3.5 BIOLOGICAL RESOURCES

This section evaluates the potential effects to biological resources of the implementation of the West Village Expansion component of the 2018 LRDP. Biological resources include all vegetation and habitat types, special-status plant and animal species, and otherwise sensitive plant communities that would be affected by implementation of the West Village Expansion component.

In response to the NOP, comments were received regarding concerns about impacts to threatened and endangered species. These impacts are described and addressed within this section as they pertain to implementation of the West Village Expansion component of the 2018 LRDP.

3.5.1 Regulatory Setting

Plans, policies, regulations, and laws (applicable to and/or considered for the West Village Expansion component) are provided in Volume 1 of this EIR. Because the regulatory setting provided in Volume 1 considers potential development, including the West Village Expansion site and remote parking area, within the entirety of the UC Davis campus as envisioned through the 2018 LRDP, no additional regulatory setting is provided for the West Village Expansion component.

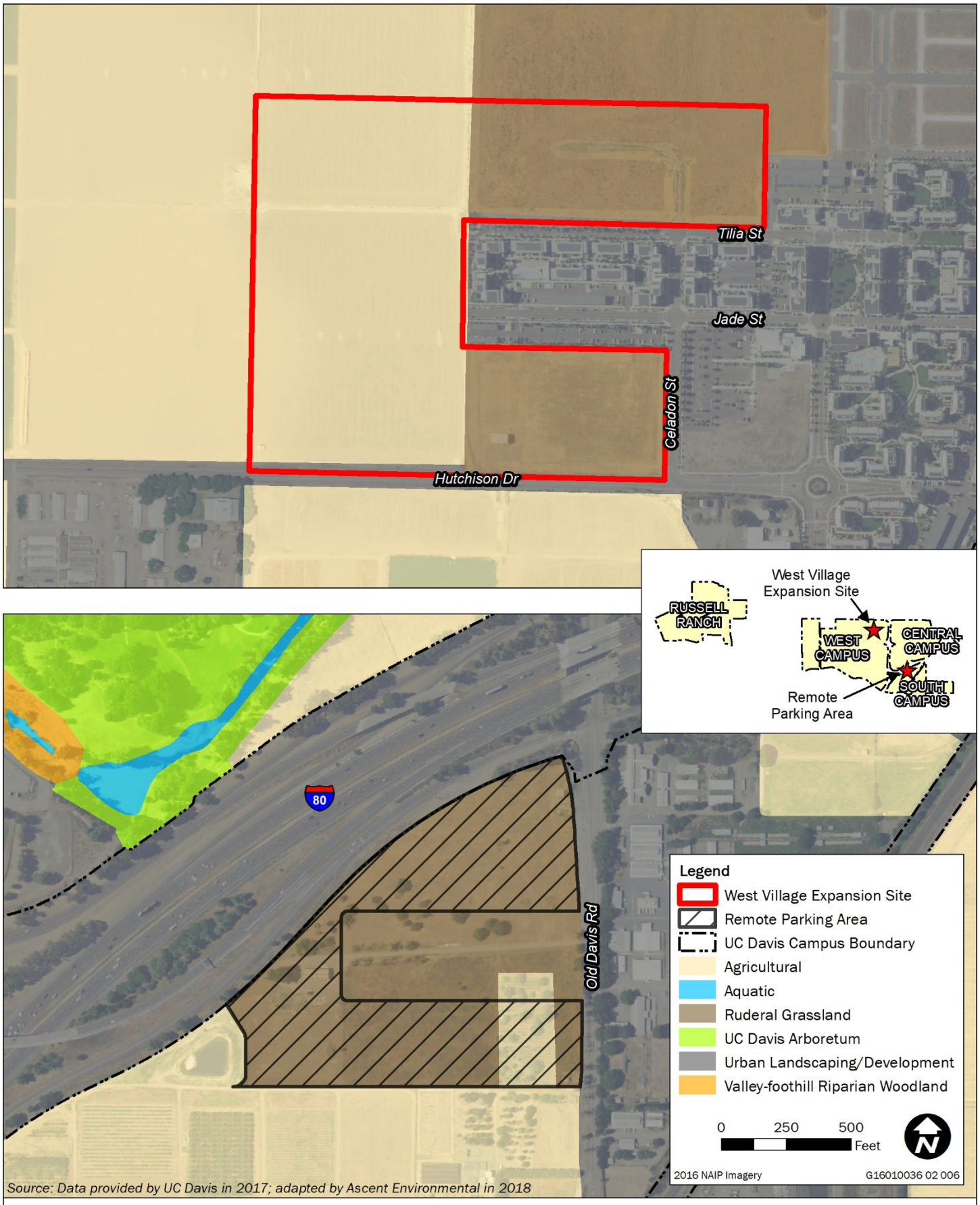
3.5.2 Environmental Setting

WEST VILLAGE EXPANSION SITE

Section 3.5, "Biological Resources," of Volume 1 includes the regional environmental setting for the UC Davis campus, including the West Village Expansion site. The West Village Expansion site contains agricultural land and ruderal grassland (Exhibit 3.5-1). The agricultural land is composed of grain fields, while the ruderal grassland areas contains plants such as common fiddleneck (*Amsinckia intermedia*), mustard (*Brassica* sp.), non-native thistle (*Carduus* and *Centaurea* sp.), wild radish (*Raphanus* sp.), and non-native grasses. These habitat types provide food and cover for wildlife species such as songbirds and small rodents, and foraging habitat for raptors such as Swainson's hawk (*Buteo swainsoni*), white-tailed kite (*Elanus leucurus*), and northern harrier (*Circus cyaneus*). There are many large trees, primarily walnut (*Juglans* sp.), along Russel Road, which is approximately 0.25 mile north of the West Village Expansion site. These trees provide suitable nesting habitat for birds including special-status raptor species, like Swainson's hawk.

The existing developed residential area adjacent to the West Village Expansion site contains native landscaping including western sycamore (*Platanus racemosa*), western redbud (*Cercis occidentalis*), valley oak (*Quercus lobata*), ceanothus (*Ceanothus* sp.), manzanita (*Manzanita* sp.), toyon (*Heteromeles arbutifolia*), agave (*Agave* sp.), sedum (*Sedum* sp.), and various bunch grasses. No blue elderberry (*Sambucus nigra caerulea*) shrubs were observed on the West Village Expansion site and they have not been observed on previous surveys (ICF 2015).

The West Village Expansion site was surveyed on March 28, 2017 to identify special-status plant and animal species, potential habitat for these species, and potential wetlands or other aquatic habitat on the West Village Expansion site. Wildlife observed on the site during the survey included foraging Swainson's hawk and northern harrier, as well as red-winged blackbird (*Agelaius phoeniceus*), tree swallow (*Tachycineta bicolor*), and more common bird species (e.g., house finch [*Haemorhous*



Source: Data provided by UC Davis in 2017; adapted by Ascent Environmental in 2018

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Exhibit 3.5-1: Land Cover - West Village Expansion

mexicanus], mourning dove [*Zenaida macroura*], American crow [*Corvus brachyrhynchos*]). No agricultural ditches, emergent marshes, or jurisdictional wetland features were present on the West Village Expansion site. Stormwater drainage features were present along Celadon Street in the southwest corner of the West Village Expansion site, where West Village Expansion component plans include construction of a new detention basin to receive stormwater flows. These features currently do not present potential aquatic habitat value as water is not consistently present within the drainage areas.

REMOTE PARKING AREA

Section 3.5, "Biological Resources," of Volume 1 includes the regional environmental setting for the UC Davis campus, including the remote parking area. The remote parking area contains mostly ruderal grassland and a small area of agricultural land (Exhibit 3.5-1). The remote parking area was surveyed on March 14, 2018 to identify special-status plant and animal species, potential habitat for these species, and potential wetlands or other aquatic habitat on the site. The agricultural land is composed of a small, inactive vineyard with fruit trees and other ornamental vegetation interspersed. The ruderal grassland area contains similar plant species identified for the ruderal grassland within the West Village Expansion site. The remote parking area also contains several walnut trees, palm trees, and other ornamental vegetation. Four, large elderberry shrubs are present within the remote parking area footprint, and seven, additional elderberry shrubs are present adjacent to the remote parking area boundary.

A red-tailed hawk (*Buteo jamaicensis*) was observed within a potentially active nest in a large walnut tree within the remote parking area. No agricultural ditches, emergent marshes, or jurisdictional wetland features were present within the remote parking area. A stormwater retention pond is located adjacent to the remote parking area.

3.5.3 Environmental Impacts and Mitigation Measures

SIGNIFICANCE CRITERIA

Refer to Section 3.5, "Biological Resources," in Volume 1 for a discussion of applicable Significance Criteria.

ANALYSIS METHODOLOGY

Refer to Section 3.5, "Biological Resources," in Volume 1 for a discussion of applicable analytical methods. Additionally, a reconnaissance-level survey for biological resources was conducted at the West Village Expansion site on March 28, 2017 and at the remote parking area on March 14, 2018.

ISSUES NOT EVALUATED FURTHER

The following impacts were identified as part of the analysis of the 2018 LRDP and are either (1) adequately evaluated at the program level of analysis of the 2018 LRDP, or (2) not applicable to the West Village Expansion component.

Special-status Reptiles and Fish

The program-level analysis of the 2018 LRDP concluded that campus development could result in the loss of special-status reptile species (i.e., giant garter snake [*Thamnophis gigas*] and western pond turtle [*Actinemys marmorata*]; 2018 LRDP Impact 3.5-2) and Chinook salmon [*Oncorhynchus*

tshawytscha] (2018 LRDP Impact 3.5-3) within Putah Creek and within upland habitat adjacent to Putah Creek. The West Village Expansion site does not contain aquatic habitat, including streams, creeks, or wetlands. The storm drainage observed during the March 2017 reconnaissance survey of the West Village Expansion site does not contain suitable aquatic habitat for these species, because water is not consistently present within the drainage area. The remote parking area does not contain any aquatic features. Therefore, suitable aquatic habitat for special-status reptile species and for Chinook salmon is not present. Additionally, the site is located a sufficient distance (approximately 0.5 to 1 mile) from Putah Creek to preclude it from being used as upland habitat for giant garter snake and western pond turtle. These species are unlikely to be adversely affected by West Village Expansion component implementation; therefore, implementation of 2018 LRDP Mitigation Measures 3.5-2a, 3.5-2b, and 3.5-3 is not required. No additional project-level analysis is necessary.

Tree Removal

The West Village Expansion site does not contain any large trees as observed during the March 2017 reconnaissance survey. The remote parking area contains several large walnut trees but does not contain any large oak trees. It is unlikely that the walnut trees would be considered Specimen Trees. Because implementation of this component would not include removal of large trees considered Heritage or Specimen Trees, the West Village Expansion component would also not conflict with UC Davis standards for removal of important trees; therefore, implementation of 2018 LRDP Mitigation Measure 3.5-11 is not required. No additional project-level analysis is necessary.

Waters of the United States, Waters of the States, and Riparian Habitat

The program-level analysis of the 2018 LRDP addressed impacts to waters of the United States, waters of the state, and riparian habitat (2018 LRDP Impact 3.5-9) and concluded that plan development could result in impacts to these sensitive features. No wetlands, streams, creeks, or associated riparian habitats were observed within the West Village Expansion site or remote parking area during the March 28, 2017 and March 14, 2018 reconnaissance surveys, respectively. These features are unlikely to be adversely affected by West Village Expansion component implementation; therefore, implementation of 2018 LRDP Mitigation Measures 3.5-9a through 3.5-9d is not required. No additional project-level analysis is necessary.

Nurseries and Wildlife Corridors

The program-level analysis of the 2018 LRDP, which includes this component, determined that the major wildlife corridor on campus, Putah Creek, would not be adversely affected by plan implementation because plans did not include any development or conversion of Putah Creek or its associated riparian habitat. This conclusion also applies for the West Village Expansion component, and this component is unlikely to result in impacts to wildlife corridors or nurseries. No additional project-level analysis is necessary.

Habitat Conservation Plans

The program-level analysis of the 2018 LRDP, which included the West Village Expansion component, addressed project consistency with two habitat conservation plans (HCP); the Yolo County HCP/Natural Community Conservation Plan and the Solano County Multispecies HCP. It was determined that impacts associated with 2018 LRDP implementation to species covered under both HCPs would be mitigated to a less-than-significant level, and this component would not conflict with the requirements of either HCP. This conclusion also applies for the West Village Expansion component, and this component would also be consistent with local HCP requirements. No additional project-level analysis is necessary.

PROJECT-SPECIFIC IMPACTS AND MITIGATION MEASURES

Impact 3.5-1: Disturbance or loss of special-status plants.

Implementation of the West Village Expansion component would result in the conversion of approximately 67 acres of agricultural land and ruderal/annual grassland habitat potentially suitable for special-status plants. Loss of special-status plants would be a **potentially significant** impact.

Eleven special-status plant species could potentially occur within the West Village Expansion site or remote parking area because of the presence of potentially suitable grassland habitat: Ferris' milk-vetch (*Astragalus tener* var. *ferrisiae*), alkali milk-vetch (*A. tener* var. *tener*), heartscale (*Atriplex cordulata* var. *cordulata*), brittlescale (*A. depressa*), round-leaved filaree (*California macrophylla*), palmate-bracted bird's beak (*Cordylanthus palmatus*), San Joaquin spearscale (*Extriplex joaquinana*), Heckard's pepper-grass (*Lepidium latipes* var. *heckardii*), Baker's navarretia (*Navarretia leucocephala* ssp. *bakeri*), California alkali grass (*Puccinellia simplex*), and Solano grass (or Crampton's tuctoria; *Tuctoria mucronata*). West Village Expansion component construction activities, such as conversion of undeveloped ruderal grassland, and ground disturbance, could result in the loss of these special-status plant species if they are present on the West Village Expansion site or remote parking area. Plants could be directly damaged, including being broken, crushed, or buried. Damaged plants may experience altered growth and development, or reduced or eliminated seed-set and reproduction, and mortality of individuals or populations could eventually result. This would be a **potentially significant** impact.

WVE Mitigation Measure 3.5-1a: Special-status plant surveys.

Implement 2018 LRDP Mitigation Measure 3.5-1a.

WVE Mitigation Measure 3.5-1b: Special-status plant avoidance.

Implement 2018 LRDP Mitigation Measure 3.5-1b.

WVE Mitigation Measure 3.5-1c: Special-status plant impact minimization measures.

Implement 2018 LRDP Mitigation Measure 3.5-1c.

Significance after Mitigation

Implementation of WVE Mitigation Measures 3.5-1a, 3.5-1b, and 3.5-1c would reduce impacts to a **less-than-significant** level by requiring that special-status plants be identified and avoided or that compensation is provided for loss of special-status plants through enhancement of existing populations, creation and management of off-site populations, conservation easements, or other appropriate measures.

Impact 3.5-2: Impacts to Swainson's hawk and other nesting raptors.

Construction activities such as ground disturbance, construction vehicles, and presence of construction crews could disturb nesting Swainson's hawks or other raptors potentially resulting in nest abandonment or failure, and mortality of chicks and eggs. This impact would be **potentially significant.**

The West Village Expansion site footprint does not contain trees large enough for Swainson's hawk or other raptors to nest; however, large walnut trees line Russell Road approximately 0.25 mile north of the West Village Expansion site. The remote parking area contains several large walnut and palm trees; one of the walnut trees contained a potentially active red-tailed hawk nest. All of these trees provide suitable habitat for Swainson's hawk, white-tailed kite, and other raptors, and are within the CDFW-recommended survey radius (0.25 mile) for the Swainson's hawk. Construction activity and noise could discourage nesting and disturb nesting birds during construction. Several Swainson's hawks were observed overhead during the March 28, 2017 site visit of the West Village Expansion site. Additionally, approximately 67 acres of agricultural land and ruderal grassland would be developed under the West Village Expansion component, which represents a permanent loss of Swainson's hawk foraging habitat. Direct loss of Swainson's hawks, other special-status raptors, or foraging habitat would be a **potentially significant** impact.

WVE Mitigation Measure 3.5-2a: Avoidance of Swainson's hawk and other nesting raptors.

Implement 2018 LRDP Mitigation Measure 3.5-4a.

WVE Mitigation Measure 3.5-2b: Compensation for loss of Swainson's hawk foraging habitat.

Implement 2018 LRDP Mitigation Measure 3.5-4b.

Significance after Mitigation

Implementation of WVE Mitigation Measures 3.5-2a and 3.5-2b would reduce impacts to a **less-than-significant** level by requiring that Swainson's hawk and other raptor nests are avoided and protected from construction activities, and that UC Davis compensates for loss of Swainson's hawk foraging habitat because of conversion of agricultural lands to urban uses.

Impact 3.5-3: Impacts to burrowing owl.

Construction activities, such as ground disturbance, construction vehicles, and presence of construction crews, could disturb nesting burrowing owls (*Athene cunicularia*), potentially resulting in nest abandonment or failure or mortality of chicks and eggs. Implementation of this component includes conversion of approximately 39 acres of undeveloped ruderal grassland to urban uses, thus would result in the permanent loss of suitable habitat for burrowing owl. This impact would be **potentially significant**.

Burrowing owls have not been observed within the West Village Expansion site during recent survey efforts (ICF 2015), but the site contains potentially suitable habitat for the species within ruderal grasslands, and on edges of the grain fields and roads. The remote parking area contains suitable grassland habitat for burrowing owl and ground squirrel activity, including large burrows, was observed during the March 14, 2018 site visit. Construction activities, such as ground disturbance and grading, could result in the direct loss of burrowing owls and occupied burrows. Conversion of grassland habitat within the West Village Expansion site and remote parking area could result in loss of suitable burrowing owl habitat. This would be a **potentially significant** impact.

WVE Mitigation Measure 3.5-3a: Burrowing owl avoidance and compensation.

Implement 2018 LRDP Mitigation Measure 3.5-5a.

WVE Mitigation Measure 3.5-3b: Compensation for loss of burrowing owl habitat.

Implement 2018 LRDP Mitigation Measure 3.5-5b.

Significance after Mitigation

Implementation of WVE Mitigation Measures 3.5-3a and 3.5-3b would reduce impacts to a **less-than-significant** level by requiring that burrowing owls are avoided and protected from construction activities, or that UC Davis compensate for loss of suitable occupied habitat because of construction activities.

Impact 3.5-4: Impacts to other special-status birds.

Implementation of the West Village Expansion component would include conversion of approximately 28 acres of agricultural habitat (grain fields). Additionally, approximately 39 acres of ruderal grassland would be converted to urban uses. If tricolored blackbird (*Agelaius tricolor*) or other birds are nesting in these habitats at the time of implementation of this component, nests could be destroyed, resulting in loss of eggs, young, or adults. This impact would be **potentially significant**.

Potentially suitable nesting habitat for tricolored blackbird is present in the West Village Expansion site within approximately 28 acres of grain fields that are planned for conversion. Tricolored blackbirds are not known to nest within the West Village Expansion site; however, there are several known occurrences within approximately 5 miles of the West Village Expansion site (CNDDB 2017). No tricolored blackbird nesting habitat is present within the remote parking area. Tricolored blackbirds are threatened by direct loss of nesting colonies because of harvesting of grain fields prior to chick fledging. Additionally, other birds could nest within the 39 acres of ruderal grassland present within the West Village Expansion site and remote parking area. Loss of tricolored blackbird nesting colonies or other bird nests would be a **potentially significant** impact.

WVE Mitigation Measure 3.5-4: Tricolored blackbird and other bird nest survey.

Implement 2018 LRDP Mitigation Measure 3.5-6.

Significance after Mitigation

Implementation of WVE Mitigation Measure 3.5-4 would reduce impacts to a **less-than-significant** level by requiring that tricolored blackbird and other bird nests are avoided and protected from construction activities.

Impact 3.5-5: Impacts to valley elderberry longhorn beetle.

Construction activities associated with the West Village Expansion component, such as vegetation removal, could result in the loss of elderberry shrubs, which are the primary habitat for the federally threatened valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*). Removal of or damage to elderberry shrubs occupied by valley elderberry longhorn beetle would be a **significant** impact.

The remote parking area contains at least 4 mature blue elderberry shrubs which could be removed during construction. USFWS considers all elderberry shrubs within the historic range of valley elderberry longhorn beetle as potential habitat for this federally-listed threatened species, regardless

of the presence of beetle exit holes. Destruction of elderberry stems greater than one inch in diameter is considered "take" under ESA and requires mitigation pursuant to USFWS guidelines (USFWS 2017b). If elderberry shrubs that are occupied by valley elderberry longhorn beetle are removed, the beetle would be destroyed. Elderberry shrubs could be affected by West Village Expansion component implementation if conversion of undeveloped ruderal grassland habitat requires removal of the shrubs. Removal of or damage to elderberry shrubs within the plan area that are occupied by valley elderberry longhorn beetles would be a **significant** impact.

WVE Mitigation Measure 3.5-5: Valley elderberry longhorn beetle avoidance.

Implement 2018 LRDP Mitigation Measure 3.5-7.

Significance after Mitigation

Implementation of WVE Mitigation Measure 3.5-5 would reduce impacts to a **less-than-significant** level by requiring that elderberry shrubs are avoided and protected from construction activities, or that UC Davis compensates for loss of elderberry shrubs due to construction activities.

Impact 3.5-6: Impacts to American badger.

Construction activities, including conversion of agricultural land to urban uses, could result in direct loss of American badger (*Taxidea taxus*) if occupied dens are on either the West Village Expansion site or remote parking area. This impact would be **potentially significant**.

Implementation of this component would result in the conversion of approximately 67 acres of agricultural land (grain fields) and ruderal grassland to urban uses. Suitable habitat for American badger includes grassland and grain fields. While badgers typically do not occur near urban development and are not expected to den on the West Village Expansion site or remote parking area, there is one known occurrence of a badger approximately 3 miles northwest of the West Village Expansion site (CNDDB 2017). West Village Expansion component implementation could result in the direct loss of badgers if currently occupying burrows within both sites. Loss of badgers because of West Village Expansion component construction activities would be a **potentially significant** impact.

WVE Mitigation Measure 3.5-6: Preconstruction survey for American badger and establishment of appropriate buffers.

Implement 2018 LRDP Mitigation Measure 3.5-8a.

Significance after Mitigation

Implementation of WVE Mitigation Measure 3.5-6 would reduce impacts to a **less-than-significant** level by requiring that American badgers are protected from construction activities if present on the West Village Expansion site or remote parking area at the time of construction.

Impact 3.5-7: Impacts to special-status mammal species.

Construction activities, including removal of large walnut trees, could result in direct loss of pallid bat (*Antrozous pallidus*), if present within trees in the remote parking area. This impact would be **potentially significant**.

Implementation of this component would result in removal of several large walnut trees, which contain potentially suitable roosting habitat for pallid bat, within the remote parking area. There is one known occurrence of pallid bat, approximately 1.5 miles north of the remote parking area (CNDDB 2017). Implementation of the West Village Expansion component could result in the direct loss of pallid bats if present within the remote parking area. Loss of pallid bats because of construction activities would be a **potentially significant** impact.

WVE Mitigation Measure 3.5-7: Bat preconstruction surveys, exclusion, and mitigation.

Implement 2018 LRDP Mitigation Measure 3.5-8b.

Significance after Mitigation

Implementation of WVE Mitigation Measure 3.5-7 would reduce impacts to a **less-than-significant** level by requiring that pallid bats are protected from construction activities if present within the remote parking area at the time of construction.

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