

3.5 BIOLOGICAL RESOURCES

This section describes the terrestrial and aquatic biological resources that are known or have the potential to occur in the Master Plan Area, in particular the main campus where development would occur, and describes the potential impacts of implementation of the 2035 Master Plan on those resources. This section identifies biological resources that could occur within the Master Plan Area, including common vegetation and habitat types, sensitive plant communities, and special-status plant and animal species, as well as regulatory requirements pertaining to those resources. Information regarding historic occurrences of sensitive biological resources (species and habitat) is presented in Appendix DE. The analysis describes potential direct and, indirect impacts from implementation of the 2035 Master Plan and identifies mitigation measures for those impacts determined to be significant.

For this analysis, information about common and sensitive biological resources known or with potential to occur in the Master Plan Area is based on a reconnaissance-level survey of the main campus and review of the following existing sources: results of previous biological surveys conducted for/by Cal Poly; a records search of the California Natural Diversity Database (CNDDDB) (CNDDDB 2019); California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants (CNPS 2019); a list of federally proposed, candidate, threatened, and endangered species that may occur in the project region obtained from the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) system (USFWS 2019a); USFWS National Wetlands Inventory (USFWS 2019b); and high-resolution aerial imagery interpretation. The reconnaissance survey of the main campus was conducted by an Ascent biologist on June 26, 2019.

No comments related to biological resources were received in response to the Notice of Preparation (NOP).

3.5.1 Regulatory Setting

FEDERAL

Federal Endangered Species Act

The federal Endangered Species Act (ESA) requires formal or informal consultation with USFWS or the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) when it is likely that a project could affect species federally listed as threatened or endangered. The purpose of the ESA is to conserve the ecosystems upon which listed species depend. The law's ultimate goal is to "recover" listed species such that the protections of the act are no longer needed. The ESA requires that recovery plans be developed that describe the steps necessary to restore the species. Similarly, the act provides for the designation of "critical habitat" when prudent and determinable. Critical habitat is geographic areas that contain physical and biological features essential to the conservation of the species and that may require special management considerations or protection. Critical habitat designations affect only federal agency actions or federally funded or permitted activities.

The act also regulates the "taking" of a species listed as threatened or endangered under the ESA. Under the 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 implementing a project would result in take of a federally listed species, either the project applicant must acquire an incidental take permit (ITP) under Section 10(a) of the ESA or, if a federal discretionary action is involved, the federal agency must consult with USFWS under Section 7 of the act.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act declares it is illegal to "take" bald eagles, including their parts, nests, or eggs, unless authorized. "Take" is defined as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." "Disturb" means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to

cause, injury to an eagle; a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior; or nest abandonment. In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present if, upon the eagle's return, such alterations agitate or bother an eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits and causes injury, nest abandonment, or death.

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. 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. Under the MBTA, "take" is defined as "to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or any attempt to carry out these activities." A take does not include habitat destruction or alteration, as long as there is not a direct taking of birds, nests, eggs, or parts thereof. The current list of species protected by the MBTA can be found in 50 CFR 10.13. The list includes nearly all birds native to the United States.

Clean Water Act

Section 404 of the Clean Water Act (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 United States, including wetlands. Fill material is material placed in waters of the United States that has the effect of replacing any portion of waters of the United States with dry land or changing the bottom elevation of any portion of waters of the United States. Waters of the United States include navigable waters; interstate waters; all other waters where the use, degradation, or destruction of the waters could affect interstate or foreign commerce; relatively permanent 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 typically 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 the CWA pending U.S. Army Corps of Engineers (USACE) verification.

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 (SWRCB) to the nine regional water quality control boards (RWQCBs). Section 3.9, "Hydrology and Water Quality," includes further discussion of water quality regulations.

STATE

California Endangered Species Act

The California Department of Fish and Wildlife (CDFW) regulates the taking of species listed as threatened or endangered under the California Endangered Species Act (CESA), which prohibits the taking of state-listed endangered or threatened species, as well as candidate species being considered for listing, without the issuance of ITPs. Project proponents may obtain an ITP pursuant to Fish and Game Code Section 2081 if the impacts of the take are minimized and fully mitigated and if the take would not jeopardize the continued existence of the species. A "take" of a species, under CESA, is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill" an individual of a species. The CESA definition of "take" does not include "harm" or "harass" as is included in the ESA definition. As a result, the threshold for take under CESA may be higher than under the ESA.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) requires that each of the nine Regional Water Quality Control Boards (RWQCBs) prepare and periodically update basin plans for water quality control in their respective regions. 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 waters of the United States, 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 CWA Section 404 provided they meet the definition of waters of the state, and the SWRCB published a new set of procedures for discharges of dredged or fill material into waters of the state on March 22, 2019. Mitigation requiring no net loss of wetlands functions and values of waters of the state typically is required by the RWQCB.

The SWRCB has adopted the following definition of wetlands:

An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater or shallow surface water or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes the area lacks vegetation.

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 CDFW under Section 1600 et seq. 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 CDFW, or use any material from the streambeds, without first notifying CDFW of such activity and obtaining a final agreement authorizing such activity. CDFW's jurisdiction in altered or artificial waterways is based on the value of those waterways to fish and wildlife.

Native Plant Protection Act

The Native Plant Protection Act (NPPA) (California Fish and Game Code Section 1900 et seq.) allows the California Fish and Game Commission to designate plants as rare or endangered. Sixty-four species, subspecies, and varieties of plants are protected as rare under the NPPA. The act prohibits take of endangered or rare native plants but includes exceptions for agricultural and nursery operations; for emergencies; and, after proper notification of CDFW, for vegetation removal from canals, roads, and other building sites, changes in land use, and other situations.

Fully Protected Species

Protection of fully protected species is described in Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code. The fully protected status prohibits take or possession of these species and generally does not provide for authorization of incidental take. "Fully protected" is a separate classification, distinct from a listing as endangered or threatened under CESA and the federal ESA. The fully protected species laws were enacted prior to CESA and the ESA. Several of the fully protected species are also protected by the federal and state endangered species laws. CDFW has informed nonfederal agencies and private parties that their actions must avoid take of any fully protected species. On October 8, 2011, the governor signed Senate Bill 618, authorizing CDFW to permit the incidental take of fully protected species if the species is covered and conserved in a natural community conservation plan (NCCP). An NCCP identifies and provides for the regional protection of plants, animals, and their habitats, while allowing compatible and appropriate economic activities. There are no NCCPs adopted within the Master Plan Area.

Protection for Bird Nests and Raptors

Section 3503 of the California Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 specifically states that it is unlawful to take, possess, or destroy any raptors (e.g., hawks, owls, eagles, and falcons), including their nests or eggs. Section 3513 of the California Fish and Game Code codifies the federal MBTA.

California Environmental Quality Act

Rare, threatened, or endangered plant species, subspecies, and varieties are specifically considered in various sections of CEQA and the State CEQA Guidelines. State CEQA Guidelines Section 15380(b) provides the criteria for endangered, rare, and threatened species. Section 15380(d) states that species that are not on state and federal lists but meet the criteria in Section 15380(b) "shall nevertheless be considered to be endangered, rare or threatened." California Rare Plant Rank 1A, 1B, 2A, and 2B species are presumed to meet these criteria. Additionally, under Section 15380, species will be considered endangered, rare, or threatened if they are listed as such under CESA or the ESA. Species designated as candidates for listing by the California Fish and Game Commission under CESA also are "presumed to be endangered." CESA presumes that candidate species meet the criteria for listing as endangered, rare, or threatened.

LOCAL

Cal Poly is an entity of the CSU, which is a constitutionally created state agency, and is therefore not subject to local government planning and land use plans, policies, or regulations. Cal Poly may consider, for informational purposes, aspects of local plans and policies for the communities surrounding the campus when it is appropriate. The proposed project would be subject to state and federal agency planning documents described herein but would not be bound by local or regional planning regulations or documents such as the City's General Plan or municipal code.

San Luis Obispo County General Plan

The San Luis Obispo County General Plan (2010) includes policies related to biological resources, including:

- ▶ **Policy BR 1.1: Protect Sensitive Biological Resources.** Protect sensitive biological resources such as, wetlands, migratory species of the Pacific flyway, and wildlife movement corridors through:
 - Environmental review of proposed Development applications, including consideration of cumulative impacts;
 - Participation in comprehensive habitat management programs with other local and resource agencies; and,
 - Acquisition and management of open space lands that provide for permanent protection of important natural habitats.
- ▶ **Policy BR 1.10: Identify and Protect Ecologically Sensitive Areas.** Protect and enable management of ecologically sensitive areas to the maximum extent feasible.
- ▶ **Policy BR 1.11: Protect Wildlife Nursery Areas and Movement Corridors.** Identify, protect, and enable the management of connected habitat areas for wildlife movement. Features of particular importance to wildlife for movement may include, but are not limited to, riparian corridors, shorelines of the coast and bay, and ridgelines.
- ▶ **Policy BR 1.12: Development Impacts to Corridors.** Ensure that important corridors for wildlife movement and dispersal are protected as a condition of discretionary permits. Provide linkages and corridors as needed to connect sensitive habitat areas such as woodlands, forests, and wetlands.
- ▶ **Policy BR 1.15: Restrict Disturbance in Sensitive Habitat During Nesting Season.** Avoid impacts to sensitive riparian corridors, wetlands, and coastal areas to protect bird-nesting activities.
- ▶ **Policy BR 2.1: Coordinate with Trustee Agencies.** The County will consult with trustee and other relevant state and federal agencies during environmental review when special-status species, sensitive natural communities, marine resources, or wetlands may be affected.
- ▶ **Policy BR 2.2: Promote Early Consultation with Other Agencies.** Require applicants to consult with all agencies with review and/or permit authority for projects in areas supporting wetlands and special-status species at the earliest opportunity.
- ▶ **Policy BR 2.6: Development Impacts to Listed Species.** Ensure that potential adverse impacts to threatened, rare, and endangered species from development are avoided or minimized through project siting and design. Ensure that proposed development avoids significant disturbance of sensitive natural plant communities that contain

special-status plant species or provide critical habitat to special-status animal species. When avoidance is not feasible, require no net loss of sensitive natural plant communities and critical habitat.

- ▶ **Policy BR 2.8: Invasive Plant Species.** Promote and support efforts to reduce the effects of noxious weeds on natural habitats. The County will work with local resource and land management agencies to develop a comprehensive approach to controlling the spread of non-native invasive species and reducing their extent on both public and private land.
- ▶ **Policy BR 2.9: Promote Use of Native Plant Species.** Landscaping for proposed development will use a variety of native or compatible nonnative, non-invasive plant species as part of project landscaping to improve wildlife habitat values.
- ▶ **Policy BR 3.2: Protection of Native Trees in New Development.** Require proposed discretionary development and land divisions to avoid damage to native trees (e.g., Monterey Pines, oaks) through setbacks, clustering or other appropriate measures. When avoidance is not feasible, require mitigation measures.
- ▶ **Policy BR 3.3: Oak Woodland Preservation.** Maintain and improve oak woodland habitat to provide for slope stabilization, soil protection, species diversity, and wildlife habitat.
- ▶ **Policy BR 3.5: Non-native Trees.** Protect healthy and non-hazardous, non-native trees (e.g., eucalyptus groves) and forests that provide raptor nesting or roosting sites or support colonies of monarch butterflies.
- ▶ **Policy BR 4.1: Protect Stream Resources.** Protect streams and riparian vegetation to preserve water quality and flood control functions and associated fish and wildlife habitat.
- ▶ **Policy BR 4.2: Minimize Impacts from Development.** Minimize the impacts of public and private development on streams and associated riparian vegetation due to construction, grading, resource extraction, and development near streams.
- ▶ **Policy BR 4.5: Encourage Stream Preservation on Private Lands.** Encourage private landowners to protect and preserve stream corridors in their natural state and to restore stream corridors that have been degraded.
- ▶ **Policy BR 5.1: Protect Wetlands.** Require development to avoid wetlands and provide upland buffers.
- ▶ **Policy BR 5.2: No Net Loss of Wetlands.** Ensure that all public and private projects avoid impacts to wetlands if feasible. If avoidance is not feasible, ensure no net loss of wetlands, consistent with state and federal regulations and this Element.
- ▶ **Policy BR 5.3: Wetland Conversion.** Avoid the conversion of wetlands, including vernal pools, except where grazing may improve the health and function of those wetlands. Where grazing occurs in and around wetlands and vernal pools, encourage grazing management that improves the health and function of those wetlands.
- ▶ **Policy BR 5.4: Wetlands on Agricultural Lands.** Support use of best management practices and proper range uses to minimize impacts to wetlands on agricultural lands.
- ▶ **Policy BR 6.1: Avoid Impacts to Fisheries.** Require all proposed discretionary land use projects and land divisions to avoid impacts to freshwater and saltwater fisheries and wildlife habitat to the maximum extent feasible. When avoidance is not feasible, offset potential losses of fisheries and wildlife.

City of San Luis Obispo General Plan

The City of San Luis Obispo General Plan (City of San Luis Obispo 2014a, 2014b) includes policies related to biological resources, including:

- ▶ **Policy LU 6.6.1: Creek and Wetlands Management Objectives.** The City should manage its lake, creeks, wetlands, floodplains, and associated wetlands to achieve the multiple objectives of:
 - Maintaining and restoring natural conditions, and fish and wildlife habitat;
 - Preventing loss of life and minimizing property damage from flooding;

- Providing recreational opportunities which are compatible with fish and wildlife habitat, flood protection, and use of adjacent private properties; and
 - Recognizing and distinguishing between those sections of creeks and Laguna Lake which are in previously urbanized areas, such as the downtown core and sections which are in largely natural areas. Those sections already heavily impacted by urban development and activity may be appropriate for multiple use whereas creeks and lakeshore in a more natural state shall be managed for maximized ecological value.
- **Policy LU 6.6.3: Amenities and Access.** New public or private developments adjacent to the lake, creeks, and wetlands must respect the natural environment and incorporate the natural features as project amenities, provided doing so does not diminish natural values. Developments along creeks should include public access across the development site to the creek and along the creek, provided that wildlife habitat, public safety, and reasonable privacy and security of the development can be maintained, consistent with the Conservation and Open Space Element.
- **Policy COS 7.3.1: Protect Listed Species (A-D).**
- A. The City will identify the location, habitat and buffer needs of species listed for protection. This information will be developed by qualified people early in the planning and development review process.
 - B. The City will establish and maintain records on the location of listed species. The City will maintain, for public use, generalized maps showing known locations of listed species. Specific site information may be kept confidential to protect the resources.
 - C. The City will comply with State and Federal requirements for listed species.
 - D. The City will protect listed species through its actions on: land-use designations; development standards; development applications; location, design, construction and maintenance of creeks, City roads and facilities; and on land that the City owns or manages.
- **Policy COS 7.3.2: Species of Local Concern.** The City will:
- A. Maintain healthy populations of native species in the long term, even though they are not listed for protection under State or Federal laws. These “species of local concern” are at the limit of their range in San Luis Obispo, or threats to their habitat are increasing.
 - B. Identify the location, habitat and buffer needs of species of local concern. This information will be developed by qualified people early in the planning and development review process.
 - C. Protect species of local concern through: its actions on land use designations, development standards, development applications; the location, design, construction, and maintenance of City facilities; land that the City owns or manages.
 - D. Encourage individuals, organizations, and other agencies to protect species of local concern within their areas of responsibility and jurisdiction.
 - E. Protect sensitive habitat, including creeks, from encroachment by livestock and human activities.
- **Policy COS 7.3.3: Wildlife Habitat and Corridors.** Continuous wildlife habitat, including corridors free of human disruption, shall be preserved and where necessary, created by interconnecting open spaces, wildlife habitat, and corridors. To accomplish this, the City will:
- A. Require public and private developments, including public works projects, to evaluate animal species and their movements within and through development sites and create habitats and corridors appropriate for wildlife.
 - B. Plan for connectivity of open spaces and wildlife habitat and corridors using specific area plans, neighborhood plans, subdivision maps, or other applicable planning processes, consistent with Open Space Guidelines.
 - C. Coordinate with San Luis Obispo County and adjoining jurisdictions, federal and state agencies such as Caltrans to assure regional connectivity of open space and wildlife corridors.
 - D. Preserve and expand links between open spaces and creek corridors.

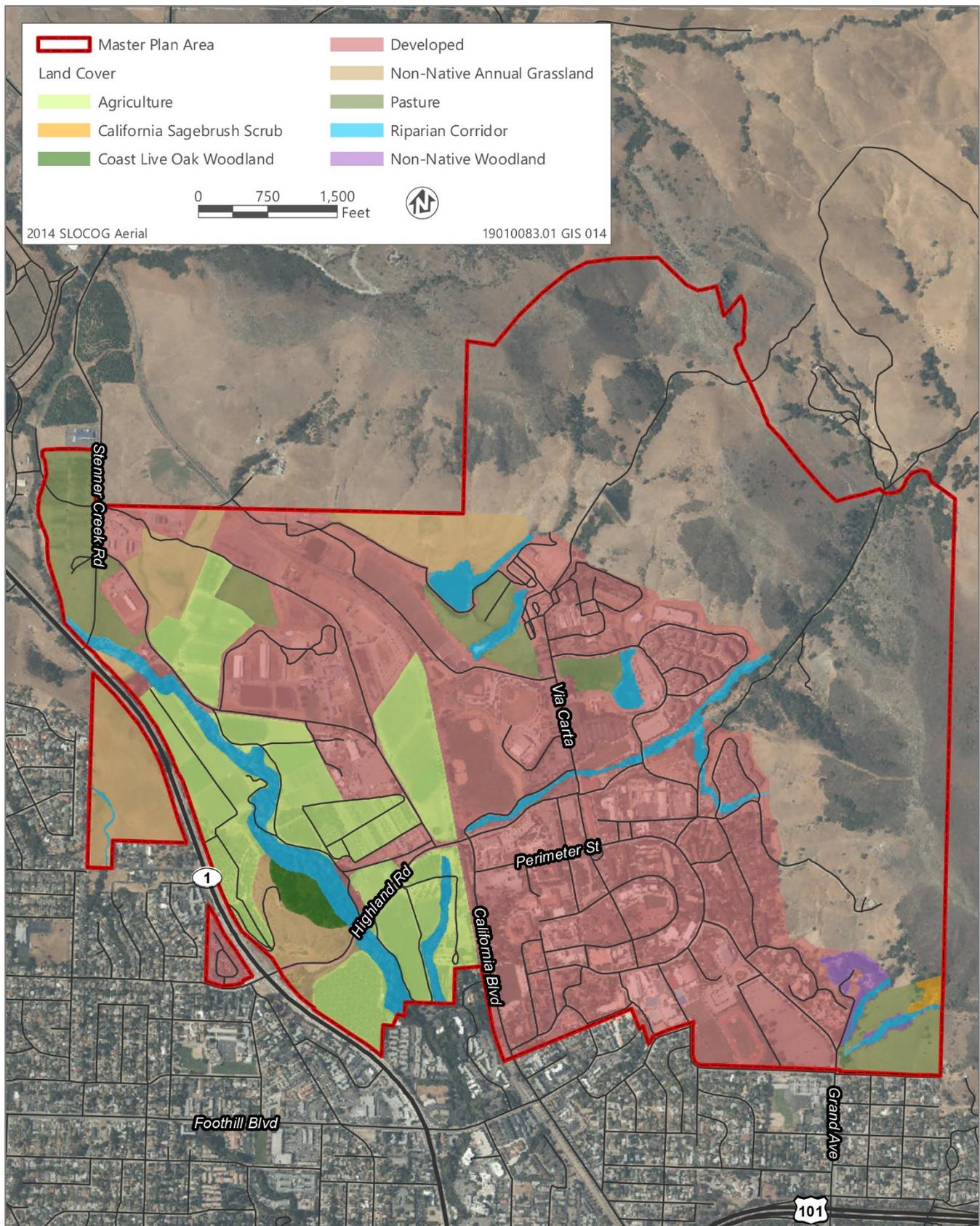
- ▶ **Policy COS 7.5.1: Protection of Significant Trees.** Significant trees, as determined by the City Council upon the recommendation of the Tree Committee, Planning or Architectural Review Committee, are those making substantial contributions to natural habitat or to the urban landscape due to their species, size, or rarity. Significant trees, particularly native species, shall be protected. Removal of significant trees shall be subject to the criteria and mitigation requirements in Chapter 8.6.3 [COS Element Policy]. Oak Woodland communities in the Greenbelt and in open space areas shall be protected.
- ▶ **Policy COS 7.5.2: Use of Native California Plants in Urban Landscaping.** Landscaping should incorporate native plant species, with selection appropriate for location.
- ▶ **Policy COS 7.5.3: Heritage Tree Program.** The City will continue a program to designate and help protect "heritage trees."
- ▶ **Policy COS 7.5.4: Preservation of Grassland Communities and Other Habitat Types.** Grassland communities and other habitat types in the Greenbelt and in designated open space areas shall be preserved.
- ▶ **Policy COS 7.5.5: Soil Conservation and Landform Modification.** Public and private development projects shall be designed to prevent soil erosion, minimize landform modifications to avoid habitat disturbance, and conserve and reuse onsite soils.
- ▶ **Policy COS 7.7.6: Replace Invasive, Non-Native Vegetation with Native Vegetation.** The City and private development will protect and enhance habitat by removing invasive, non-native vegetation that detracts from habitat values by replanting it with native California plant species. The Natural Resources Manager will prioritize projects and enlist the help of properly trained volunteers to assist in non-native vegetation removal and replanting when appropriate.
- ▶ **Policy COS 7.7.7: Preserve Ecotones.** Condition or modify development approvals to ensure that "ecotones," or natural transitions along the edges of different habitat types, are preserved and enhanced because of their importance to wildlife. Natural ecotones of particular concern include those along the margins of riparian corridors, marshlands, vernal pools, and oak woodlands, where they transition to grasslands and other habitat types.
- ▶ **Policy COS 7.7.8: Protect Wildlife Corridors.** Condition development permits in accordance with applicable mitigation measures to ensure that important corridors for wildlife movement and dispersal are protected. Features of particular importance to wildlife include riparian corridors, wetlands, lake shorelines, and protected natural areas with cover and water. Linkages and corridors shall be provided to maintain connections between habitat areas.
- ▶ **Policy COS 7.7.9: Creek Setbacks.** As further described in the Zoning Regulations [Section 17.16.025], the City will maintain creek setbacks to include: an appropriate separation from the physical top of bank, the appropriate floodway as identified in the Flood Management Policy, native riparian plants or wildlife habitat, and space for paths called for by any city-adopted plan. In addition, creek setbacks should be consistent with the following:
 - A. The following items should be no closer to the wetland or creek than the setback line: buildings, streets, driveways, parking lots, aboveground utilities, and outdoor commercial storage or work areas.
 - B. Development approvals should respect the separation from creek banks and protection of floodways and natural features identified in Part A above, whether or not the setback line has been established.
 - C. Features which normally would be outside the creek setback may be permitted to encroach where there is no practical alternative, to allow reasonable development of a parcel, consistent with the Conservation and Open Space Element.
 - D. Existing bridges may be replaced or widened, consistent with policies in this Element. Removal of any existing bridge or restoration of a channel to more natural conditions will provide for wildlife corridors, traffic circulation, access, utilities, and reasonable use of adjacent properties.
- ▶ **Policy COS 8.3.1: Open Space within an Urban Area.** The City will preserve the areas listed in Goal 8.2.2 (creek corridors, including open channel with natural banks and vegetation, wetlands and vernal pools, grassland communities and woodlands, wildlife habitat corridors, habitat of listed species, and unique plant and animal

communities including “species of local concern”) and will encourage individuals, organizations, and other agencies to do likewise. The City will designate these areas as Open Space or Agriculture in the General Plan.

- ▶ **Policy COS 8.3.2: Open Space Buffers.** When activities close to open space resources within or outside the urban area could harm them, the City will require buffers between the activities and the resources. The City will actively encourage individuals, organizations, and other agencies to follow this policy. Buffers associated with new development shall be on the site of the development, rather than on neighboring land containing the open space resource. Buffers provide distance in the form of setbacks, within which certain features or activities are not allowed or conditionally allowed. Buffers shall also use techniques such as planting and wildlife-compatible fencing. Buffers shall be adequate for the most sensitive species in the protected area, as determined by a qualified professional, and shall complement the protected area’s habitat values. Buffers shall be required in the following situations (four of the five noted here, see COS Policy 8.3.2 for A):
 - B. Between urban development and agricultural operations, to address dust, noise, odors, chemical use, and access by people and pets.
 - C. Between agricultural operations and natural habitat, to address noise, chemical use, sediment transport, and livestock access.
 - D. Between new development and cultural resources, to address visual compatibility and access by people.
 - E. Between new development and scenic resources or the greenbelt, to address view blockage, lighting and noise, and visual transition from urban character to rural character.
 - F. Urban development or uses located adjacent to the Urban Reserve Line (URL) to provide a transition to open space or greenbelt areas. Transition areas should add to the preservation of open space lands or resources. At a minimum, a 50-foot transition area (preserved in essentially a natural state) shall be provided within the project along the project boundary with the URL, unless the transition area is defined elsewhere in this Element.
- ▶ **Policy COS 8.6.3 G: Required Mitigation.** Any development that is allowed on a site designated as Open Space or Agriculture, or containing open-space resources, shall be designed to minimize its impacts on open space values on the site and on neighboring land.
 - A. Hillside development shall comply with the standards of the Land Use Element, including minimization of grading for structures and access, and use of building forms, colors, and landscaping that are not visually intrusive (See also Chapter [COS Element Policy] 9.21.1).
 - B. Creek corridors, wetlands, grassland communities, other valuable habitat areas, archaeological resources, agricultural land, and necessary buffers should be within their own parcel, rather than divided among newly created parcels. Where creation of a separate parcel is not practical, the resources shall be within an easement. The easement must clearly establish allowed uses and maintenance responsibilities in furtherance of resource protection.
- ▶ **Policy COS 8.7.2 C: Enhance and Restore Open Space.** Remove invasive, non-native species in natural habitat areas, and prevent the introduction or spread of invasive, non-native species and pathogens.

3.5.2 Environmental Setting

The Master Plan Area is located north of the city of San Luis Obispo in San Luis Obispo County in California’s Central Coast Floristic Province (Sawyer et al. 2009). The Master Plan Area abuts the city of San Luis Obispo to the south and west, and open space, rangeland, and public land to the north and east. Elevations within the Master Plan Area range from approximately 260 to 700 feet above mean sea level. The Master Plan Area supports several land cover types including developed/disturbed, grasslands, woodland, waterways, and ruderal areas. The land cover map in Figure 3.5-1 shows the locations of the land cover types within the main campus of the Master Plan Area; however, some existing land cover types are small enough in size that they are not observable at the map scale.



Source: Data received from Cal Poly in 2019

Figure 3.5-1 Land Cover

VEGETATION AND HABITAT TYPES

Developed/Disturbed

Within the main campus, areas designated as developed/disturbed land cover include the academic, administrative, student support, and recreation facilities; student housing; parking; and ornamental landscaping. This land cover type contains little native habitat, as it does not contain native or naturalized vegetation communities. The developed/disturbed land cover does not support potential special-status plant habitat and is not expected to support special-status wildlife species. As is typical of developed/disturbed environments, the campus's developed/disturbed land cover provides foraging and nesting habitats for common avian species such as red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*B. lineatus*), American kestrel (*Falco sparverius*), Brewer's blackbird (*Euphagus cyanocephalus*), a variety of gull species (*Larus* sp.), and common passerines, such as house finch (*Haemorhous mexicanus*), European starling (*Sturnus vulgaris*), and house sparrow (*Passer domesticus*). Mammals that have adapted to developed/disturbed urban environments and are expected to occur include raccoon (*Procyon lotor*), coyote (*Canis latrans*), California ground squirrel (*Otospermophilus beecheyi*), Virginia opossum (*Didelphis virginiana*), striped skunk (*Mephitis mephitis*), Norway rat (*Rattus norvegicus*), and house mouse (*Mus musculus*).

Ruderal

Ruderal vegetation is indicative of disturbed areas that have been significantly altered by construction or other land-clearing activities. Ruderal habitats in the main campus occur along roadsides and fence lines, on the edges of development, in fallow agricultural areas, and in other areas that experience ongoing disturbance of natural vegetative cover. Plants found in ruderal areas are typically introduced Mediterranean species that exhibit clinging seeds, adhesive stems, and rough leaves that assist their invasion and colonization of the disturbed ground. Species observed include wild oats (*Avena fatua*), ripgut brome (*Bromus diandrus*), Russian thistle (*Salsola* sp.), catalpa (*Catalpa* sp.), and fountaingrass (*Pennisetum setaceum*). Wildlife species expected to occur in this include similar species as in the developed/disturbed land cover type. Ruderal vegetation is widespread on the main campus.

Grasslands

The main campus includes non-native annual grassland, pasturelands, and common velvet grass meadow. These grassland types are described below.

Non-Native Annual Grassland

Non-native annual grasslands are composed of a dense to sparse cover of annual grasses. This community can be occupied by numerous species of annual forbs, especially in years of favorable rainfall. Germination occurs with the onset of late fall rains and growth, flowering, and the setting of seeds, which occurs from winter through spring. The plants are typically dead through the summer–fall dry season and persist as seeds (Holland 1986). Although somewhat rare in the main campus, non-native grassland is present at Cal Poly among the various pastures and agricultural areas, as well as parts of the West Campus subarea. This community differs from the pastures at Cal Poly due to the dominance of naturalized grass species and a lack of active plowing, seeding, and irrigation.

Pasturelands

Pasturelands are those areas that are managed by Cal Poly staff for the purpose of keeping livestock in fenced paddocks. The pasturelands vary in size and support a mix of bare dirt and non-native grasses. These areas are subject to grazing and trampling by livestock. The vegetative composition in the pastures varies over time depending on what species Cal Poly staff have seeded the area with, the amount of irrigation, and the intensity of use. Therefore, the pasture areas do not constitute a naturalized or native grassland community. Plant species observed in the pastures include, but were not limited to, softchess brome (*Bromus hordeaceus*), purple false brome (*Brachypodium distachyon*), filaree (*Erodium cicutarium*), cheeseweed (*Malva parviflora*), and tree tobacco (*Nicotiana glauca*).

Common Velvet Grass Meadow

This grassland community is dominated by velvet grass (*Holcus lanatus*), a non-native perennial species that has become naturalized in the wild and is commonly found in moist pastures and occasionally in wetland and riparian areas. In order for a plant community to qualify for this alliance, the community must include greater than 50-percent

relative cover of velvet grass or sweet vernal grass (*Anthoxanthum odoratum*) (Sawyer et al. 2009). *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986) refers to this community as Coastal Terrace Prairie. Due to its dominance by non-native species, the California Invasive Plant Council (Cal-IPC) considers sweet vernal grass and the community as a moderate threat to California's wildlands (Cal-IPC 2019). Velvet grass meadows occur in small patches among the non-native grasslands adjacent to pastures, reservoirs, and drainages in the main campus. This community also occurs on the northern flank of Shepard Reservoir.

Trees and Shrublands

The following tree- and shrub-dominated communities occur in the Master Plan Area.

Coyote Brush Scrub

The southwestern bank of Shepard Reservoir, the outer rim of Smith Reservoir, and several of the unnamed drainages include stands of coyote brush scrub. Coyote brush scrub is similar in definition to central coastal scrub (Holland 1986), and is a shrubland community dominated by coyote brush (*Baccharis pilularis*), a native pioneer species that commonly colonizes disturbed areas. It may also include mock heather (*Ericameria ericoides*), buckbrush (*Ceanothus cuneatus cuneatus*), California sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), and other scrub species. This community is indicative of disturbed places that are in the process of regenerating.

Non-Native Woodland

Small stands of non-native trees have become naturalized near agricultural and pasturelands on the campus. One such stand is in a series of drainages that converge at the intersection of Slack Street and Grand Avenue at the Faculty and Staff Workforce Housing site. The vegetation in the drainages is dominated by non-native and moderately invasive trees including olive (*Olea europaea*), eucalyptus (*Eucalyptus* spp.), and beavertail cactus (*Opuntia ficus indica*). These species were historically planted near ranch homes and on pasturelands for shade and paddock delineation, suggesting that the non-native trees in the main campus were likely planted as part of Cal Poly's agricultural history. Because these species do not occur in the drainage due to the presence of water, the vegetation in the drainages does not constitute a riparian woodland. A few native coast live oak (*Quercus agrifolia*) trees and native shrubs, including silk tassel (*Garrya elliptica*) and poison oak (*Toxicodendron diversilobum*), occur in the understory.

Arroyo Willow Thickets

Arroyo willow thickets (*Salix lasiolepis* Shrubland) are similar in definition to central coast riparian scrub, which consists of scrubby streamside thickets that are dominated by any of several willow species, including arroyo willow (*Salix lasiolepis*) (Holland 1986). The thickets vary in density from partially open to impenetrable. The understory commonly supports species such as California blackberry (*Rubus ursinus*) and stinging nettle (*Urtica dioica*) in drier sites, or cattail and sedges in mesic (moist) sites. This community may develop through ecological succession into any of several riparian woodland or forest types, absent severe flooding disturbance. Arroyo willow thickets occur on many soil types including sand and gravel bars in areas close to groundwater or surface water. Arroyo willow thickets on the main campus are associated with the various waterways and reservoirs in the area; therefore, Figure 3.5-1 includes this community in the riparian corridor vegetation type.

Coast Live Oak Woodland

This woodland community features coast live oak as the dominant evergreen tree and include western sycamores (*Platanus racemosa*), arroyo willows, and/or several other tree species (Holland 1986; Sawyer et al. 2009). The canopy may be continuous or open; the shrub layer is typically poorly developed but may include species such as toyon (*Heteromeles arbutifolia*) and gooseberry (*Ribes* spp.). The herbaceous layer is dominated by native and non-native grasses and forbs. Coast live oak woodlands typically grow on north-facing slopes and shaded ravines (Holland 1986; Sawyer et al. 2009). Coast live oak woodlands are scattered in the Master Plan Area and are largely associated with the riparian corridors of Stenner Creek and Brizzolara Creek, tributaries to these creeks, and the Smith Reservoir drainage. Figure 3.5-1 includes this community in the riparian corridor mapping.

Riparian and Aquatic Habitats

The Master Plan Area includes portions of Brizzolara Creek and Stenner Creek; a variety of drainages, some of which are tributaries to the main creeks; three reservoirs; and numerous human-made ponds (SWCA 2015; USFWS 2019c). Collectively, these water features are referred to as waterways in this section. Many of the drainages are tributaries to the reservoirs and the reservoirs overflow into the creeks via the drainages. In some instances, this interconnection is enough to establish state and federal jurisdictions over the waterways. Figure 3.5-2 shows the locations of jurisdictional waters within the main campus of the Master Plan Area. The creeks, drainages, and reservoirs support a variety of habitats ranging from landscaped and ruderal vegetation to riparian scrubs and riparian woodlands. Many of these aquatic resources support suitable habitat for California red-legged frog (*Rana draytonii*) and South-Central California Coast steelhead (*Oncorhynchus mykiss*), both federally listed as threatened, and for western pond turtle (*Actinemys marmorata*), a species of special concern, and support suitable nesting habitat for several avian species, including raptors.

Brizzolara Creek

Brizzolara Creek flows from the hills northeast of the Master Plan Area to the southwest through the Master Plan Area. This creek forms the boundary between the East Campus and Academic Core subareas, on the south, and the North Campus subarea. At its intersection with Highland Drive, Brizzolara Creek makes an abrupt turn to the south and enters the West Campus subarea. An engineered fish ladder designed for steelhead passage is located at the creek's intersection with Highland Drive. Shortly after passing through the southeast corner of the West Campus subarea, Brizzolara Creek converges with Stenner Creek. Most of the Brizzolara Creek reach in these main campus subareas supports riparian scrub and woodlands including coyote brush scrub, coast live oak woodland, and arroyo willow thicket. Brizzolara Creek is federal waters subject to USACE jurisdiction, state waters subject to CDFW and RWQCB jurisdictions, and designated steelhead critical habitat under the ESA.

Stenner Creek

Stenner Creek flows from the northwest to the southeast through the West Campus subarea. Throughout its reach on the campus, Stenner Creek supports a riparian corridor that includes coast live oaks, arroyo willows, western sycamores, cottonwoods, and eucalyptus trees in the overstory. The understory supports native and non-native shrubs and vines, including coyote brush, California blackberry, stinging nettle, German ivy (*Delawarea odorata*), periwinkle (*Vinca major*), and others. Stenner Creek is federal waters subject to USACE jurisdiction, state waters subject to CDFW and RWQCB jurisdictions, and listed as steelhead critical habitat under the ESA.

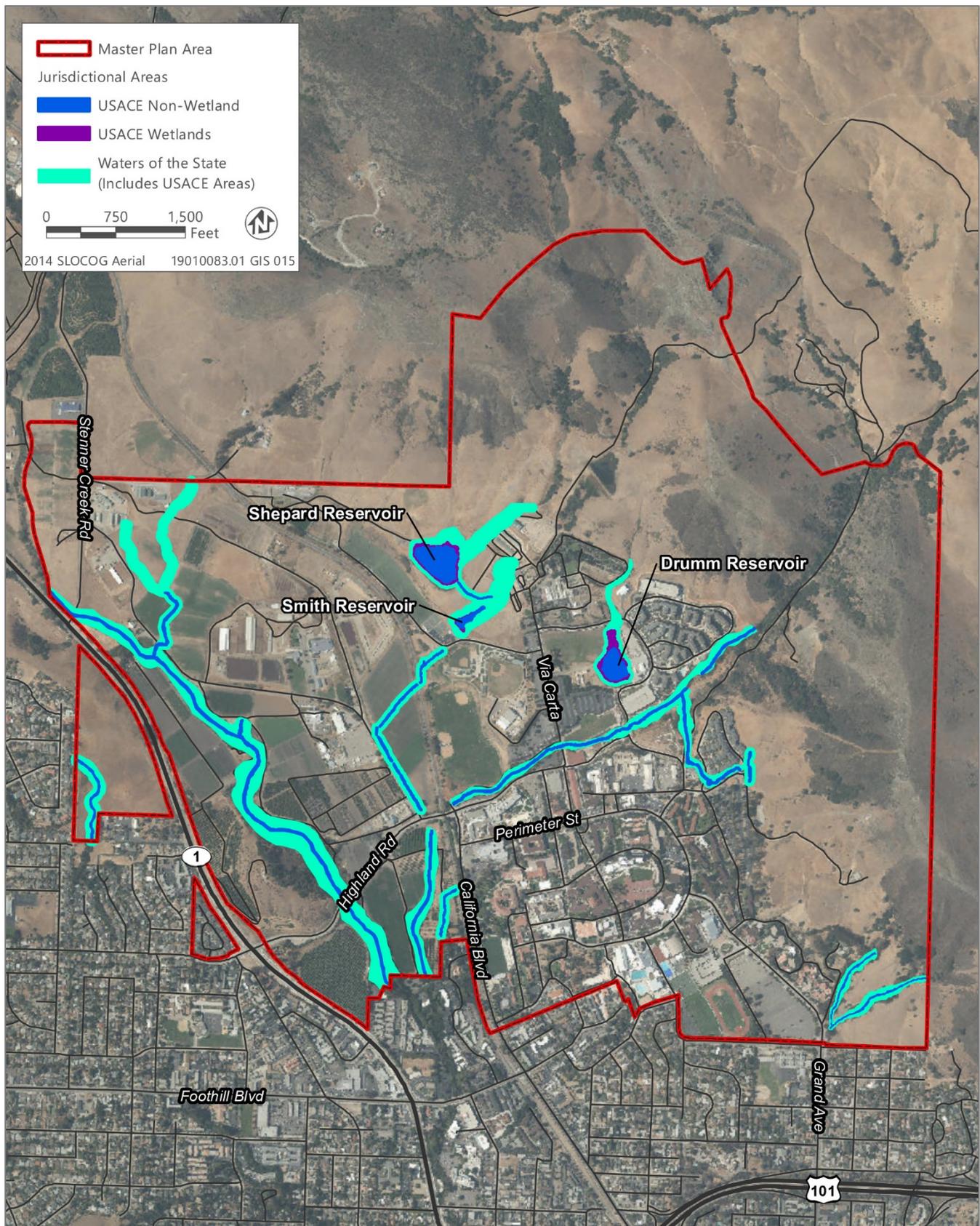
Other Aquatic Features within the Master Plan Area

The Master Plan Area contains reservoirs, wastewater retention ponds for agricultural uses, and settling basins for storm water use. These features are human-made; some have earthen bottoms and banks and support natural vegetation, while others are heavily managed and support minimal vegetation.

North Campus Subarea

The North Campus subarea includes portions of the Drumm Reservoir and its drainage, Smith Reservoir and its drainage, and Shepard Reservoir and its drainage. These reservoirs are waters of the United States subject to USACE jurisdiction. The drainages that feed the reservoirs, such as James Creek, which feeds Drumm Reservoir, lack ordinary high-water marks (OHWMs). Due to the lack of OHWMs, the drainages that feed the reservoirs are not within USACE jurisdiction (SWCA 2015). The three reservoirs and their associated drainages support bed and bank features; therefore, they are waters of the state subject to CDFW and RWQCB jurisdictions.

The reservoirs support open water habitat, freshwater marsh, and arroyo willow thicket. The reservoir drainages support non-native grasses, landscape trees, coast live oak woodland, and coyote brush scrub. The uplands surrounding the reservoirs and their drainages support a mix of ruderal vegetation, non-native grasslands, and velvet grass meadows. The reservoirs and ponds in the North Campus subarea provide suitable aquatic habitat for California red-legged frog and other aquatic species. The upland habitats surrounding the reservoirs and basins provide dispersal habitat for California red-legged frog.



Source: Data received from Cal Poly in 2019

Figure 3.5-2 Potential Jurisdictional Waters within the Master Plan Area

The North Campus subarea also contains wastewater retention ponds and storm water settling basins. Two wastewater retention ponds support the Swine Unit. California red-legged frog has been documented by Cal Poly staff in the Swine Unit wastewater retention ponds. These wastewater ponds are isolated from the nearby reservoir and drainages and are not considered to be waters of the United States or waters of the state (SWCA 2015). There are two settling basins in the southwest end of the Oppenheimer Family Equine Center and two settling basins that are adjacent to the sports fields. The northern settling basin is located between the railroad tracks and Sports Complex Road. It spills into a drainage that is connected to Brizzolara Creek. The southern settling basin is located just north of Brizzolara Creek, at the creek's intersection with Highland Drive. This settling basin receives runoff and includes an overflow inlet that directs flows to Brizzolara Creek.

West Campus Subarea

The West Campus subarea contains four wastewater retention ponds that are used by the Beef Cattle Evaluation Center (BCEC), the rodeo facility, and the Dairy Unit. These engineered wastewater retention ponds serve to capture wastewater from the adjacent facilities. In some cases, the facility managers pump the wastewater out of the ponds to irrigate adjacent pasturelands. These wastewater retention ponds are not jurisdictional features and are not expected to support sensitive aquatic species because of frequent ongoing pumping practices.

Unnamed Drainages

Numerous unnamed drainages traverse the campus and provide hydrologic connections between each other, the reservoirs, and creeks discussed above; these drainages are discussed below.

- ▶ A tributary to Brizzolara Creek flows northeast between the existing Cerro Vista student housing and the housing parking area. This drainage supports bed and bank features and is connected to Brizzolara Creek; therefore, the drainage is considered waters of the United States and waters of the state. The drainage supports a mix of landscaping, restored riparian vegetation, and ruderal vegetation.
- ▶ The pastureland in the southeastern corner of the East Campus subarea supports two disturbed drainages that are in the area proposed for the Faculty and Staff Workforce Housing project. The drainages have headwaters in the hills to the east, flow southwest through the pastures, and converge near the Slack Street and Grand Avenue intersection. Shortly downstream of the convergence, the combined channel directs flows into the municipal storm drain system. Once in the storm drain system, flows are directed to San Luis Obispo Creek via the underground culvert system managed by the City of San Luis Obispo. During a May 16, 2017, field visit with the RWQCB staff, the RWQCB asserted jurisdiction over the drainages (Dugas, pers. comm., 2017). During a May 25, 2017 pre-application meeting with USACE, USACE asserted jurisdiction over the two drainages because of the significant nexus with San Luis Obispo Creek (Dugas, pers. comm., 2017). During a June 7, 2017, field meeting, CDFW asserted jurisdiction over the drainages (Dugas, pers. comm., 2017).
- ▶ A small unnamed drainage that is hydrologically connected to Smith Reservoir (North Campus subarea) flows from east to west through the West Campus subarea, flows along Mount Bishop Road, and eventually connects to Brizzolara Creek at Highland Drive. This drainage supports OHWM features and provides a connection between two federal and state jurisdictional features (Smith Reservoir and Brizzolara Creek); therefore, this drainage is waters of the United States (SWCA 2015). A small detention basin that receives flows from the existing sports fields on Sports Complex Road (North Campus subarea) is hydrologically connected to the drainage and may be a state jurisdictional feature as well.

Mount Bishop Road meanders through the central portion of the West Campus subarea and bisects the various agricultural fields. The Mount Bishop Road shoulder is largely ruderal; however, the drainage feature that originates at Smith Reservoir (see above bullet) occurs on the northern side of the road. The portion of the feature is indicative of a roadside ephemeral drainage. USACE has asserted jurisdiction over the entire drainage from Highland Drive to Smith Reservoir (SWCA 2015). The portion of the Mount Bishop Road drainage that is by the existing rodeo arenas was determined not to be jurisdictional (SWCA 2015).

- ▶ Two drainages flow from north to south adjacent to the existing corporate yard and skirt the eastern edge of the proposed BCEC Expansion area. These drainages converge just east of the proposed BCEC Expansion area and the combined drainage is a tributary to Stenner Creek. Upstream (north) of the convergence, the two drainages are non-jurisdictional agricultural ditches. Downstream of the convergence, the tributary to Stenner Creek is waters of the United States and waters of the state (SWCA 2015).
- ▶ The proposed Facilities Operations Complex site is adjacent to Brizzolara Creek and supports an unnamed jurisdictional drainage that is a tributary to Brizzolara Creek. The unnamed drainage does not support riparian vegetation but includes a defined bed and bank with connectivity to waters of the United States, and USACE has asserted jurisdiction over the drainage (SWCA 2015).
- ▶ The site of the proposed University-Based Retirement Community in the West Campus subarea (west of SR 1) includes a small drainage that flows through the southwestern corner of the campus. The seasonal drainage collects runoff from the area and the Ferrini Heights neighborhood located to the west and conveys collected flow in a southerly direction off-site toward Old Garden Creek, a tributary to Stenner Creek. The drainage is ephemeral and supports non-native annual grassland and freshwater marsh vegetation. Due to the presence of an OHWM, bed and bank features, and the connectivity with Old Garden Creek, the drainage is likely waters of the United States and waters of the state.

SENSITIVE BIOLOGICAL RESOURCES

Sensitive biological resources addressed in this Draft EIR include those that are afforded special protection or consideration through the California Fish and Game Code (including but not limited to the CESA), the ESA, the CWA, the Porter-Cologne Act, and CEQA.

Special-Status Species

Plants and animals may be special-status species because of declining populations, vulnerability to habitat change, or restricted distributions. Special-status species include those species legally protected under the CESA, the ESA, or other regulations, as well as species considered sufficiently rare by the scientific community to qualify for such listing. In this document, special-status species are defined as the following:

- ▶ Species listed or proposed for listing as threatened or endangered under ESA (50 CFR 17.12 for listed plants, 50 CFR 17.11 for listed animals, and various notices in the Federal Register for proposed species) or candidates for possible future listing as threatened or endangered under ESA (75 CFR 69222);
- ▶ Species listed or candidates for listing by the State of California as threatened or endangered under CESA (14 CCR Section 670.5);
- ▶ Animals fully protected under the California Fish and Game Code (Section 3511 for birds, Section 4700 for mammals, Section 5050 for reptiles and amphibians, and Section 5515 for fish);
- ▶ Plants listed as rare under the California Native Plant Protection Act (Fish and Game Code Section 1900 et seq.);
- ▶ Plants considered by CDFW to be “rare, threatened or endangered in California” (California Rare Plant Ranks of 1A, presumed extinct in California and either rare or extinct elsewhere; 1B, considered rare or endangered in California and elsewhere; 2A, presumed extinct in California but common elsewhere; and 2B, considered rare or endangered in California but more common elsewhere). Note, that while these rankings do not afford the same type of legal protection as ESA or CESA, the uniqueness of these species requires special consideration under Section 15380 of the CEQA Guidelines;
- ▶ Animals identified by CDFW as species of special concern;
- ▶ Species considered locally significant, that is, a species that is not rare from a statewide perspective but is rare or uncommon in a local context such as within a county or region (CEQA Section 15125 (c)) or is so designated in local or regional plans, policies, or ordinances (CEQA Guidelines, Appendix G); or

- Species that otherwise meets the definition of rare or endangered under CEQA Section 15380.

A preliminary list of special-status plant and animal species with potential to occur in the main campus was developed based on the reconnaissance survey, and review of the existing data sources described previously.

Plants

The data review preliminarily identified 75 special-status plant species that could occur in or near the main campus (Appendix E). Table 1 of Appendix E summarizes the regulatory status, habitat associations, and potential for occurrence in the main campus for each special-status plant species evaluated during this analysis. Of these 75 plant species, six are known to occur in the Master Plan Area but are not expected to occur within the main campus due to lack of suitable soils, 17 have a moderate or high likelihood to occur in the main campus, and the remainder have a low (or no) potential and are not expected to occur. These determinations were based on the types, extent, and quality of habitats in the main campus determined during the reconnaissance-level field surveys; the proximity of the main campus to known occurrences of the species; and the regional distribution and abundance of the species. Table 3.5-1 lists the plants that may or are likely to occur within the study area and is a subset of Table 1 of Appendix E, which presents all of the special-status plant species evaluated.

Table 3.5-1 Special-Status Plants That May or Are Likely¹ to Occur Within the Study Area

Species	Legal Status ² Federal/ State/CRPR
Marsh sandwort <i>Arenaria paludicola</i>	FE/SE/1B.1
Mile's milk-vetch <i>Astragalus didymocarpus</i> var. <i>milesianus</i>	--/--/1B.2
Coulter's saltbush <i>Atriplex coulteri</i>	--/--/1B.2
San Luis Obispo owl's clover <i>Castilleja densiflora</i> ssp. <i>obispoensis</i>	--/--/1B.2
Dwarf calycadenia <i>Calycadenia villosa</i>	--/--/1B.1
San Luis Obispo sedge <i>Carex obispoensis</i>	--/--/1B.2
Congdon's tarplant <i>Centromadia parryi</i> ssp. <i>congdonii</i>	--/--/1B.1
San Luis Obispo fountain thistle [=Chorro Creek Bog Thistle] <i>Cirsium fontinale</i> var. <i>obispoense</i>	FE/SE/1B.2
La Graciosa thistle <i>Cirsium scariosum</i> var. <i>loncholepsis</i>	FE/ST/1B.1
Blochman's dudleya <i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i>	--/--/1B.1
San Joaquin spearscale <i>Extriplex joaquiniana</i>	--/--/1B.2
Coulter's goldfields <i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	--/--/1B.1
Jones's layia <i>Layia jonesii</i>	--/--/1B.2
Spreading navarretia <i>Navarretia fossalis</i>	FT/--/1B.1
Shining navarretia <i>Navarretia nigelliformis</i> ssp. <i>radians</i>	--/--/1B.2

Species	Legal Status ² Federal/ State/CRPR
Adobe sanicle <i>Sanicula maritima</i>	--/SR/1B.1
Saline clover <i>Trifolium hydrophilum</i>	--/--/1B.2

Source: Data compiled by Ascent Environmental in 2019

¹Potential for Occurrence Definitions

May occur: Suitable habitat is available within the Master Plan Area; however, there are little to no other indicators that the species might be present.

Likely to occur: All of the species' life history requirements can be met by habitat present on the site, and populations/occurrences are known to occur in the immediate vicinity.

²Legal Status Definitions

Federal:

FE Endangered (legally protected by ESA)

FT Threatened (legally protected by ESA)

State:

SE Endangered (legally protected by CESA)

ST Threatened (legally protected by CESA)

SR Rare (legally protected by the California Native Plant Protection Act)

California Rare Plant Ranks (CRPRs):

1B Plant species considered rare or endangered in California and elsewhere (protected under CEQA, but not legally protected under ESA or CESA)

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

Threat Ranks:

0.1 Seriously threatened in California (over 80% of occurrences threatened; high degree and immediacy of threat)

0.2 Moderately threatened in California (20-80% occurrences threatened; moderate degree and immediacy of threat)

0.3 Not very threatened in California (less than 20% of occurrences threatened; low degree and immediacy of threat or not current threats known)

Wildlife and Fish

The data review preliminarily identified 44 special-status wildlife and fish species that could occur in or near the main campus (Appendix D-E). Table 2 of Appendix D-E summarizes the regulatory status, habitat associations, and potential for occurrence in the main campus for each special-status wildlife and fish species evaluated during this analysis. Of these 44 animal species, seven are known to occur in the Master Plan Area, 15 have a moderate or high likelihood to occur in the main campus area, and the remainder have a low (or no) potential and are not expected to occur in the main campus. These determinations were based on the types, extent, and quality of habitats in the main campus determined during the reconnaissance-level field surveys; the proximity of the main campus to known occurrences of the species; and the regional distribution and abundance of the species. Table 3.5-2 lists wildlife species known or with potential to occur within the study area and is a subset of Table 2 of Appendix D-E, which includes all of the special-status wildlife species evaluated.

Table 3.5-2 Special-Status Wildlife Known or With Potential to Occur Within the Study Area

Species	Legal Status ² (Federal/State)
Monarch butterfly <i>Danaus plexippus</i>	--/SA
South-Central California Coast steelhead DPS <i>Oncorhynchus mykiss</i>	FT/SSC
California red-legged frog <i>Rana draytonii</i>	FT/SSC
Coast Range newt <i>Taricha torosa torosa</i>	--/SSC
Western pond turtle <i>Actinemys marmorata</i>	--/SSC
Tricolored blackbird <i>Agelaius tricolor</i>	--/SE, SSC
Grasshopper sparrow <i>Ammodramus savannarum</i>	--/SSC
Burrowing owl <i>Athene cunicularia</i>	--/SSC
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	FT/SE
White-tailed kite <i>Elanus leucurus</i>	--/FP
Least Bell's vireo <i>Vireo bellii pusillus</i>	FE/SE
Loggerhead shrike <i>Lanius ludovicianua</i>	--/SSC
Purple martin <i>Progne subis</i>	--/SSC
Pallid bat <i>Antrozous pallidus</i>	--/SSC
Ringtail <i>Bassariscus astutus</i>	--/FP
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	--/SSC
Monterey dusky-footed woodrat <i>Neotoma fuscipes annectens</i>	--/SSC
American badger <i>Taxidea taxus</i>	--/SSC

Sources: CNDDDB 2019; eBird 2019; USFWS 2019a; compiled by Ascent Environmental in 2019

¹ Legal Status Definitions

Federal:

FE Endangered (legally protected)

FT Threatened (legally protected)

PCH

State:

FP Fully protected (legally protected)

SA Special Animal List (no formal protection other than CEQA consideration).

SSC Species of special concern (no formal protection other than CEQA consideration)

SE Endangered (legally protected)

Sensitive Natural Communities and Habitats

The land cover types present in the main campus are described in the "Vegetation and Habitat Types" section, above. Sensitive natural communities and habitats include those that are of special concern to resource agencies or are afforded specific consideration through CEQA, Section 1602 of the California Fish and Game Code, Section 404 of the CWA, and the state's Porter-Cologne Act. Sensitive natural habitat may be of special concern to agencies and 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. Sensitive natural communities are those native plant communities defined by CDFW as having limited distribution statewide or within a county or region and that are often vulnerable to environmental effects of projects (CDFW 2018). In addition to habitats officially identified by CDFW as sensitive natural communities or meeting the definition of waters of the United States, other sensitive habitats include riparian habitats, oak woodlands, chaparral, and coastal sage scrub. The following briefly summarizes sensitive habitats and natural communities in the main campus.

Arroyo Willow Thicket

Arroyo willow thicket is designated by CDFW as a sensitive natural community. Arroyo willow thickets in the Master Plan Area are associated with various waterways and reservoirs in the main campus.

Riparian Woodland

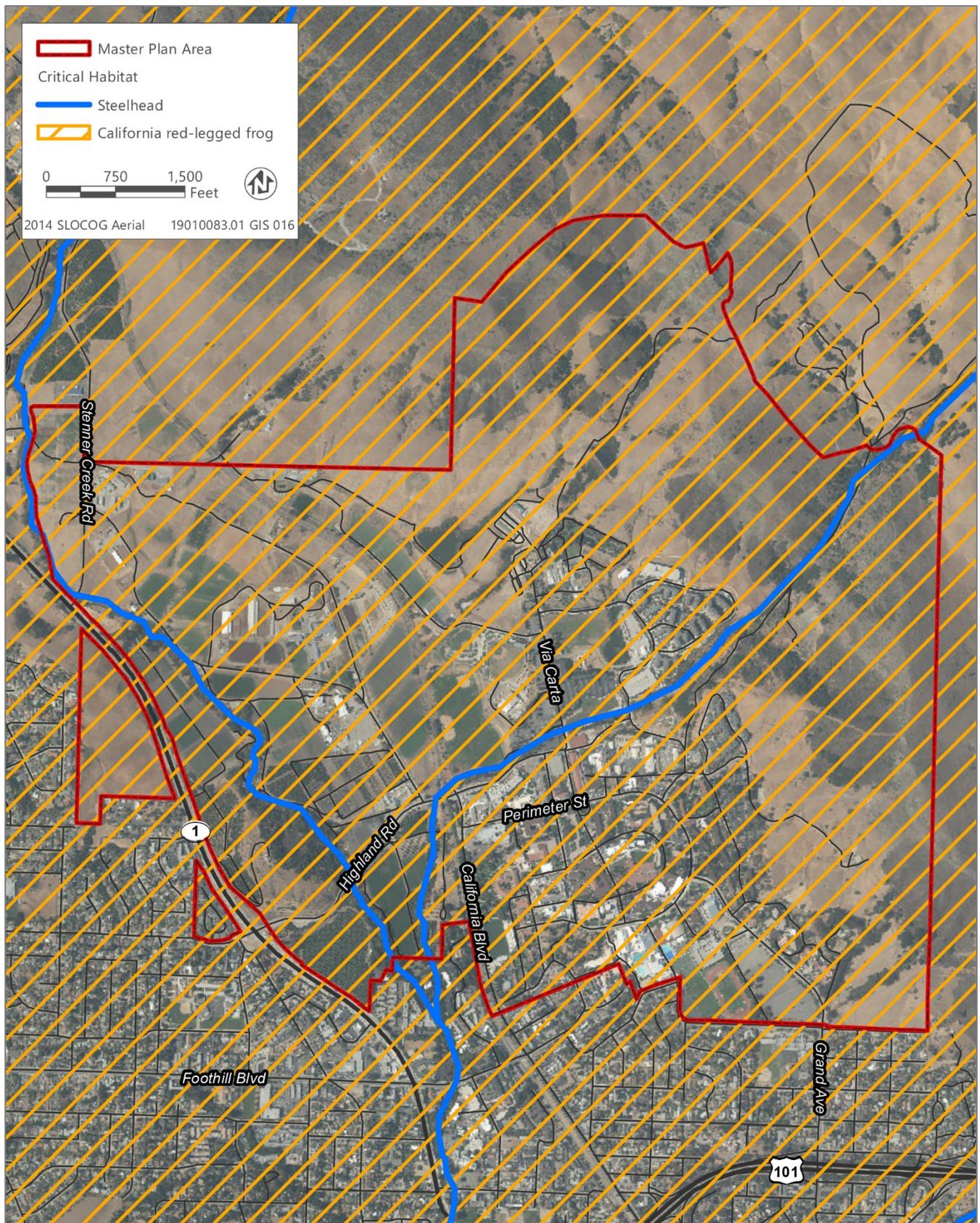
Riparian woodland is afforded specific consideration under CEQA and by CDFW; this habitat is present within the main campus along waterways and reservoirs. Riparian habitats located near rivers, streams, and lakes are subject to regulation under Section 1602 of the California Fish and Game Code, even if they are not included on CDFW's list of special-status natural communities, and riparian habitats often support high wildlife species diversity and abundance relative to surrounding habitats.

Wetlands and Other Waters of the United States and Waters of the State

Wetlands, streams, drainages, and associated riparian habitat in the Master Plan Area are considered sensitive habitats. Several of these waterways in the Master Plan Area are considered waters of the United States, meaning they are regulated by USACE under Section 404 of the CWA, and waters of the state regulated by the RWQCB under the Porter-Cologne Act. Some of these features are also regulated by CDFW under Section 1600 et seq. of the California Fish and Game Code. Specifically, CDFW regulates activities affecting the bed, channel, or bank of any river, stream, or lake that supports wildlife resources. As discussed previously, jurisdictional wetlands and other waters in the Master Plan Area include Brizzolara Creek, Stenner Creek, and several unnamed drainages.

Designated Critical Habitat

The entire Master Plan Area contains designated critical habitat for California red-legged frog, and Stenner Creek and Brizzolara Creek are designated critical habitat streams for steelhead - South-Central California Coast Distinct Population Segment (DPS). Figure 3.5-3 shows the extent of critical habitat in the Master Plan Area. California red-legged frog critical habitat unit SLO-3 includes approximately 116,517 acres in western San Luis Obispo County (USFWS 2019b). Cal Poly is in the southeastern portion of SLO-3. Stenner Creek and Brizzolara Creek are designated critical habitat areas for the South-Central California Coast DPS of steelhead (NMFS 2005).



Source: Data received from Cal Poly in 2019

Figure 3.5-3 Critical Habitat

3.5.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

This impact analysis is based on data collected during the reconnaissance survey conducted on June 26, 2019, and review of the existing data sources described previously. To evaluate the potential impacts of the 2035 Master Plan on biological resources, the types, extent, and quality of biological resources that could be directly or indirectly affected were considered in relation to the proposed construction and operation of facilities within the Master Plan Area and any policies and programs related to the protection of biological resources.

Analysis of potential impacts of the 2035 Master Plan on biological resources focused on the campus areas where future facilities would be developed, expanded, or renovated (i.e., Academic Core, North Campus, East Campus, and West Campus subareas). Potential impacts were initially identified by overlaying GIS layers of project components on land cover maps of the project site and maps of sensitive biological resources. Any natural community and wildlife habitat that overlapped with an area of proposed modification was considered to be directly affected during project construction. Short-term construction impacts would occur where natural vegetation would be removed to construct new features and facilities or modify existing features. Construction-related impacts could affect biological resources through storm water runoff, erosion, and the introduction of invasive or non-native species. Long-term impacts on biological resources could occur in or adjacent to habitats that would experience a permanent conversion in land use and cover (i.e., conversion of natural vegetation to paved areas, other facilities, and landscaping) or an increase in disturbance from long-term operations/uses as a result of the 2035 Master Plan.

Section 3.5.2, "Environmental Setting," addresses the special-status plant and animal species evaluated in this analysis, and Tables 1 and 2 in Appendix D-E summarize the potential for each of these species to occur in the Master Plan Area.

Cal Poly 2035 Master Plan

The following "Guiding Principles" were developed early on in the process by the 2035 Master Plan professional team with input from campus leadership, including the college deans, and considering continuity with the 2001 Master Plan. Guiding Principles can be thought of both as starting points for the plan process and as overarching directives relevant to all or most Master Plan topics. They are organized by topic heading in the Master Plan as General Principle, Academic Mission and Learn by Doing, Design Character, Implementation, Implementation Program (IP), Other Recommendation (OR), Sustainability and Environmental Stewardship (S), Transportation and Circulation, or Residential Community and University Life. The following principles are considered relevant to the evaluation of biological resources impacts associated with implementation of the 2035 Master Plan:

- ▶ **IP 9:** A trail plan should be developed to provide access to Cal Poly's natural resources and open spaces where appropriate considering factors such as safety, avoidance of degradation of the resources and interference with educational priorities. Such a plan should address design, management and signage to addressing appropriate use and signage, including possible links between off campus public lands.
- ▶ **OR 17:** Cal Poly should be the model for Low Impact Design principles.
- ▶ **S 02:** Cal Poly should preserve and enhance the viability of agriculture and natural habitat systems on its holdings by providing adequate land area including appropriate buffers, connectivity or corridors between related natural communities, and linear continuity along streams.
- ▶ **S 03:** Impacts to environmentally sensitive areas should be avoided; environmentally degraded areas should be enhanced or restored where practical.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, the project would normally have a significant adverse effect related to biological resources if it would:

- ▶ have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;
- ▶ have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by CDFW or USFWS;
- ▶ have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- ▶ interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- ▶ conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- ▶ conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state HCP.

ISSUES NOT DISCUSSED FURTHER

Certain Special-Status Plants and Wildlife

Section 3.5.2, "Environmental Setting," discusses the special-status plant and animal species evaluated in this analysis and summarizes the potential for each of these species to occur in the Master Plan Area. Those plant and animal species not expected to regularly occur, or with a low probability to occur (because of a lack of suitable habitat, existing disturbance levels, or lack of occurrence records), are not addressed further in the impact analysis. Implementation of the 2035 Master Plan is not expected to considerably affect those species.

Conflict with Local Policies or Ordinances Related to the Protection of Biological Resources

Because Cal Poly is a state university, it is not subject to local plans, policies, or regulations. Therefore, the following impact analysis does not evaluate potential conflicts with local plans, policies, or regulations.

Conflict with Adopted Habitat Conservation Plan or Natural Community Conservation Plan

There are no adopted HCPs or NCCPs that apply to the Master Plan Area. The nearest adopted HCP/NCCP to the Master Plan Area is the Northeastern San Luis Obispo County NCCP/HCP, which is located further to the east of Cal Poly. Therefore, the following impact analysis does not evaluate potential conflicts with adopted conservation plans.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.5-1: Have a Substantial Adverse Effect, Either Directly or Through Habitat Modifications, on Special-Status Plants

Implementation of the 2035 Master Plan could result in conversion of undeveloped habitats that may provide marginally suitable habitat for several special-status plants. Removal of these undeveloped habitats could result in loss of special-status plants if they are present. Loss of special-status plants would be a **significant** impact.

Seventeen special-status plant species have the potential to occur within the Master Plan Area (see Table 3.5-1). Proposed projects under the 2035 Master Plan, such as the University-Based Retirement Community, Faculty and Staff Workforce Housing, Faculty Operations Complex/interim surface parking lot, the expansion or improvement of the

existing trail system, proposed informal recreation areas, and the Water Reclamation Facility (WRF) (including proposed water storage ponds), are proposed or include components in areas that may provide suitable habitat for special-status plant species. Construction activities, such as conversion of undeveloped ruderal grassland, pasture, riparian corridors, under the 2035 Master Plan could result in the loss of these special-status plant species if they are present. Plants could be directly removed, 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 local populations could eventually result.

The expansion or improvement of the existing trail in conjunction with the planned increase in student body would likely increase the amount of use the trail receives. The trail near Brizzolara Creek and other parts of Poly Canyon (which generally extends from the northeast corner of the Academic Core, following the upper stretches of Brizzolara Creek) supports natural vegetation types, including serpentine soils (Cal Poly 2019). The existing trail is near several sensitive resource occurrences. CNDDDB documents occurrences of California red-legged frog, Coast Range newt (*Taricha torosa torosa*), Jones’s layia, San Luis Obispo owl’s-clover, most beautiful jewelflower (*Streptanthus albidus* ssp. *peramoenus*), mouse-gray dudleya (*Dudleya abramsii* ssp. *murina*), Brewer’s spineflower (*Chorizanthe breweri*), Eastwood’s larkspur (*Delphinium parryi* ssp. *eastwoodiae*), and San Luis mariposa lily (*Calochortus obispoensis*) in the Poly Canyon area. Ongoing and increased use of the existing trail could affect the sensitive species occurrences and habitat. Adverse effects could result if trail use or maintenance required grading. The grading could physically remove the resources, alter drainage patterns that support the resources, or provide an avenue for invasive weeds to spread and alter the habitats that support the resources. Indirect effects of ongoing trail use including trampling or other degradation of adjacent habitats could occur if trail users walked off-trail or conducted other activities that could disturb habitat, such as creating increased dust and leaving litter behind. This impact would be **significant**.

Mitigation Measures

Mitigation Measure 3.5-1a: Conduct Special-Status Plant Surveys

Prior to approval of specific projects under the 2035 Master Plan, Cal Poly shall have a qualified botanist (i.e., a professional biologist with expertise in native and naturalized plants found in California who is able to use appropriate field survey methods and protocols that satisfy documentation and assessment requirements) evaluate the potential for special-status plant habitat at the proposed project sites containing undeveloped land cover types as shown in Figure 3.5-1, “Land Cover.” Should suitable habitat for any of the species listed in Table 3.5-3 be identified, the qualified botanist, at Cal Poly’s direction, shall conduct protocol-level surveys for the potentially occurring special-status plants that could be removed or disturbed by project activities during the blooming period for the plant(s) that could be present on-site. Protocol-level surveys shall be conducted in accordance with Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW 2009). Concurrent with the special-status plant survey, the botanist shall document non-native invasive plants within the project areas and provide a separate report with the location and extent of non-natives within the project area to Cal Poly. If special-status plants are not found, the botanist shall document the findings in a letter report to CDFW and further mitigation shall not be required.

Table 3.5-3 Normal Blooming Period for Special-Status Plants with Potential to Occur within the Main Campus

Species	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Marsh sandwort <i>Arenaria paludicola</i>									
Mile’s milk-vetch <i>Astragalus didymocarpus</i> var. <i>milesianus</i>									
Coulter’s saltbush <i>Atriplex coulteri</i>									
San Luis Obispo owl’s clover <i>Castilleja densiflora</i> ssp. <i>obispoensis</i>									

Species	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Dwarf calycadenia <i>Calycadenia villosa</i>									
San Luis Obispo sedge <i>Carex obispoensis</i>									
Congdon's tarplant <i>Centromadia parryi</i> ssp. <i>congdonii</i>									
San Luis Obispo fountain thistle [=Chorro Creek Bog Thistle] <i>Cirsium fontinale</i> var. <i>obispoense</i>									
La Graciosa thistle <i>Cirsium scariosum</i> var. <i>loncholepsis</i>									
Blochman's dudleya <i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i>									
San Joaquin spearscale <i>Extriplex joaquiniana</i>									
Coulter's goldfields <i>Lasthenia glabrata</i> ssp. <i>coulteri</i>									
Jones's layia <i>Layia jonesii</i>									
Spreading navarretia <i>Navarretia fossalis</i>									
Shining navarretia <i>Navarretia nigelliformis</i> ssp. <i>radians</i>									
Adobe sanicle <i>Sanicula maritima</i>									
Saline clover <i>Trifolium hydrophilum</i>									

Source: Data compiled by Ascent Environmental in 2019

Mitigation Measure 3.5-1b: Conduct Special-Status Plant Avoidance

If special-status plant species are found on a particular project site and are located outside of the permanent footprint of any proposed structures/site features and can be avoided, Cal Poly shall avoid and protect these species by establishing a no-disturbance buffer around the area occupied by special-status plants and marking the buffer boundary with high-visibility flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway); exceptions to this requirement are listed later in this measure. The no-disturbance buffers shall generally be a minimum of 40 feet from special-status plants, but the size and shape of the buffer zone may be adjusted if a qualified botanist determines that a smaller buffer is sufficient to avoid killing or damaging the plants or that a larger buffer is necessary to sufficiently protect plants from the proposed activity. The appropriate buffer size shall be determined based on plant phenology at the time of project initiation (e.g., whether the plants are in a dormant, vegetative, or flowering state), the individual species' vulnerability to the activity being conducted, and environmental conditions and terrain. Consideration of factors such as site hydrology, changes in light, edge effects, and potential introduction of invasive plants and noxious weeds may inform the determination of buffer width. If a no-disturbance buffer is reduced below 40 feet from a special-status plant, a qualified botanist shall provide a site- and/or activity-specific explanation with the biological technical justification for the buffer reduction, which shall be included in a memo to CDFW and Cal Poly.

Mitigation Measure 3.5-1c: Special-Status Plant Impact Minimization and Compensation Measures

If special-status plants are found during rare plant surveys and cannot be avoided, Cal Poly shall consult with CDFW and USFWS, as appropriate depending on species status, to determine the appropriate action(s) to achieve no net loss of occupied habitat or individuals. Mitigation measures may include, but are not limited to, preserving and enhancing existing populations, creating off-site populations on mitigation sites through seed collection or transplantation at a 3:1 ratio, and restoring or creating suitable habitat in sufficient quantities which would collectively achieve no net loss of occupied habitat or individuals. Potential mitigation sites could include suitable transplant locations within or outside of the campus. Cal Poly shall develop and implement a site-specific mitigation strategy describing how unavoidable losses of special-status plants shall be compensated consistent with this mitigation measure and the no net loss standard. Success criteria for preserved and compensatory populations shall include:

- a) The extent of occupied area and plant density (number of plants per unit area) in compensatory populations shall be equal to or greater than the affected occupied habitat.
- b) Compensatory and preserved populations shall be self-producing. Populations shall be considered self-producing when:
 - i) plants reestablish annually for a minimum of 5 years with no human intervention such as supplemental seeding; and
 - ii) reestablished and preserved habitats contain an occupied area and flower density comparable to existing occupied habitat areas in similar habitat types in the project vicinity.

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 project-specific mitigation plan, including information on responsible parties for long-term management, conservation easement holders, long-term management requirements, success criteria consistent with those listed above and other details, as appropriate to target the preservation of long-term viable populations.

Mitigation Measure 3.5-1d: Conduct Environmental Monitoring

For projects and locations where mitigation measures are required to protect biological resources during construction activities, Cal Poly shall retain an environmental monitor to ensure compliance with the EIR mitigation measures. The monitor shall be responsible for: (1) ensuring that procedures for verifying compliance with environmental mitigations are implemented; (2) establishing lines of communication and reporting methods; (3) conducting compliance reporting; (4) conducting construction crew training regarding environmentally sensitive areas and/or special-status species; (5) maintaining authority to stop work; and (6) outlining actions to be taken in the event of non-compliance. Monitoring shall be conducted full time during the initial vegetation removal (clear/grub activities), then periodically throughout project construction, or at a frequency and duration as directed by the affected natural resource agencies (e.g., USACE, USFWS, CDFW, and RWQCB).

Mitigation Measure 3.5-1e: Prepare Trail Management Plan

Prior to improving existing Cal Poly trails or constructing new trails in Cal Poly's natural lands, Cal Poly shall prepare a Trail Plan as described in 2035 Master Plan Principle IP 9. The Trail Plan shall emphasize the use of existing trails in the trail system, identify all sensitive resources within and adjacent to the trail(s) alignment(s), and ensure that the trail alignments do not necessitate the removal of or otherwise adversely affect the sensitive resources. If the Trail Plan includes the construction of new trails, the new trail alignments shall be surveyed for sensitive biological resources before trail design. The new trail alignments shall be designed to avoid or minimize direct and indirect impacts on any identified sensitive resources. The construction of new trails shall minimize the number of creek crossings in the trail system. If the construction of new trails or improvement of existing trails includes the installation of pedestrian bridges over Brizzolara Creek or other waterways, Cal Poly shall obtain the necessary permits from USACE, USFWS, CDFW, and/or RWQCB, as necessary. The Trail Plan shall include the following elements:

- a) Installation of interpretive signage to inform trail users of the presence of sensitive resources along the trails and identify appropriate trail use conduct.
- b) Identification of the department and/or individuals responsible for implementing all aspects of the trail plan.
- c) Provision of adequate buffers from waterways, seeps, springs, and other sensitive resources.
- d) Use of natural infiltration and best management practices for storm water management. Designs should focus on the use of natural dispersed infiltration systems, such as vegetated swales, rather than engineered systems, such as storm drains and catch basins, to the maximum extent feasible.
- e) Prohibition of public motor vehicle use of the trails.
- f) Identification of trails suitable for bicycle use and those for which bicycle use is prohibited.
- g) A trail decommissioning program to restore native habitats in trail sections that are no longer in use.
- h) A trail monitoring program.

Significance after Mitigation

Implementation of Mitigation Measures 3.5-1a through 3.5-1e requires floristic surveys to determine if suitable habitat for special-status plants are present in proposed development areas; avoidance of special-status plants outside of the permanent footprint of 2035 Master Plan projects; consultation with CDFW and USFWS (depending on species status) for any special-status plant that cannot be avoided; mitigation for the loss of special-status plants with a performance standard that achieves no net loss of plants and occupied habitat; creation of a long-term management plan to manage the preserve or compensatory populations; and environmental monitoring to ensure all requirements of environmental mitigation are being met. For trails specifically, mitigation requires preparation of a Trail Management Plan that would identify sensitive resources, including special-status plants, emphasize the use of existing trails, and ensure that the trail alignments do not affect sensitive resources and would be done in compliance with the requirements of USACE, USFWS, CDFW, and/or RWQCB as necessary. Implementation of these mitigation measures would avoid, minimize, and compensate for adverse effects such that impacts on special-status plants would be reduced to a **less-than-significant** level.

Impact 3.5-2: Have a Substantial Adverse Effect, Either Directly or through Habitat Modifications, on Special-Status Wildlife Species, Fish Species, or Habitats

Implementation of the 2035 Master Plan could result in the disturbance or conversion of habitats occupied by or suitable for several special-status wildlife species. Disturbance or loss of these habitats could result in loss of special-status wildlife if they are present. Loss of special-status wildlife or their habitat would be a **significant** impact.

Five special-status fish and wildlife species are known to occur within the Master Plan Area, including monarch butterfly, California red-legged frog, steelhead – south-central California coast DPS, Coast Range newt, and tricolored blackbird. An additional twelve wildlife species have a moderate to high potential to occur within the Master Plan Area, including western pond turtle, special-status birds (grasshopper sparrow, burrowing owl, western yellow-billed cuckoo, white-tailed kite, least Bell's vireo, loggerhead shrike, and purple martin) pallid bat, Townsend's big-eared bat, Monterey dusky-footed woodrat, and American badger. Construction activities within occupied habitat for these species, or conversion of undeveloped habitats, under the 2035 Master Plan could result in the loss of their habitat or loss of these special-status fish and wildlife species if they are present. These species could be killed during construction activities or their habitat substantially disturbed such that it impairs the habitat functions required by these special-status wildlife species. The following discusses these potential effects for each special-status wildlife species known or with potential to occur in the main campus.

Monarch Butterfly

Landcover types that may provide suitable wintering habitat for monarch butterfly are the riparian areas, coast live oak woodland, and non-native woodland that contain eucalyptus tree stands. These land cover types are shown in Figure 3.5-1, "Land Cover." Some of the projects proposed under the 2035 Master Plan are sited among or adjacent

to riparian areas and/or non-native woodlands that could provide suitable overwintering habitat for monarch butterflies. These projects include the Faculty and Staff Workforce Housing, Farm Shop, and the Facilities Operations Complex/interim surface parking lot. Overwintering monarch butterflies have not been documented in these project areas and the woodlands are not known monarch overwintering sites. However, the riparian areas and woodlands could support overwintering monarchs in the future and there is a CNDDDB record of overwintering monarch butterflies occurring approximately 630 feet west of the proposed Facilities Operations Complex. This CNDDDB overwintering record has been monitored sporadically since 2003, and the numbers of observed monarch butterflies have fluctuated from 0 to 300. However, when monarch clusters have been observed, they were always within eucalyptus trees present within the Stenner Creek riparian area. Typically, when monarch overwintering takes place, the monarch butterflies may remain in the area from early November to early March, but this is dependent on weather and site conditions. Monarch butterflies were observed within the Faculty and Staff Workforce Housing and Farm Shop on June 26, 2019. If construction activities of these projects require removal of all or parts of eucalyptus trees and woodlands, and monarchs were present during the activities, overwintering monarch butterflies could be affected. Direct adverse impacts could include mortality of overwintering monarch butterflies and construction-generated noise that could cause the overwintering monarchs to abandon the site; indirect adverse impacts could include habitat alteration that makes the site unsuitable. This impact would be **significant**.

Mitigation Measures

Mitigation Measure 3.5-2a: Conduct Surveys for Areas with Significant Potential for Overwintering Monarch Butterfly Sites

1. Cal Poly shall retain a monarch butterfly habitat specialist to conduct surveys in riparian, live oak woodland, and non-native oak woodland habitat and identify areas with significant potential for overwintering monarch butterflies. The monarch butterfly habitat specialist shall provide Cal Poly with a report summarizing the result of the surveys, including a map of areas with significant potential for overwintering monarch butterflies. Cal Poly shall use the report to identify overwintering sites that are within 300 feet of any proposed Master Plan project. If no projects are within 300 feet of identified habitat, no further mitigation is required. If projects are identified within 300 feet, then the following measure shall apply.
2. Preconstruction surveys shall be conducted for potential overwintering monarch butterfly sites within 300 feet of any proposed 2035 Master Plan project construction areas. Surveys for overwintering aggregations of monarch butterflies shall be conducted over the winter season (November 1 to first week of March) before construction activities within 300 feet of the potential butterfly overwintering zone. A minimum of two surveys shall be conducted at least one month (30 days) apart within the monarch butterfly wintering season (November 1 to first week of March). Surveys shall follow survey methods specified by the Xerces Society for Invertebrate Conservation (Xerces 2011). If no overwintering monarch butterflies are found, no further mitigation is required. If overwintering monarch butterflies are found, then the following measures shall be implemented.

Mitigation Measure 3.5-2b: Implement Avoidance of Overwintering Monarch Butterfly and Protection of Active Overwintering Monarch Butterfly Sites

Construction activities in and around butterfly overwintering sites identified pursuant to Mitigation Measure 3.5-2a shall start outside of the overwintering season (overwintering season is typically between November 1 and first week of March), to the greatest extent feasible, to avoid potential impacts on monarch butterfly overwintering habitat. However, when it is not feasible to avoid the overwintering season and construction activities take place during this time, the following measures shall apply.

If an active overwintering site is located, work activities shall be delayed within 300 feet of the site location until avoidance measures have been implemented. Appropriate avoidance measures shall include the following measures (which may be modified as a result of consultation with CDFW to provide equally effective measures):

- a) If the qualified wildlife biologist determines that construction activities would not affect an active overwintering site, activities shall proceed without restriction.

- b) If the wildlife biologist determines there is a potential to affect an active overwintering site, a no-disturbance buffer shall be established around the overwintering site to avoid disturbance or destruction. The extent of the no-disturbance buffers shall be determined by the qualified wildlife biologist familiar and in consultation with CDFW. Buffers shall be maintained until March 7 or until the qualified biologist determines that the monarch butterflies have left the wintering site.
- c) Throughout the year, Cal Poly shall avoid removing or trimming trees utilized by monarch butterflies or documented as active within the last 3 years pursuant to Mitigation Measure 3.5-2a, as well as trees adjacent to the documented active winter roost areas to prevent adverse indirect changes to the humidity, wind exposure, and temperature within the immediate vicinity of the roost site, unless Cal Poly consults with a monarch butterfly habitat specialist to identify appropriate variances to this measure. Any routine tree trimming shall be done between April and October to eliminate the risk of disturbance to overwintering monarch colonies during the core overwintering/clustering period and shall be conducted following the Management Guidelines for Monarch Butterfly Overwintering Habitat (Xerces 2017) and under the supervision of the monarch habitat specialist. This mitigation measure does not apply to removal or trimming of hazard trees or branches or management of the wintering site for the benefit of monarch butterfly.

Significance after Mitigation

Implementation of Mitigation Measure 3.5-2a requires surveys to identify overwintering monarch butterfly sites. Mitigation Measure 3.5-2b requires the avoidance of the overwintering site by delaying construction within 300 feet of the site and consultation with CDFW, and it requires Cal Poly to avoid removing or trimming trees utilized by overwintering monarch butterflies or adjacent to the winter roost unless consultation with a monarch butterfly habitat specialist takes place. By implementing these measures, potential impacts on overwintering monarch butterflies would be reduced to a **less-than-significant** level.

California Red-Legged Frog

Presence and/or potential habitat for California red-legged frog has been identified within the Master Plan Area. One occurrence of California red-legged frog was documented in the Swine Unit wastewater basin in 2011 and the CNDDDB contains occurrences of California red-legged frog within Brizzolara Creek (CNDDDB 2019). California red-legged frogs prefer aquatic habitats with little or no flow, the presence of surface water to at least early June, surface water depths of at least 2 to 3 feet, and the presence of sturdy underwater supports such as cattails. During periods of wet weather, some individuals may make overland excursions through upland habitats. During dry periods, California red-legged frogs are rarely encountered far from water. California red-legged frog may use upland shelter habitat under logs, in small mammal burrows, or in soil cracks, provided ample moisture is available in the shelter area (USFWS 2002).

Shepard Reservoir contains water most of the year; therefore, it provides suitable breeding aquatic habitat and its drainage provides suitable upland shelter habitat for California red-legged frog. Smith Reservoir has been dry for the last several years and is typically dry most of the year during normal rainfall years; as such, it provides suitable non-breeding aquatic habitat. Neither of these reservoirs are known to support California red-legged frogs. The Swine Unit ponds are located approximately 1,400 feet northwest of Shepard Reservoir, which is within the dispersal distance for California red-legged frog.

Brizzolara Creek, the drainages, Smith Reservoir, the Swine Unit ponds, and the detention ponds at the Union Pacific Railroad are ephemeral and can be dry during normal rainfall years. In addition, there is an abundance of bull frogs (*Lithobates catesbeianus*), which prey on California red-legged frog, in the reservoirs. Due to the ephemeral nature of the water features and the presence of bull frogs, it is unlikely that California red-legged frog would breed in these features. However, considering the Cal Poly staff's documented observation of California red-legged frog at the Swine Unit wastewater retention ponds and the presence of year-round water in Shepard Reservoir, the presence of this species in the reservoirs and the drainages when water is present cannot be ruled out. The upland pastures surrounding the reservoirs and drainages are heavily used for horses and other livestock and do not support suitable upland shelter refugia (dense vegetation, moist soils, or debris that maintain moist conditions). Therefore, California red-legged frog and other amphibians are not expected to utilize the upland pastures for shelter during the dry

season. If California red-legged frogs were present in the area during the dry season, they would remain in the wetted or moist portions of the reservoir(s) and drainages.

Construction of the proposed sports field between Shepard and Smith Reservoirs, the California Boulevard extension, and the Village Drive extension shall require grading and construction activities in the upland areas adjacent to the reservoirs and adjacent to or in Brizzolara Creek. Similarly, any proposed Brizzolara Creek trail improvements, or repairs would occur within the riparian area, a known occurrence area for California red-legged frog.

The proposed University-Based Retirement Community supports an unnamed ephemeral drainage that is a tributary to Old Garden Creek. This drainage is fed by runoff from the residential area and does not support suitable aquatic breeding habitat for California red-legged frog.

The proposed Faculty and Staff Workforce Housing site supports pastureland and two ephemeral drainages with dense non-native riparian woodland vegetation. The ephemeral drainage features within the Faculty and Staff Workforce Housing area provide poor quality habitat for California red-legged frog breeding and foraging due to the steep banks and lack of perennial flows, deep pool habitat, and overhanging riparian vegetation and protective cover (Dugas, pers. comm., 2017). There are limited opportunities for upstream California red-legged frog dispersal within the drainages and the pasture (upland) areas may provide marginally suitable dispersal habitat for California red-legged frog, with increased potential during favorable conditions (i.e., wet conditions). Though a majority of the habitat is considered poor quality for California red-legged frog breeding and foraging, there is low potential for upland dispersal of California red-legged frog through the Faculty and Staff Workforce Housing project area, particularly during wet conditions (Dugas, pers. comm., 2017).

The Agricultural Facility Redevelopment at the existing rodeo area supports two wastewater detention ponds that support California red-legged frog non-breeding aquatic habitat. These wastewater ponds occasionally contain water into the late spring and early summer months; therefore, the wastewater ponds may provide summer (dry season) shelter habitat for California red-legged frog.

Development of the WRF may require crossing campus drainages and creeks, expanding existing reservoirs, and/or creating new reservoirs in habitats that have the potential to support California red-legged frog. The perennial reservoirs that could be expanded provide suitable California red-legged frog breeding and summer shelter habitat. Some of the campus ephemeral drainages may support suitable summer habitat during years of average or greater precipitation. If the perennial aquatic sites were dewatered and California red-legged frog were present during the dewatering, the individuals could be exposed and subject to predation and death.

Two of the proposed water reclamation ponds occur within a seasonal drainage that provides suitable non-breeding habitat and may provide suitable dispersal habitat for California red-legged frog. The irrigated pasture where these two proposed water reclamation ponds would be located provide low quality upland habitat for the frog since without irrigation the area would be dry and would not provide suitable moist refugia habitat.

The Farm Shop Storage Building Project site has been subject to site-specific studies to determine the presence or absence of California red-legged frogs. In support of this project, the Federal Emergency Management Agency (FEMA) had eight protocol surveys conducted within a 1-mile radius of the existing Farm Shop (West Campus subarea). No California red-legged frogs were observed during the FEMA surveys (FEMA 2007).

If initial grading of these projects occurred in the wet season and if California red-legged frog were occupying the reservoir(s), drainages, or creek, the individuals could disperse through the construction areas. If this dispersal were to occur when construction was underway, the individual(s) could be crushed or otherwise adversely affected by the construction equipment.

Alternatively, expansion of existing reservoirs or the creation of new reservoirs would increase the quantity of aquatic habitat that could be suitable for California red-legged frog use. Increasing aquatic California red-legged frog aquatic habitat on the campus could be a beneficial impact.

Because the reservoirs on the main campus have been determined to be waters of the United States, Cal Poly would need to coordinate with USACE to modify the reservoirs, potentially creating a federal nexus for the project. If a federal nexus is available through USACE CWA permitting, USACE may consult with USFWS via Section 7 of the ESA to obtain a Biological Opinion and Incidental Take Statement (ITS) for the WRF project. If a federal nexus is not available, Cal Poly may consult directly with USFWS under Section 10 of the ESA, to obtain an Incidental Take Permit (ITP). Section 10 consultation may require Cal Poly to prepare and implement an HCP.

Implementation of projects proposed under the 2035 Master Plan could result in removal or modification of habitat that could substantially affect California red-legged frog. This impact would be **potentially significant**.

Mitigation Measures

Mitigation Measure 3.5-2c: Prepare Project-Specific California Red-Legged Frog Habitat Assessments

Future development that would directly affect reservoirs, ponds, or drainages or that would result in land disturbance within 1.6 kilometers of these features shall be subject to project-specific California Red-legged Frog Habitat Assessments. The assessments shall be prepared in coordination with, and submitted for review by, USFWS. The California red-legged frog habitat assessments shall be prepared and processed in accordance with the USFWS Revised Guidance on Site Assessments and Field Surveys for the California Red-Legged Frog (USFWS 2005), or the most recent applicable guidance. The assessments shall specifically evaluate the reservoirs, ponds, and drainages and their upland areas that may be disturbed by Master Plan Area projects and be submitted to USFWS for review/approval. Alternatively, Cal Poly can conduct a campus-wide habitat assessment to identify California red-legged frog aquatic and upland habitat. If prepared, the campus-wide assessment shall also be submitted to USFWS for review/approval and can be used to screen out projects that do not require consultation within the Master Plan Area.

Mitigation Measure 3.5-2d: Conduct California Red-Legged Frog Consultation

For 2035 Master Plan projects that would affect jurisdictional water features and would also affect California red-legged frog and/or California red-legged frog Critical Habitat as determined from Mitigation Measure 3.5-2c, Cal Poly shall coordinate with USACE during the CWA Section 404 permitting process to consult with USFWS regarding the potential for these activities to result in take of California red-legged frog and/or California red-legged frog critical habitat. If USACE in consultation with USFWS determines that the proposed projects may affect or result in take of California red-legged frog, USFWS may issue a Biological Opinion with an Incidental Take Statement for the project. Cal Poly shall comply with all measures included in the Biological Opinion, which may include compensatory mitigation for permanent and/or temporary loss of habitat, construction monitoring, salvaging of California red-legged frog, and installation of exclusion fencing between the project site and adjacent habitats.

If USACE declines to take jurisdiction over the project, thus removing a federal nexus from the project, Cal Poly shall consult directly with the USFWS pursuant to Section 10 of the ESA. If USFWS determines that the project may affect or result in take of California red-legged frog or detrimental modification of critical habitat, it may ask Cal Poly to prepare an HCP and obtain an ITP. Cal Poly shall comply with all measures included in the ITP.

A permitting strategy (i.e., programmatic versus individual project consultations) shall be determined between Cal Poly and USFWS as Cal Poly commences implementation of the 2035 Master Plan.

Mitigation Measure 3.5-2e: Avoid California Red-Legged Frog during the Wet Season

To avoid the potential for take of California red-legged frogs, unless otherwise authorized by the Biological Opinion and/or Incidental Take Permit per Mitigation Measure 3.5-2.d, the initial ground-disturbing activities associated with 2035 Master Plan projects that would affect California red-legged frog and/or California red-legged frog Critical Habitat as determined from Mitigation Measure 3.5-2c shall be completed in the dry season (between June 1 and the first fall rains). Regardless of the seasonal rain patterns, no ground-disturbing activities may occur on these sites between first fall rains and May 31 of any year without prior authorization or concurrence from USFWS and CDFW.

Mitigation Measure 3.5-2f: Conduct Preconstruction Surveys for California Red-Legged Frog

Prior to construction of future Master Plan development projects that would affect California red-legged frog and/or California red-legged frog Critical Habitat as determined from Mitigation Measure 3.5-2c, Cal Poly shall retain a qualified biologist with demonstrated experience surveying for California red-legged frog. The biologist shall conduct preconstruction surveys for California red-legged frog. The survey(s) must be conducted within 48 hours before the site disturbance and encompass the entire project disturbance area and a 100-foot buffer of the disturbance area(s).

If California red-legged frog(s) are observed during the survey, the biologist shall immediately contact Cal Poly and inform them of the survey findings. Cal Poly shall delay the project activities that were planned to occur in the area until Cal Poly consults with USFWS and secures any necessary approvals, including a Biological Opinion or an Incidental Take Permit (if not already secured) as may be applicable, to move forward with the Master Plan project. In absence of USFWS approval, the surveying biologist shall not capture, handle, or otherwise harass California red-legged frog. Cal Poly and its contractors shall comply with all measures within any Biological Opinion or Incidental Take Permit.

Mitigation Measure 3.5-2g: Implement Waterway Protection Measures

Prior to construction of future development that would directly affect reservoirs, ponds, or drainages or that would result in land disturbance within California red-legged frog habitat as defined by Mitigation Measure 3.5-2c, implement Mitigation Measures 3.5-3a through 3.5-3d, described below.

Mitigation Measure 3.5-2h: Conduct Environmental Monitoring

During construction of future development that would directly affect reservoirs, ponds, or drainages or that would result in land disturbance within California red-legged frog critical habitat as defined by Mitigation Measure 3.5-2c, implement Mitigation Measure 3.5-1d, described above.

Mitigation Measure 3.5-2i: Prepare Trail Management Plan

Prior to improvements that would directly affect drainages or riparian habitat or that would result in land disturbance within California red-legged frog habitat as defined by Mitigation Measure 3.5-2c, implement Mitigation Measure 3.5-1e, described above.

Significance after Mitigation

With implementation of Mitigation Measure 3.5-2c, which requires California red-legged frog habitat assessment, Mitigation Measure 3.5-2d, which requires consultation with resource agencies, Mitigation Measure 3.5-2e, which requires avoiding the California red-legged frog wet season, Mitigation Measure 3.5-2f, which requires pre-construction surveys before project implementation, Mitigation Measure 3.5-2g, which requires the implementation of waterway protection measures, Mitigation Measure 3.5-2h, which requires environmental monitoring, and Mitigation Measure 3.5-2i, which identifies development of the Trail Management Plan to identify and protect natural resources, potential impacts on California red-legged frog and California red-legged frog critical habitat would be avoided or reduced to **less than significant**.

Steelhead

Steelhead can occur in the Master Plan Area throughout the Brizzolara Creek and Stenner Creek channels. The South-central California Coast Steelhead DPS occurs within both Brizzolara Creek and Stenner Creek. These two streams are also designated critical habitat for the species.

Brizzolara Creek currently includes seven crossings, and the 2035 Master Plan proposes one additional crossing and improvements to others. The existing crossing at East Creek Road and Highland Drive would likely require substantial improvements to implement the 2035 Master Plan goal of extending California Boulevard into the North Campus subarea. The East Creek Road crossing currently has a fish ladder to facilitate aquatic species movement into the upper reaches of Brizzolara Creek. The proposed new crossing would be for pedestrians and bicycles and would be located just upstream of the East Creek Road crossing at California Boulevard and Highland Drive.

Installation of these structures has the potential to adversely affect steelhead and steelhead critical habitat. Adverse effects can occur both during construction and operation. If construction is undertaken while water is present, it would require dewatering and potential capture and relocation of individual steelhead. The loss of aquatic habitat would be confined to discrete sections of the creek and would be temporary because the affected workspace would be re-watered upon project completion. If steelhead are present, they would need to be captured and relocated, which could harm the individual(s) or make them susceptible to depredation. Because the creek is ephemeral and frequently dry, these potential impacts can be avoided by constructing the crossing(s) when the creek is dry.

Constructing the crossings while the creek is dry minimizes but does not avoid all impacts. Work in the creek bed could temporarily deplete the aquatic insect population in the area resulting in reduced feeding opportunities for steelhead when water returns to the site. Installation of the crossings could result in the loss of streamside vegetation which is important for microclimate stabilization. Construction work in the creek could alter water quality by temporarily increasing the potential for sedimentation and turbidity when water returns to the site after construction. High turbidity can affect aquatic habitats downstream of the project area. After construction, the channel morphology may be different than before construction causing changes in hydraulic conditions. These changes could create barriers to steelhead passage. The crossing(s) must be designed so as to avoid adverse effects to steelhead and steelhead critical habitat.

Development of the new WRF would require installation of new or modified underground wastewater conveyance infrastructure, including pipelines and pump stations throughout the main campus. The exact locations of these facilities have not been determined. It is possible that project design would require infrastructure to cross Stenner and Brizzolara Creeks. Trenching activities could result in sediment loading, vegetation removal, and modification of the local topography in the affected area. Placement of fill or sediment in the waterways can cause increased turbidity at and downstream from the crossing. Removal of vegetation from the waterways can result in a change in microclimate and erosion at the crossing location. In addition, if trenching were to occur during periods of flow, the work area would need to be dewatered prior to trenching. If steelhead were present during the dewatering process, the individuals would be subject to stranding and thus would need to be captured and relocated outside of the work area. Capture and relocation of steelhead can injure individual(s) and would be considered take of the species.

Development of the WRF includes expanding the campus's existing reservoir system and/or creating new reservoirs to provide approximately an additional 100 acre-feet of storage. The reservoir system may include impoundments of natural waterways tributary to Stenner Creek and Brizzolara Creek. Expanding storage capacity of the reservoir system could reduce the surface water available for the steelhead habitat in Stenner and Brizzolara Creeks.

Construction activities such as demolition of existing structures, new construction, or expansion of existing features within the creeks, riparian corridors, or adjacent to the riparian corridors under the 2035 Master Plan could result in degradation or loss of these habitats and reduction of steelhead survival. This impact would be **significant**.

Mitigation Measures

Mitigation Measure 3.5-2j: Conduct Steelhead Impact Avoidance

As part of future design and planning of 2035 Master Plan projects that require work in Stenner Creek or Brizzolara Creek, their tributaries, or their riparian areas, all such work shall be conducted between June 15 and October 15 or as approved by a qualified biologist in coordination as required with USACE, NMFS, and CDFW.

Mitigation Measure 3.5-2k: Conduct Steelhead Consultation

Prior to implementation of 2035 Master Plan projects that require work in Stenner Creek, Brizzolara Creek, their tributaries, or riparian areas, Cal Poly shall coordinate with CDFW through the 1602 permitting process, and with USACE during the CWA Section 404 permitting to consult with NMFS regarding the potential for the project to result in take of steelhead and/or steelhead critical habitat. If USACE, in consultation with NMFS, determines that the project may affect or result in take of steelhead or result in the detrimental modification of critical habitat, NMFS may issue a Biological Opinion with an Incidental Take Statement for the project. Cal Poly shall comply with all measures included in the Biological Opinion, which may include restoration, habitat compensation to ensure no net loss of habitat, and monitoring. Cal Poly shall reference and include the *Guidelines for Salmonid Passage at Stream Crossings* (NMFS 2001),

or as updated by NMFS, in all future bridge/crossing designs over Stenner Creek and Brizzolara Creek. Any new crossings shall not create new barriers to fish passage into the upper reaches of the creeks.

If USACE declines to take jurisdiction over the project, thus removing a federal nexus from the project, Cal Poly shall consult directly with NMFS pursuant to Section 10 of the ESA. If NMFS determines that the project may affect or result in take of steelhead or detrimental modification of critical habitat, it may ask Cal Poly to prepare an HCP and obtain an ITP. Cal Poly shall comply with all measures included in the ITP.

Mitigation Measure 3.5-2l: Protect Steelhead Habitat through Implementation of Waterway Protection Measures

Prior to implementation of 2035 Master Plan projects that require work in Stenner Creek, Brizzolara Creek, their tributaries, or riparian areas, implement Mitigation Measure 3.5-3a through 3.5-3d, described below. Because mitigation for degradation or loss of riparian habitat and other sensitive natural communities would also minimize potential impacts on steelhead, those measures are recommended for this impact.

Mitigation Measure 3.5-2m: Conduct Environmental Monitoring

During implementation of 2035 Master Plan projects that require work in Stenner Creek, Brizzolara Creek, their tributaries, or riparian areas, implement Mitigation Measure 3.5-1d, described above.

Mitigation Measure 3.5-2n: Prepare Trail Management Plan

Prior to improvements that would directly affect Stenner Creek, Brizzolara Creek, their tributaries, or riparian areas or that would result in disturbance to steelhead habitat, Implement Mitigation Measure 3.5-1e, described above.

Significance after Mitigation

Implementation of Mitigation Measure 3.5-2j, which requires steelhead impact avoidance by allowing construction activities occur only during the dry season when water is absent from the creeks and their tributaries, Mitigation Measure 3.5-2k, which requires consultation with CDFW and NMFS, Mitigation Measure 3.5-2l, which requires implementation of water-quality protection measures to prevent construction activities from generating silt discharge into the creeks or their tributaries, Mitigation Measure 3.5-2m, which requires environmental monitoring for steelhead for projects that require work in creeks, tributaries, or their riparian areas, and Mitigation Measure 3.5-2n, which identifies the preparation of the Trail Management Plan to identify and protect natural resources within the trail system, would reduce impacts on steelhead to a **less-than-significant** level.

Ringtail

Ringtail is nocturnal and arboreal and therefore is rarely seen by people. Favored habitat consist of areas with many rock outcroppings or cliffs and large trees in riparian habitat that have cavities. Ringtails are adept climbers and avoid moving through open grasslands, where they would have difficulty escaping predators. During the day, ringtails sleep in dens such as tree hollows, rock crevices, and abandoned burrows created by other animals. A single ringtail will use several dens and move between them regularly.

Old trees within the Faculty and Staff Workforce Housing site and trees within the riparian habitat provide suitable denning habitat for this species. If ringtails use any of these areas for denning, construction activities could result in direct and indirect effects on the species. Direct effects could include physically crushing individuals and/or entrapping individuals in trenches or other excavations. Indirect impacts may include displacing individuals from their dens and leaving them vulnerable to predation or exposure. Because ringtails maintain multiple dens, the loss of a single den site may be a negligible impact. However, the loss of a natal or maternity den or mortality of a ringtail would be a **significant** impact.

Mitigation Measures

Mitigation Measure 3.5-2o: Conduct Ringtail Den(s) Surveys, and Avoidance

If vegetation removal or construction activities within riparian habitat occur outside of the breeding and pupping season for ringtail (February 1 through June 15), no mitigation is necessary. If the ringtail breeding season cannot be

avoided, Cal Poly shall retain a qualified biologist to conduct pre-construction surveys within 3 weeks prior to commencement of construction for potential natal or maternity den trees/rock crevices. If an active den is found, the qualified biologist, in consultation with CDFW, shall determine a construction-free buffer zone to be established around the den until the young have left the den. At a minimum, the buffer shall be 500 feet unless a reduced buffer is warranted as determined by a qualified biologist in consultation with CDFW. Because ringtails are known to move their offspring between dens, the biologist may maintain the den under surveillance with a trail camera in a way that does not affect the use of the den. If the biologist determines that ringtails have vacated the den during the surveillance period, then construction may begin within 7 days following this observation, but the den must remain under surveillance in the event that the mother has moved the litter back to the den. If the den is within a tree hollow, and the tree needs to be removed, the hollow section of the tree must be salvaged and secured to a nearby unaffected tree in order to maintain the number of dens in the area.

Mitigation Measure 3.5-2p: Conduct Environmental Monitoring

During implementation of 2035 Master Plan projects that require work in riparian corridors where ringtail occupied habitat has been identified, implement Mitigation Measure 3.5-1d, described above.

Significance after Mitigation

Mitigation Measures 3.5-2o and 3.5-2p require surveys to identify ringtail dens, buffers and maternity season avoidance around construction/disturbance areas and environmental monitoring to ensure that mitigation measures are implemented. Implementation of these measures would avoid or minimize adverse effects such that impacts on ringtail would be reduced to a **less-than-significant** level.

Monterey Dusky-Footed Woodrat

Riparian corridors, California sagebrush scrub, coast live oak woodland, and non-native woodland habitat, as shown in Figure 3.5-1, "Land Cover," provide suitable habitat for Monterey dusky-footed woodrat. Several woodrat (*Neotoma* sp.) houses (middens) were observed in the understory of the ornamental plantings lining the ephemeral drainages during surveys of the Faculty and Staff Workforce Housing site (Dugas, pers. comm., 2017). Woodrats cannot be identified to the subspecies level without trapping. Therefore, observed middens on the Workforce Housing project site and in riparian habitat in the main campus have potential to be occupied by the special-status Monterey dusky-footed woodrat or common dusky-footed woodrat (Dugas, pers. comm., 2017).

Construction activities could result in direct and indirect effects to Monterey dusky-footed woodrats. Direct effects could include physically crushing individuals and/or entrapping individuals in trenches or other excavations. Indirect impacts could include displacing individuals from their middens and leaving them vulnerable to predation or exposure. Demolition of existing structures, grading, and construction of new workforce housing facilities could destroy middens or remove midden material from these areas. In addition, woodrat middens are sometimes used as refugia by other special-status wildlife such as Coast Range newts, and California red-legged frogs. Direct loss of dusky-footed woodrats from construction activity and indirect effects to the species through habitat loss would be a significant impact.

Mitigation Measures

Mitigation Measure 3.5-2q: Conduct Monterey Dusky-Footed Woodrat Midden Surveys, Avoidance, or Relocation

Prior to implementation of 2035 Master Plan projects that require work in riparian corridors, California sagebrush scrub, coast live oak woodland, and non-native woodland habitat, Cal Poly shall retain a qualified biologist to survey for Monterey dusky-footed woodrat middens and assist in the removal/relocation of woodrat middens no more than 2 weeks prior to start of ground disturbance activities. The biologist shall document the results of the survey(s) in a letter report to Cal Poly and CDFW that includes a map of observed middens. If dusky-footed woodrat middens are found on a particular project site and are located outside of the permanent footprint of any proposed structure/site features and can be avoided, Cal Poly shall establish and maintain a 40-foot protective buffer, unless a reduced buffer is warranted as determined by a qualified biologist in consultation with CDFW, ensuring that the buffer does not isolate the midden from available habitat. If middens can be avoided no further mitigation is required.

If middens cannot be avoided, relocation shall be conducted in consultation with CDFW. Relocation of the middens shall occur after July 1 and before December 1 to avoid the maternity season. During implementation of site clearing activities and under supervision of the biologist, the equipment operators shall remove all vegetation and other potential woodrat shelter within the disturbance areas that surround the woodrat midden(s) to be removed. Upon completion of clearing the adjacent woodrat shelter, the operator shall gently nudge the intact woodrat midden with equipment or long handled tools. Due to the potential health hazards associated with removing woodrat middens, hand removal is not recommended. The operators shall place their equipment within the previously cleared area and not within the undisturbed woodrat shelter area. The objective is to alarm the woodrats so that they evacuate the midden and scatter away from the equipment and into the undisturbed vegetation. Once the woodrats have evacuated the midden(s), the operator shall gently pick up the midden structure and move it to the undisturbed adjacent vegetation. The objective of moving the structure is to provide the displaced woodrats with a stockpile of material to scavenge while they build a new midden; jeopardizing the integrity of the midden structure is not an adverse impact.

Mitigation Measure 3.5-2r: Conduct Environmental Monitoring

During construction of future development that requires work in or around active Monterey dusky-footed woodrat middens, implement Mitigation Measure 3.5-1d, described above.

Significance after Mitigation

Mitigation Measures 3.5-2q and 3.5-2r require surveys to identify woodrat middens, buffers and maternity season avoidance around middens outside areas of direct effects, clearing and relocation of middens away from construction/disturbance areas for those middens that cannot be avoided, and environmental monitoring to ensure mitigation measures are implemented. Implementation of these measures would avoid, minimize, and compensate for adverse effects such that impacts on Monterey dusky-footed woodrat would be reduced to a **less-than-significant** level.

American Badger

Non-native annual grassland, as shown in Figure 3.5-1, "Land Cover," provides suitable habitat for American badger. The proposed University-Based Retirement Community site and the proposed WRF site (including proposed water storage ponds) are within or have components in areas that may provide suitable habitat for American badger. Construction activities such as demolition of existing structures, grading, and new construction could result in the entombment, injury, or mortality of American badgers if they were to be present. This impact would be **significant**.

Mitigation Measures

Mitigation Measure 3.5-2s: Conduct American Badger Surveys and Avoidance

For projects within undeveloped grassland habitat and before ground-disturbing activities, a qualified biologist shall conduct a preconstruction survey for American badger dens. The American badger survey shall be conducted no more than 2 weeks prior to construction. If the survey results are negative (i.e., no active badger dens observed), no additional mitigation is required. If the results are positive (American badger dens are observed), the biologist shall contact Cal Poly within 24 hours and work in the area shall be delayed until Cal Poly's biologist has made one of the following determinations:

- a) If the biologist determines that dens may be active, the biologist shall install a game camera for 3 days and 3 nights to determine if the den is in use. If the biologist determines that the den is a maternity den, construction activities shall be delayed during the maternity season (February to August), or until the badgers leave the den on their own accord or the biologist determines that the den is no longer in use. If the game camera does not capture an individual entering/exiting the den, the den can be excavated as described below. If the camera captures badger use of the den, the biologist shall install a one-way door in the den opening and continue use of the game camera. Once the camera captures the individual exiting the one-way door, the den can be excavated as described below.
- b) If the biologist determines that potential dens are inactive, the biologist shall excavate the dens with hand tools to prevent badgers from reusing them.

Significance after Mitigation

Mitigation Measure 3.5-2s requires surveys for American badger to identify active burrows, buffers around active burrows, avoidance of maternity season, and excavation of inactive burrows to prevent reuse within construction areas. Implementation of these measures would avoid, minimize, and compensate for adverse effects such that impacts on American badger would be reduced to a **less-than-significant** level.

Western Pond Turtle and Coast Range Newt

Western pond turtles inhabit quiet waters of ponds, small lakes, streams, and marshes, and require basking sites, such as partially submerged logs, rocks, mats of floating vegetation, or open mud banks. Coast Range newts typically occur in ponds, reservoirs, and slow-moving streams. Western pond turtle and Coast Range newt are known to occupy a variety of aquatic habitats in and adjacent to the Master Plan Area, including Brizzolara Creek, Miozzi Creek, Camp San Luis Obispo, Dairy Creek, and Stenner Creek. The Master Plan Area reservoirs also support suitable habitat for these species. Expansion of the reservoirs would likely require dewatering of the aquatic sites, which could adversely affect these species. The pasture and non-native grassland areas with a southern sun exposure also provide suitable nesting habitat for western pond turtle. Adverse impacts from development projects under the 2035 Master Plan could include disturbance by project personnel; stranding during dewatering; and trampling or crushing of individuals, egg masses, or nests by equipment. This impact would be **significant**.

Mitigation Measures

Mitigation Measure 3.5-2t: Conduct Western Pond Turtle and Coast Range Newt Surveys and Relocation

To minimize adverse effects on western pond turtle and Coast Range newt during any projects that requires dewatering, dredging, fill of an aquatic site (e.g., a reservoir, pond, settling pond, or drainage), or the grading (during construction of new facilities) of inactive pasturelands or non-native grassland with a southern sun exposure within 500 feet of any of these aquatic habitats, Cal Poly shall retain a qualified biologist to survey for western pond turtle and Coast Range newt within 2 weeks of project activities. If no western pond turtle, Coast Range newt, or their eggs or nests are observed, no further mitigation is required. If western pond turtle, Coast Range newt, their eggs or nests are found then the following shall be conducted:

- a) Cal Poly shall retain a qualified biologist to capture and relocate western pond turtle and Coast Range newt adults and juveniles. Capture and relocation efforts must be conducted using visual survey and hand capture techniques. Any captured western pond turtles and Coast Range newts must be relocated to a nearby aquatic site that shall not be affected by project activities.
- b) If newt egg masses and/or larvae, or western pond turtle nests are identified, construction shall be delayed until the eggs have hatched and individuals are capable of vacating the site or being relocated. Because of the delicate nature of newt egg masses/larvae and habitat requirements of western pond turtle nests, delaying construction is the only viable method to protect the resource.

Significance after Mitigation

Mitigation Measure 3.5-2t requires surveys for western pond turtle and Coast Range newt to identify occupied aquatic and upland habitat, avoiding eggs and nests of these species by delaying construction, and relocating individuals outside of the work areas. Implementation of these measures would avoid, minimize, and compensate for adverse effects such that impacts on western pond turtles and Coast Range newt would be reduced to a **less-than-significant** level.

Special-Status Birds

Construction activities associated with implementation of the 2035 Master Plan, such as demolition of existing structures, new construction, grading, vegetation removal, ground disturbance, use of construction vehicles, and general presence of active construction crews, could disturb nesting special-status birds including tricolored blackbird, grasshopper sparrow, burrowing owl, western yellow-billed cuckoo, white-tailed kite, least Bell's vireo, loggerhead shrike, and purple martin, potentially resulting in nest abandonment or failure, and mortality of chicks

and eggs. The following discusses these potential effects for each special-status bird species known or with potential to occur in the main campus.

Tricolored Blackbird

Potentially suitable nesting habitat for tricolored blackbird is present within the riparian vegetation along the Master Plan Area reservoirs and creeks, and suitable foraging habitat is present within the grassland habitat. The nearest recorded nesting colony is approximately 1.7 miles north of the main campus (CNDDDB 2019). During the June 26, 2019 field survey, a small flock of tricolored blackbirds was observed foraging in the fields where two of the proposed WRF water storage ponds would be located. Proposed conversion of agricultural fields and ruderal grasslands to urban uses could result in loss of suitable breeding and foraging habitat for this species. While suitable foraging habitat may be lost through conversion, the loss would not be substantial because the habitat planned for conversion is marginal and sparse and the loss would not substantially diminish the quality of other foraging habitat within and adjacent to the Master Plan Area. Tricolored blackbirds are threatened by direct loss of colonies from harvesting of grain fields before chicks have fledged. Therefore, loss of tricolored blackbird breeding colonies or breeding habitat could result from the project and would be a **significant** impact.

Burrowing Owl, Grasshopper Sparrow, and Loggerhead Shrike

Suitable nesting habitat for burrowing owl, grasshopper sparrow, and loggerhead shrike is present within non-native annual grassland, agricultural land, and pastureland as shown in Figure 3.5-1, "Land Cover," in the main campus. Proposed conversion of agricultural fields and grasslands to urban uses could result in loss of suitable breeding and foraging habitat for these species. While suitable foraging habitat may be lost through conversion, the loss would not be substantial because the habitat planned for conversion is marginal and sparse and the loss would not substantially diminish the quality of other foraging habitat within and adjacent to the Master Plan Area. Loss of active nests or breeding habitat for these species, however, could occur with site preparation and project construction and would be a **significant** impact.

Western Yellow-Billed Cuckoo, White-Tailed Kite, Least Bell's Vireo, and Purple Martin

Potentially suitable nesting habitat for these species is present in mature trees (yellow-billed cuckoo, white-tailed kite, purple martin), large shrubs with horizontal branches or vertical forks to support a nest structure (yellow-billed cuckoo), and patches of dense shrub vegetation (least Bell's vireo) within riparian corridors. In addition to riparian corridors, mature/large trees in non-native woodland and large ornamental/landscaping trees in developed areas may also support nesting white-tailed kite and purple martin. Purple martin additionally uses buildings, bridges, and other structures that provide cavities for nesting. All proposed 2035 Master Plan projects that involve removal or disturbance of these potentially suitable nesting habitats (including demolition of structures that could support nesting purple martins) during the nesting season (typically February 1 through September 15) have the potential to disturb nesting birds. Direct impacts on nesting birds may include physical removal of active nests resulting in the destruction of the nest, eggs, and/or chicks. Indirect impacts could result from noise disturbance that may prompt an adult bird to abandon the nest. This impact would be **significant**.

Mitigation Measures

Mitigation Measure 3.5-2u: Conduct Special-Status Bird and Other Bird Nest Avoidance

For any project-specific construction activities under the 2035 Master Plan, the following measures shall be implemented to avoid or minimize loss of active special-status bird nests including tricolored blackbird, grasshopper sparrow, burrowing owl, western yellow-billed cuckoo, white-tailed kite, least Bell's vireo, loggerhead shrike, and purple martin:

- a) To minimize the potential for loss of special-status or other bird nests, vegetation removal activities within potentially suitable nesting habitat shall commence during the nonbreeding season (September 16 - January 31), where feasible.
- b) If project construction activities, including ground-disturbing activities, vegetation trimming, or tree removal are scheduled to occur between February 1 and September 15, the following measures shall be implemented:

- i. For project sites on or within 500 feet of agricultural land, pasture, non-native annual grassland, or riparian habitat as shown in Figure 3.5-1, "Land Cover," and ornamental/landscaping trees in developed habitat, Cal Poly shall retain a qualified biologist to conduct habitat assessment surveys for tricolored blackbird, grasshopper sparrow, burrowing owl, western yellow-billed cuckoo, white-tailed kite, least Bell's vireo, loggerhead shrike, and purple martin. If no suitable habitat is present within 500 feet of the project site, no further action is required.
- ii. Where suitable habitat is present, surveys shall be conducted by biologists adhering to guidance offered in Western Yellow-billed Cuckoo Natural History Summary and Survey Methodology (Haltermann et al. 2015); Least Bell's Vireo Survey Guidelines (USFWS 2001); CDFW Staff Report on Burrowing Owl Mitigation (CDFW 21012) and/or current industry standards. Cal Poly shall initiate consultation with USFWS and/or CDFW as required and shall mitigate for the loss of breeding and foraging habitat as determined by consultation.
- iii. Two weeks prior to construction, a pre-construction nesting bird survey shall be conducted within suitable habitat identified in Mitigation Measure 3.5-2u(b)(i). If nests of these species are detected, a qualified biologist shall establish no-disturbance buffers around nests. Buffers shall be of sufficient width that breeding is not likely to be disrupted or adversely affected by construction. No-disturbance buffers around active nests shall be a minimum of 0.25 mile wide for white-tailed kite, 500 feet wide for other raptors, and 250 feet wide for other special-status birds, unless a qualified biologist determines based on site-specific conditions that a larger or smaller buffer would be sufficient to avoid impacts on nesting birds. Factors to be considered in determining buffer size shall include the presence of existing buffers provided by vegetation, topography, or existing buildings/structures; nest height; locations of foraging territory; and baseline levels of noise and human activity. Buffers shall be maintained until a qualified biologist has determined that young have fledged and are no longer reliant upon the nest or parental care for survival. Monitoring of the nest by a qualified biologist during and after construction activities shall be required if the activity has potential to adversely affect the nest.
- iv. For tricolored blackbird, the qualified biologist shall conduct preconstruction surveys within tules, cattails, Himalayan blackberry, and riparian scrub habitat areas. The surveys shall be conducted no more than 14 days before construction commences. If no active nests or tricolored blackbird colonies are found during focused surveys, no further action under this measure shall be required. If active nests are located during the preconstruction surveys, the biologist shall notify CDFW. If necessary, modifications to the project design to avoid removal of occupied habitat while still achieving project objectives shall be evaluated and implemented to the extent feasible. If avoidance is not feasible or conflicts with project objectives, construction shall be prohibited within a minimum of 100 feet of the outer edge of the nesting colony, unless a qualified biologist determines based on site-specific conditions that a larger or smaller buffer would be sufficient, to avoid disturbance until the nest colony is no longer active.

Mitigation Measure 3.5-2v: Conduct Environmental Monitoring

During construction of future development within the active nesting season where nesting birds have been found and a no-disturbance buffer is established, implement Mitigation Measure 3.5-1d, described above.

Significance after Mitigation

Mitigation Measure 3.5-2u requires that construction-related vegetation removal occur during the nonbreeding season. If that is not possible, the measure calls for habitat assessment, consultation with resource agencies if suitable breeding habitat is identified, and mitigation for loss or disturbance of that habitat. The measure requires surveys for special-status birds, establishment of buffers around nest sites to avoid disturbance, and maintenance of buffers until young have fledged and the nests are no longer active. Mitigation Measure 3.5-2v requires monitoring to ensure the mitigation is carried out and nests are protected. Implementation of this measure would avoid, minimize, and compensate for adverse effects such that impacts on special-status birds would be reduced to a **less-than-significant** level.

Bats

Low-use agricultural structures and livestock shelters in the BCEC, rodeo facility, and Farm Shop have the potential to support roosting bat species, including pallid bat. Pallid bats use a variety of habitats to roost, including caves, crevices, mines, hollow trees, and farm buildings. Potentially suitable roosting habitat such as large trees and buildings are present within the Master Plan Area. Bats may roost in trees and structures during the daylight hours. Tree and structure removal could result in the loss of pallid bat roosts and individuals. This impact would be **significant**.

Mitigation Measures

Mitigation Measure 3.5-2w: Implement Bat Preconstruction Surveys and Exclusion

Before commencing construction activities with the potential to affect bats, including land surveying with a Global Positioning System (GPS) Total Station and removal of farm structures and trees with hollows or exfoliating bark suitable for bats, a qualified biologist shall conduct surveys for roosting bats 2 weeks prior to start of construction activities. GPS Total Stations used for land surveying emit high frequency noise outside of the human hearing frequency but within the hearing range of bats, which has resulted in colony abandonment. If evidence of bat use is observed, the species and number of bats using the roost shall be determined. Bat detectors may be used to supplement survey efforts. If no evidence of bat roosts is found, then no further study and no additional measures are required. If the roost site can be avoided, a 250-foot-wide no-disturbance buffer shall be implemented unless a qualified biologist determines, based on bat species and site-specific conditions, that a larger or smaller buffer would be adequate to avoid impacts on bat roosts.

If roosts of pallid bat or other bat species are found, and the roost cannot be avoided, bats shall be excluded from the roosting site before the tree or structure is removed. Exclusion efforts shall be restricted during periods of sensitive activity (e.g., during hibernation or while females in maternity colonies are nursing young). Once it is confirmed that bats are not present in the original roost site, the tree or structure may be removed. A detailed program to identify exclusion methods and roost removal procedures shall be developed by a qualified biologist in consultation with CDFW before implementation.

Mitigation Measure 3.5-2x: Conduct Environmental Monitoring

If construction of future development would occur where an active bat roost or maternity colony is found and a no-disturbance buffer has been established, conduct environmental monitoring as described in Mitigation Measure 3.5-1d.

Significance after Mitigation

Mitigation Measure 3.5-2w and Mitigation Measure 3.5-2x require surveys for bats and, if found, avoidance of roosts and protection from construction activities by creation of no-disturbance buffer and environmental monitoring. Implementation of this measure would avoid, minimize, and compensate for adverse effects such that impacts on bats would be reduced to a **less-than-significant** level.

Impact Summary

Implementation of Mitigation Measures 3.5-2a through 3.5-2x would reduce impacts on special-status wildlife to a **less-than-significant** level as described above.

Impact 3.5-3: Result in Degradation or Loss of Riparian Habitat or Other Sensitive Natural Communities

Implementation of the 2035 Master Plan could result in the degradation or loss of arroyo willow thickets and riparian woodland. Degradation or loss of these riparian habitats would be a **significant** impact.

Portions of the creeks, drainages, reservoirs, and ponds in the main campus support arroyo willow thickets and riparian woodland. Arroyo willow thickets are designated as a sensitive natural community and riparian woodland is of special concern. Construction activities such as demolition of existing structures, new construction, expansion of existing features and trail management within these habitats could result in degradation (including introduction and spread of invasive species) or loss of these habitats. Riparian habitats could be directly removed, and construction in

or adjacent to these habitats may degrade them by altering the natural flow of water into or out of these areas. This impact would be **significant**.

Mitigation Measures

Mitigation Measure 3.5-3a: Avoid and Protect Brizzolara and Stenner Creeks

For projects in the vicinity of Brizzolara and Stenner Creeks, a 50-foot buffer from the outer extent of the top-of-bank or outer extent of riparian vegetation, whichever is greater, shall be established unless a qualified biologist determines, based on site-specific conditions, that a larger or smaller buffer would be sufficient to avoid impacts on arroyo willow thickets or riparian woodland. Development of new parking areas and buildings within this buffer shall be prohibited.

If projects require work within the creeks or within the riparian area of the creeks, Cal Poly shall implement Mitigation Measures 3.5-2c through 3.5-2j, 3.5-2n, and 3.5-4.

Mitigation Measure 3.5-3b: Implement Low-Impact Development Principles

Pursuant to 2035 Master Plan Principle OR 17, Cal Poly shall incorporate Low-Impact Development (LID) principles in the design of all projects within 100 feet of Brizzolara Creek, Stenner Creek, campus reservoirs, waterways and riparian areas unless a qualified biologist determines, based on site-specific conditions, that a larger or smaller buffer would be sufficient to avoid impacts on these resources.

Mitigation Measure 3.5-3c: Install Exclusion Fencing

Prior to construction of any project within 100 feet of Brizzolara Creek, Stenner Creek, campus reservoirs, and other campus waterways, all grading plans shall clearly show the outer limits of riparian vegetation or top-of-bank features and specify the location of project delineation fencing that excludes the riparian areas from disturbance. The project delineation fencing shall remain in place and functional throughout the duration of the project, and no work activities shall occur outside the delineated work area. This measure shall not apply to any project specifically designed to cross a creek, such as a bridge or span.

Mitigation Measure 3.5-3d: Map and Protect Waterways and Riparian Areas

Prior to construction, plans shall clearly show all staging areas, which shall be located a minimum of 100 feet outside of the Brizzolara Creek, Stenner Creek, campus reservoirs, and other campus waterways and riparian areas. The minimum buffer size may be reduced at the discretion of a qualified biologist if, based on local habitat conditions and project features, the buffer is sufficient to avoid construction-related disturbances to waterways and riparian areas.

Mitigation Measure 3.5-3e: Minimize Ground Disturbance in Sensitive Natural Community Areas

For projects that require the demolition of existing structures and vegetation removal within sensitive natural communities, Cal Poly shall require that ground disturbance, vegetation removal, and tree removal is limited to that necessary for construction, especially in sensitive natural communities and riparian areas.

Mitigation Measure 3.5-3f: Mitigate for the Loss of Sensitive Natural Communities

If loss of sensitive natural communities would not be otherwise mitigated by the proposed projects (i.e., the sensitive natural community is recognized as sensitive, but not protected pursuant to other regulations or policies), then additional actions shall be implemented based on site- and project-specific impacts in order to ensure no net loss of habitat function or acreage. Such actions may include creating, restoring, and/or preserving in perpetuity in-kind communities at a sufficient ratio to achieve no net loss of habitat function or acreage. If habitat enhancement or creation takes place, Cal Poly shall develop and implement a monitoring and management plan to assess the effectiveness of the mitigation. If monitoring indicates that the actions have not adequately mitigated for the project's impacts, Cal Poly shall implement further remedial actions, restoration, and other activities to reach a no net loss of habitat function or acreage.

Mitigation Measure 3.5-3g: Avoid Planting Invasive Plants

Project landscaping shall not utilize any species included on the most recent Cal-IPC Inventory.

Mitigation Measure 3.5-3h: Use Clean and Weed-Free Vehicles and Equipment

- a) Cal Poly shall require of its contractor(s) that all vehicles and construction equipment arrive at project areas clean and weed free to avoid inadvertent transport of invasive species. Equipment shall be inspected by the on-site inspector or environmental monitor for mud and other signs that weed seeds or propagules could be present prior to use in project areas in or near sensitive natural communities. If the equipment is not clean, the environmental inspector or monitor shall deny access to the work areas until the equipment is clean.
- b) Vehicles and equipment shall be cleaned using high-pressure water or air in designated weed-cleaning stations after exiting a weed-infested area. Cleaning stations shall be designated by a botanist or noxious weed specialist and located away from aquatic resources, riparian areas, and other sensitive natural communities.

Mitigation Measure 3.5-3i: Require Use of Certified Weed-Free Construction Materials

Only certified weed-free construction materials, such as sand, gravel, straw, or fill, shall be used throughout each project site.

Mitigation Measure 3.5-3j: Treat Invasive Plant Infestations

Before construction activities begin, Cal Poly shall treat invasive plant infestations in the construction area, and within 50 feet of the construction activity area. Any new invasive plant infestations discovered during construction shall be documented, reported to Cal Poly, and treated where needed. After construction is complete, Cal Poly or its contractors shall monitor all construction disturbance areas for new invasive plant invasions and expansion of existing weed populations and treat invasive plant infestations where needed. Post-construction monitoring for invasive plant infestations would be conducted annually for 3 years within sensitive natural communities.

Mitigation Measure 3.5-3k: Prepare Trail Management Plan

Implement Mitigation Measure 3.5-1e, described above.

Significance after Mitigation

Implementation of Mitigation Measure 3.5-3a avoids and protects Brizzolara and Stenner Creeks by requiring the incorporation of a 50-foot buffer from the top of bank or outer extent of riparian area, Mitigation Measure 3.5-3b requires the incorporation of LID principles to all projects located within 100 feet of the creeks, Mitigation Measure 3.5-3C requires the installation of exclusion fencing for projects that do not require crossing the waterways, Mitigation Measure 3.5-3d requires that all project plans map and protect waterways and riparian areas and project staging areas need to be located at a minimum of 100 feet outside of the top of bank of the waterways or riparian areas, Mitigation Measure 3.5-3e requires the minimization of ground disturbance in sensitive natural community areas, Mitigation Measure 3.5-3f requires the compensation for the loss of sensitive natural communities at a sufficient ratio to ensure a no net loss of habitat function or acreage, Mitigation Measure 3.5-3g requires that all 2035 Master Plan projects do not plant invasive plant species, Mitigation Measure 3.5i requires the usage of certified weed-free construction materials, Mitigation Measure 3.5-3j requires the treatment of invasive plant infestations within construction areas to prevent spreading them, and Mitigation Measure 3.5-3k identifies the need to develop the Trail Management Plan to identify and protect natural resources within the trail system and thus impacts on sensitive habitats would be reduced to a **less-than-significant** level.

Impact 3.5-4: Result in Degradation or Loss of State or Federally Protected Wetlands

Development of new facilities, and construction associated with improvements to existing facilities, under the 2035 Master Plan could remove wetland vegetation, alter wetland hydrology or topography, and impair wetland functions in some locations. These disturbances could result in temporary or permanent degradation or loss of waters of the United States, waters of the state, and their habitat functions and values. The degradation or loss of state or federally protected wetlands would be a **significant** impact.

The main campus contains several wetlands and other waters of the United States and waters of the state, primarily in the East Campus, North Campus, and West Campus subareas. Potential effects of future development projects and land uses under the 2035 Master Plan are discussed below.

In the East Campus subarea, the pastureland in the proposed Faculty and Staff Workforce Housing site includes two ephemeral drainages that the RWQCB, USACE, and CDFW have determined to be jurisdictional under the CWA, the Porter Cologne Act, and Section 1602 of the California Fish and Game Code (Dugas, pers. comm., 2017). If the proposed Faculty and Staff Workforce Housing project includes road crossings, pedestrian/bicycle crossings, or utility crossings through these drainages, installation of the crossings has the potential to place fill in the drainages or alter flows within the drainages. Installation of the crossings would likely cause temporary disturbances to the drainages such as vegetation removal and have the potential to result in permanent disturbances such as redirecting flows and/or placement of fill in the jurisdictional boundaries of the drainages. Such activities would trigger the need for RWQCB, USACE, and CDFW permitting for the crossings.

The North Campus subarea includes portions of Brizzolara Creek, Drumm Reservoir, Smith Reservoir, Shepard Reservoir, an engineered drainage that connects Smith and Shepard Reservoirs, and a drainage at Sports Complex Road that have been determined to be waters of the United States (SWCA 2015). Brizzolara Creek currently includes seven crossings, and the 2035 Master Plan proposes one additional crossing and improvements to others. The existing crossings include a pedestrian pathway at Village Drive Parking Structure (Building 271), the Village Drive vehicle crossing, the Feed Mill Walkway crossing at Village Drive, the Via Carta vehicle crossing, a pedestrian crossing at Via Carta, a pedestrian crossing at the University Drive parking area, and an unimproved drive at Highland Drive and East Creek Road. The 2035 Master Plan proposes to add one new pedestrian crossing at the existing parking area located at the Highland Drive and East Creek Road intersection. Improvements to the existing crossings and construction of the new crossing could adversely affect the Brizzolara Creek habitat functions and values resulting from a decrease in riparian vegetation and an increase bridge structure area over the creek. With inclusion of 2035 Master Plan Principles S 02 and S 03, the intent of the 2035 Master Plan is to utilize the existing crossings with minimal improvements to the crossings, thus minimizing impacts on jurisdictional waters.

The proposed extension of California Boulevard to the north would likely require the replacement of the existing Brizzolara Creek crossing at East Creek Road. Replacement of the existing crossing at East Creek Road may require the removal of riparian vegetation, alteration of existing creek flows, and/or fill within the jurisdictional boundaries of Brizzolara Creek.

The proposed Village Drive extension to Mount Bishop Road and the proposed new sports fields adjacent to the existing baseball fields would be located near the jurisdictional drainage at Sports Complex Road. If the proposed Village Drive extension and/or new sports fields were built in such a manner that crossed or otherwise required the drainage to be altered, there would likely be temporary and permanent impacts on the jurisdictional feature. Implementation of 2035 Master Plan Principles S 02 and S 03 would serve to avoid or minimize this potential impact.

The 2035 Master Plan includes the development of a new parking structure at the intersection of East Creek Road and Highland Drive. An existing storm water basin is in the general area of the proposed parking structure. The storm water basin includes a drain and underground pipe that directs excess flows from the basin to the underground reach of Brizzolara Creek. The underground hydrologic connection between the basin and Brizzolara Creek may establish a significant nexus to Brizzolara Creek, thus making the basin a jurisdictional feature. Construction of the parking structure could result in direct fill of the potentially jurisdictional storm water basin.

The 2035 Master Plan also includes the development of the proposed University-Based Retirement Community site in the portion of the West Campus subarea extending west of SR 1. The site includes an ephemeral drainage that is tributary to Old Garden Creek and may therefore be jurisdictional waters of the United States and waters of the state. If development of the proposed University-Based Retirement Community includes a crossing through the drainage, the crossing could require placement of fill in, or other alterations to, the drainage, which would likely result in temporary and permanent impacts on potentially jurisdictional waters. Implementation of Master Plan Principles S 02 and S 03 would serve to avoid or minimize this potential impact.

Development of the WRF may include expanding one of Cal Poly's existing reservoirs, creating two small "tailwater" reservoirs, and installing underground infrastructure under jurisdictional waterways. Smith, Drumm, Shepard, and Indonesian Reservoirs (located within or just north of the Master Plan Area) are waters of the United States and waters of the state (SWCA 2015). Expansion of any of these reservoirs would result in direct impacts on the jurisdictional waters, which could include placement of fill in the reservoirs, alterations of flow into or out of the reservoirs, and the temporary loss (during construction) of the functions and services that the reservoirs provide. Alternatively, expansion of the reservoirs could result in an increase of jurisdictional area and associated aquatic habitat, which could be a beneficial impact.

If expansion of the existing reservoirs would not provide adequate infrastructure to support the WRF, Cal Poly may develop new reservoirs. The number and locations of any new reservoir(s) has not been determined. However, it is likely they would be excavated as impoundments within existing campus waterways. Most of the existing waterways on the campus support bed and bank features and are likely waters of the state. Several of the waterways have been determined to be waters of the United States. Excavating impoundments in the campus waterways is likely to result in alterations to the waterways that would be subject to California Fish and Game Code Section 1602, CWA Section 404, and CWA Section 401 permitting.

Installation of the underground infrastructure associated with the proposed WRF may require crossing jurisdictional waters. If the waterways were trenched through, the trenching activities would result in placing fill in the jurisdictional features and other alterations to the jurisdictional features. Placement of fill or sediment in the waterways can cause increased turbidity at and downflow from the crossing. Removal of vegetation from the waterways can result in a change of microclimate and erosion at the crossing location.

Development of new facilities, and construction associated with improvements to existing facilities, under the 2035 Master Plan could remove wetland vegetation, alter wetland hydrology or topography, and impair wetland functions in some locations. These disturbances could result in temporary or permanent degradation or loss of waters of the United States, waters of the state, and their habitat functions and values. The degradation or loss of state or federally protected wetlands would be a **significant** impact.

Mitigation Measures

Mitigation Measure 3.5-4: Design Projects to Avoid and Minimize Disturbances to Jurisdictional Waters; Conduct Delineation of Jurisdictional Waters and Obtain Authorization for Fill and Required Permits; and Compensate for Unavoidable Degradation or Loss of Jurisdictional Waters

Cal Poly shall avoid, minimize, and compensate for potential degradation or loss of waters of the United States and waters of the state by implementing the following measures.

- ▶ Cal Poly shall design new facilities and improvements to existing facilities to avoid impacts on potential jurisdictional waters where feasible. If avoidance of these features is not feasible, or the jurisdictional status of an waterways that may be encroached upon is unknown, Cal Poly shall prepare a project-specific Jurisdictional Waters Delineation that identifies the project boundaries in relation to the jurisdictional boundaries of the site. For any unavoidable fill or alteration of a jurisdictional feature, Cal Poly shall coordinate with USACE to obtain a CWA Section 404 permit, CDFW to obtain a Streambed Alteration Agreement, and RWQCB to obtain a CWA Section 401 Certification. Cal Poly shall comply with all special conditions of the necessary permits.

To support the permit applications, Cal Poly shall prepare a Habitat Mitigation and Monitoring Plan (HMMP) for inclusion into the permit applications. The HMMP shall, at a minimum propose a 2:1 replacement ratio for permanent impacts on jurisdictional areas and a 1:1 ratio for temporary impacts on the jurisdictional areas, or higher mitigation ratios if required by the permitting agencies. Unless otherwise directed by the permitting agencies, Cal Poly shall incorporate on-site, in-kind, permittee-responsible compensatory mitigation to ensure that the drainages' functions and values are retained or improved as part of the project. The HMMP shall identify the location(s) where the proposed compensatory mitigation shall be implemented and the type (e.g., creation, restoration, enhancement, preservation) of mitigation that shall be implemented. At a minimum, the HMMP shall include a 5-year maintenance and monitoring program that facilitates the successful completion of the mitigation efforts.

- ▶ Pursuant to Master Plan Principles S 02 and S 03, all improvements to the existing pedestrian pathways that currently cross Brizzolara Creek shall have the sole purpose of maintaining safe pedestrian and bicycle use of the crossings. Cal Poly shall not improve these existing pedestrian/bicycle crossings for vehicular use.
- ▶ Pursuant to Master Plan Principles S 02 and S 03, all improvements to the existing vehicle crossing at Via Carta shall have the sole purpose of maintain the existing use as a two-lane vehicle crossing or a pedestrian/bicycle crossing. The existing Via Carta crossing shall not be improved in such a manner that increases the width of the crossing or increases the amount of the crossing's surface area that covers Brizzolara Creek. Any improvements to the existing bridge shall be designed to result in a decrease of creek surface area being covered by bridge structure.
- ▶ Pursuant to Master Plan Principles S 02 and S 03, to the extent feasible, Cal Poly shall omit the one proposed pedestrian/bicycle crossing at the existing parking area located at the Highland Drive and East Creek Road intersection from future development plans. Cal Poly shall design the pedestrian/bicycle circulation routes to utilize the existing crossings in the area if feasible. The intent of omitting the proposed crossing is to minimize impacts on jurisdictional waters and the habitat functions and services that the creek provides.

If omitting the one new pedestrian/bicycle crossing is not feasible, Cal Poly shall design, permit, and construct the new pedestrian/bicycle crossing in conjunction with the proposed California Boulevard extension crossing at East Creek Road. These two crossings shall not be designed and constructed independently from each other. The intent of combining the design of the two crossings is to ensure that the two crossings are developed in such a way that minimizes impacts on the creek and allows permitting agencies to evaluate the full effect of the two crossings on the creek functions and services during the permitting process.

Significance after Mitigation

Mitigation Measure 3.5-4 would require that wetlands and other waters of the United States and waters of the state be avoided to the extent feasible and that unavoidable losses of wetlands be compensated for in a manner that results in no net loss of wetland functions and values, thus reducing the significant impacts on state and federally protected wetlands to a **less-than-significant** level.

Impact 3.5-5: Interfere with Important Wildlife Movement Corridors and Nursery Sites

Implementation of the 2035 Master Plan projects could result in encroachment into Brizzolara Creek, Stenner Creek, and other drainage riparian corridors, which provide suitable wildlife movement corridors and nursery sites for some species within the Master Plan Area. Removal and/or encroachment of these corridors and/or nursery sites could interfere with important wildlife movements and reproduction. Degradation or loss of important wildlife movement corridors or nursery sites would be a **significant** impact.

The 2035 Master Plan includes the demolition of existing buildings and parking areas within 20 feet of Brizzolara Creek and the construction of new buildings within approximately 70 feet of the creek. With respect to near-term projects, several near-term projects, including the proposed student housing for freshmen and upper division students and the proposed Facilities Operations Complex/interim surface parking lot, are located adjacent to Brizzolara Creek. In addition, the proposed Farm Shop site is located adjacent to Stenner Creek, and the proposed Faculty and Staff Workforce Housing and University-Based Retirement Community sites are within riparian corridors associated with unnamed drainages. Demolition of existing facilities and construction of new facilities near creeks and

drainages have the potential to degrade or impede their use for nursery sites and can affect wildlife movement from Cuesta Ridge through the campus and the city of San Luis Obispo to the Trish Hills. Brizzolara Creek and Stenner Creek provide suitable movement and breeding habitat for steelhead. Demolition of existing facilities and construction of new facilities near Brizzolara and Stenner Creeks have the potential to affect or impede steelhead and other fish species movements or breeding, depending on when construction activities would take place. This impact would be **significant**.

Mitigation Measures

Mitigation Measure 3.5-5a: Avoid and Protect Brizzolara and Stenner Creeks

Implement Mitigation Measure 3.5-3a, described above.

Mitigation Measure 3.5-5b: Implement Low-Impact Development Principles

Implement Mitigation Measure 3.5-3b, described above.

Mitigation Measure 3.5-5c: Install Exclusion Fencing

Implement Mitigation Measure 3.5-3c, described above.

Mitigation Measure 3.5-5d: Map and Protect Waterways and Riparian Areas

Implement Mitigation Measure 3.5-3d, described above.

Significance after Mitigation

Implementation of Mitigation Measure 3.5-5a avoids and protects Brizzolara and Stenner Creeks by requiring the incorporation of a 50-foot buffer from the top of bank or outer extent of riparian area, Mitigation Measure 3.5-5b requires the incorporation of LID principles to all project designs located within 100 feet of the creeks, Mitigation Measure 3.5-5c requires the installation of exclusion fencing for projects that do not require crossing the waterways, Mitigation Measure 3.5-5d require that all project plans map and protect waterways and riparian areas and project staging areas need to be located at a minimum of 100 feet outside of the top of bank of the waterways or riparian areas thus reducing the significant impacts on wildlife movement corridors and/or nursery sites to a **less-than-significant** level.

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