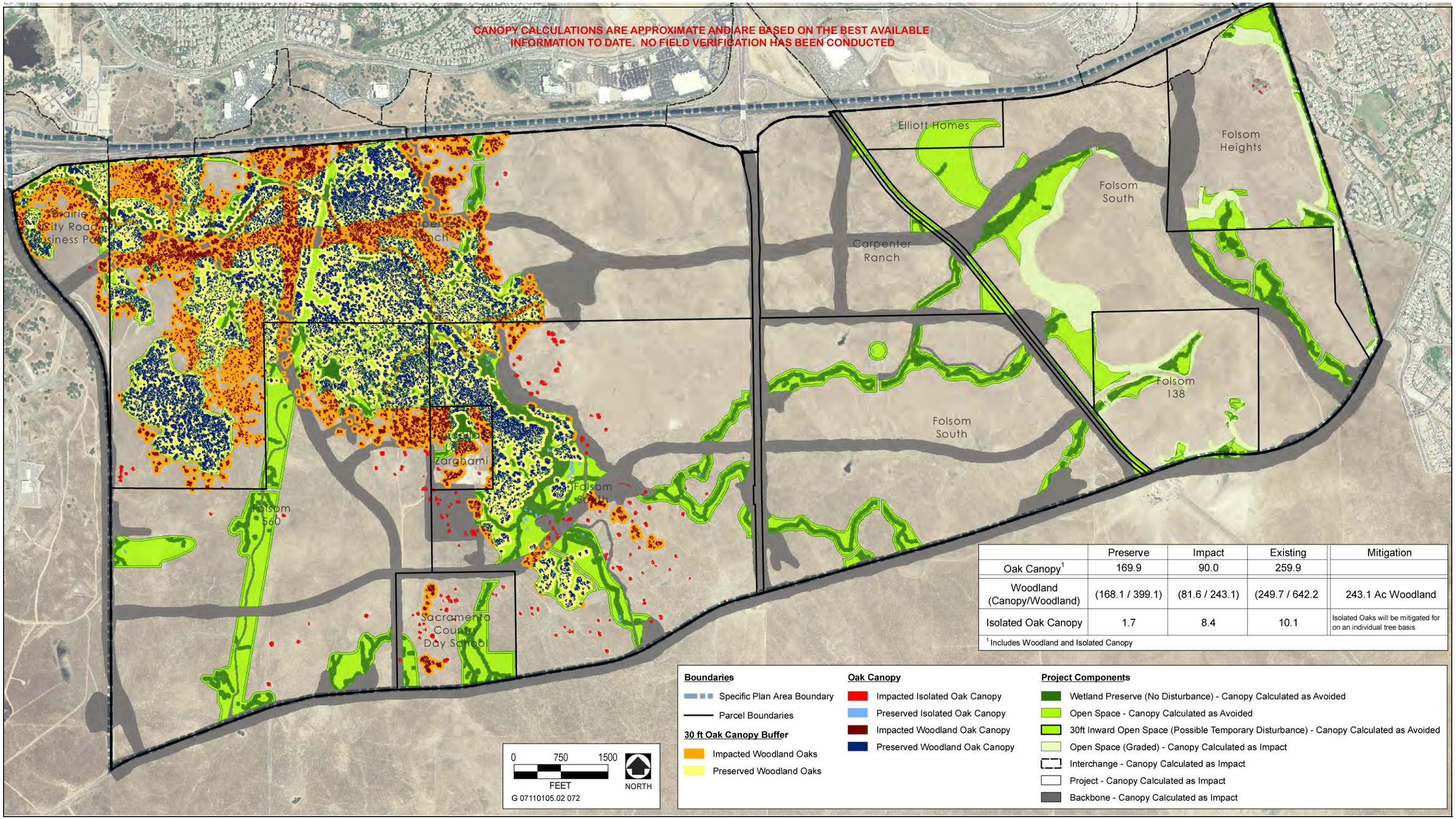
Development of the site under the existing AG-80 land use designation would not prevent movement of native wildlife and no movement corridors would be eliminated. There would be no off-site water facilities constructed. Therefore, **no direct** or **indirect** impacts to wildlife movement would occur. ***[Lesser]***

On-Site Elements

NCP, PP, RIM, CD, RHD

Wildlife corridors are features that provide connections between two or more areas of habitat that would otherwise be isolated and unusable. Often drainages, creeks, or riparian areas are used by wildlife as movement corridors as these features can provide cover and access across a landscape. Alder Creek flows northwesterly from White Rock Road to Prairie City Road. It is unknown the extent to which this creek corridor is used by wildlife in

CANOPY CALCULATIONS ARE APPROXIMATE AND ARE BASED ON THE BEST AVAILABLE INFORMATION TO DATE. NO FIELD VERIFICATION HAS BEEN CONDUCTED



	Preserve	Impact	Existing	Mitigation
Oak Canopy[1]	169.9	90.0	259.9	
Woodland (Canopy/Woodland)	(168.1 / 399.1)	(81.6 / 243.1)	(249.7 / 642.2	243.1 Ac Woodland
Isolated Oak Canopy	1.7	8.4	10.1	Isolated Oaks will be mitigated for on an individual tree basis

[1] Includes Woodland and Isolated Canopy

Boundaries
- Specific Plan Area Boundary
- Parcel Boundaries

30 ft Oak Canopy Buffer
- Impacted Woodland Oaks
- Preserved Woodland Oaks

Oak Canopy
- Impacted Isolated Oak Canopy
- Preserved Isolated Oak Canopy
- Impacted Woodland Oak Canopy
- Preserved Woodland Oak Canopy

Project Components
- Wetland Preserve (No Disturbance) - Canopy Calculated as Avoided
- Open Space - Canopy Calculated as Avoided
- 30ft Inward Open Space (Possible Temporary Disturbance) - Canopy Calculated as Avoided
- Open Space (Graded) - Canopy Calculated as Impact
- Interchange - Canopy Calculated as Impact
- Project - Canopy Calculated as Impact
- Backbone - Canopy Calculated as Impact

Source: ECORP Consultants 2010

Oak Woodland Resources under the Proposed Project Alternative

Exhibit 3A.3-12

CANOPY CALCULATIONS ARE APPROXIMATE AND ARE BASED ON THE BEST AVAILABLE INFORMATION TO DATE. NO FIELD VERIFICATION HAS BEEN CONDUCTED

Elliott Homes
Folsom Heights
Folsom South
Carpenter Ranch
Folsom 138
Folsom South
Folsom 560
Sacramento Country Day School

	Preserve	Impact	Existing	Mitigation
Oak Canopy[1]	168.4	91.6	260.0	
Woodland (Canopy/Woodland)	(166.8 / 396.4)	(83.0 / 245.8)	(249.8 / 642.2)	245.8 Ac Woodland
Isolated Oak Canopy	1.6	8.7	10.3	Isolated Oaks will be mitigated for on an individual tree basis

[1] Includes Woodland and Isolated Canopy

Boundaries
- Specific Plan Area Boundary
- Parcel Boundaries

30 ft Oak Canopy Buffer
- Impacted Woodland Oaks
- Preserved Woodland Oaks

Oak Canopy
- Impacted Isolated Oak Canopy
- Preserved Isolated Oak Canopy
- Impacted Woodland Oak Canopy
- Preserved Woodland Oak Canopy

Project Components
- Open Space (Possible Temporary Disturbance) - Canopy Calculated as Avoided
- 30ft Inward Open Space (Possible Temporary Disturbance) - Canopy Calculated as Impact
- Project - Canopy Calculated as Impact
- Backbone - Canopy Calculated as Impact

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NORTH
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Source: ECORP Consultants 2010

Oak Woodland Resources under the Reduced Hillside Development Alternative

Exhibit 3A.3-13

the area for movement. However, the No USACE Permit, Proposed Project, Resource Impact Minimization, Centralized Development, and Reduced Hillside Development Alternatives include preservation of most of the Alder Creek corridor as open space. Other drainage features in the SPA do not support riparian vegetation cover and therefore do not provide valuable movement corridors. Annual grassland habitat present to the south is currently used as rangeland and would remain in open space into the foreseeable future based on zoning under the Sacramento County General Plan. This adjacent open space provides opportunities for wildlife to move around developed areas to preserved open spaces on site and to use the Alder Creek corridor to move across the SPA. Areas to the north and east of the SPA are already developed and do not provide natural habitat areas for wildlife.

Regionally common wildlife species, such as coyote, fox, raccoon, skunk, and possum, are expected to continue to use the Alder Creek corridor after project implementation. There are no established migratory routes through the SPA that are vital for the movement of any resident or migratory fish or wildlife species or population. Therefore, **direct** and **indirect** impacts on wildlife movement from the Proposed Project, Resource Impact Minimization, Centralized Development, Reduced Hillside Development, and No USACE Permit Alternatives are considered **less than significant**. ***[Similar]***

Mitigation Measure: No mitigation measures are required.

Off-Site Elements

The off-site elements include several freeway interchange improvements and an overcrossing, two local roadway connections from Folsom Heights into El Dorado County, a new underground sewer force main, and a detention basin. These elements would not interfere with wildlife movement because the existing U.S. 50 limits wildlife movement in this area. The improvements to the existing Prairie City interchange would not substantially interfere with wildlife movement east and west along the Alder Creek corridor because the project activities would not extend into the creek corridor. The proposed detention basin to the west of the site also would not interfere with wildlife movement because it would not be located in areas providing important linkages between areas of wildlife habitat.

Because the off-site elements would not result in disruption of important linkages between wildlife habitats, this **direct** impact is considered **less than significant**. **No indirect** impacts would occur. ***[Similar]***

Mitigation Measure: No mitigation measures are required.

IMPACT 3A.3-7 Conflict with an Adopted Habitat Conservation Plan. *Project implementation would not result in conflicts with the goals of an adopted Habitat Conservation Plan.*

On-Site and Off-Site Elements

NP, NCP, PP, RIM, CD, RHD

The South Sacramento Habitat Conservation Plan (SSHCP) is being prepared by the County of Sacramento. Project consistency with the SSHCP is not required under CEQA because the SSHCP has not been adopted and is not scheduled for completion and implementation until late 2010 or early 2011. Furthermore, while the exact scope and content of the SSHCP are not known at this time, the proposed planning area for the SSHCP does not include the SPA according to the notice of preparation issued on June 11, 2008 for the SSHCP EIR.

Implementation of the No Project, No USACE Permit, Proposed Project, Resource Impact Minimization, Centralized Development, and Reduced Hillside Development Alternatives, as well as the off-site elements, would not reduce the effectiveness of the proposed SSHCP's conservation strategy or adversely affect attainment of the goals and objectives of the SSHCP because the SPA and off-site elements are not included in the planning area and

the SSHCP is not adopted. Therefore, there is no conflict with any adopted HCPs and **no direct** or **indirect** impacts would occur. ***[Similar]***

Mitigation Measures: No mitigation measures are required.

3A.3.4 RESIDUAL SIGNIFICANT IMPACTS

Although impacts on some biological resources would be reduced to less-than significant levels through implementation of the mitigation measures described in this section, impacts on jurisdictional waters of the United States, including wetlands, and blue oak woodlands would remain significant and unavoidable even with implementation of the mitigation measures listed herein because the project would contribute substantially to the regional loss of these habitats and temporal losses of aquatic resources and blue oak woodland would occur during implementation of mitigation until performance standards and success criteria are met and it is unknown whether the acreage and functions of these habitats can be replaced through preservation and creation since mitigation sites have not been identified and a mitigation plan has not been developed. Even after a mitigation plan is developed and implemented, there would be a substantial regional loss of this resource for many decades and the full range of habitat functions may never be successfully replaced. Impacts on trees protected under Folsom Municipal Code and County Tree Preservation Ordinance would also remain significant and unavoidable because temporal losses of oak tree resources would persist until replacement trees reached comparable sizes to the trees to be removed; a process that would take many decades, and it is unknown if suitable mitigation sites are available in the region to establish replacement trees at appropriate ratios to compensate for the loss of oak tree resources in the SPA. Cumulative impacts on aquatic resources, oak woodlands, nesting and foraging habitat for raptors, including Swainson's hawk, and potential habitat for special-status plant species would remain significant and unavoidable even with implementation of the mitigation measures because the project would contribute substantially to the regional loss and degradation of these habitats.

In addition, some of the off-site elements fall under the jurisdiction of El Dorado County, Sacramento County, or Caltrans; therefore, neither the City nor the project applicant(s) would have control over the timing or implementation of mitigation measures for these interchange improvements. Because the City does not control implementation of mitigation measures for off-site improvements constructed in areas under the jurisdiction of these other agencies, Impacts 3A.3-1 through 3A.3-5 are considered potentially significant and unavoidable for off-site improvements which would be located in the jurisdiction of El Dorado County, Sacramento County, or Caltrans.