

4.1 BIOLOGICAL RESOURCES

This section summarizes the regulatory framework for evaluating biological resources, summarizes the biological resources within the project site, and discusses the potential impacts resulting from implementation of the proposed project. The following documents were used to analyze the potential impacts that could occur:

- Biological Resources Assessment, prepared by Monk & Associates, January 3, 2024
- Approved Jurisdictional Determination, prepared by Army Corps of Engineers, May 6, 2024
- Arborist Report, prepared by Macnair & Associates, November 1, 2022
- Kortum Canyon Tree Impacts Memo, prepared by MacNair & Associates, January 1, 2024

4.1.1 REGULATORY CONTEXT

Federal

Clean Water Act

The Clean Water Act (CWA) is codified in Title 33 of the Code of Federal Regulations (CFR) and establishes regulations for the discharge of pollutants into Waters of the United States, which include the territorial seas, and waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including waters which are subject to the ebb and flow of the tide; tributaries; lakes and ponds, impoundments of jurisdictional waters; and adjacent wetlands.¹ Waters of the United States exhibit a defined bed, bank, and ordinary high water mark (OHWM), which is defined as that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank.² In addition to regulating discharge of pollutants into Waters of the United States, the CWA establishes water quality standards for surface waters. The Environmental Protection Agency (EPA) has established pollution control programs including wastewater standards and recommendations for pollutants in surface waters.

Discharge of fill material into Waters of the United States, including wetlands, is regulated by the U.S. Army Corps of Engineers (Corps) under Section 404 of the Clean Water Act (33

¹ Code of Federal Regulations, Title 33 – Navigation and Navigable Waters, Chapter II, - Corps of Engineers, Department of the Army, Department of Defense, Part 328 – Definition of Waters of the United States, Section 328.3

² Ibid.

U.S.C. 1251–1376). Discharges of fill material are defined in Section 323.3(f) of the Federal Code of Regulations and include but are not limited to placement of fill necessary for construction of any structure or infrastructure in a water of the United States, building of any structure, infrastructure, or impoundment requiring rock, sand, dirt, or other material for its construction, and site-development fills for recreational, industrial, commercial, residential, or other uses. As specified therein, discharges of fill do not include plowing, cultivating, seeding, and harvesting for the production of food, fiber, and forest products.

Federal Endangered Species Act

The Federal Endangered Species Act (ESA) was passed by the United States Congress in 1973 to protect and recover endangered plants and animals, and the ecosystems on which they depend for survival. The ESA is administered by the United States Fish and Wildlife Service (USFWS), having responsibility for terrestrial and freshwater species, and the National Marine Fisheries Service (NMFS), informally known as NOAA Fisheries, having responsibility for marine wildlife. Species are afforded protection under the ESA if they are “listed” as either “endangered” or “threatened” where endangered species are defined as those that are in danger of extinction throughout all or a significant portion of their known range, and threatened species are those that are likely to become extinct in the foreseeable future. The ESA allows individuals and organizations to petition to have species listed as endangered or threatened, which undergo scientific evaluation and public review before a final decision is made on whether a species should be formally listed as protected.

Once a species is formally listed, it is fully protected from a “take”, which is defined as the harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting of wildlife species or any attempt to engage in such conduct, including modification of its habitat (16 U.S.C. 1532, 50 C.F.R. 17.3). When an activity would result in a “take” of a formally listed species, a take permit issued by the applicable regulating agency is required (e.g., USFWS and NMFS).

Federal Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703–711) makes it illegal to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 C.F.R. Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 C.F.R. 21).

Federal Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 U.S.C. Section 668) protects these birds from direct take and prohibits the take or commerce of any part of these species. The USFWS administers the act, and reviews federal agency actions that may affect these species.

State

Regional Water Quality Control Board

Section 401 of the CWA (33 U.S.C. 1341) requires an applicant who is seeking a 404 permit to first obtain a water quality certification from the Regional Water Quality Control Board (RWQCB). To issue a water quality certification, the RWQCB must conclude that the proposed fill is consistent with the water quality standards established by the State for the waterbody. The San Francisco RWQCB (Region 2) is responsible for enforcing water quality criteria and protecting water resources in the City of Calistoga.

California Endangered Species Act

The California Endangered Species Act (CESA) is administered by the California Department of Fish and Wildlife (CDFW) and is intended to protect plant and animal species when they are of special ecological, educational, historical, recreational, aesthetic, economic, and scientific value to the people of the State. CESA established that it is State policy to conserve, protect, restore, and enhance endangered species and their habitats. The CDFW is responsible for conducting scientific reviews of species petitioned for listing under CESA, administering regulatory permitting programs to authorize take of listed species, maintaining a database of listed species occurrences, and conducting periodic review of listed species to determine if the conditions that led to original listing are still present.

CESA expanded upon the original Native Plant Protection Act (NPPA) and enhanced legal protection for plants. To be consistent with federal regulations, CESA created the categories of "endangered" and "threatened" species. All animal species listed as "rare" were given a status of "threatened" under the Act however, this was not similarly done for plant species. Thus, there are three listing categories for plants in California including rare, threatened, and endangered. Under State law, plant and animal species may be formally designated by official listing by the California Fish and Game Commission.

California Environmental Quality Act

The California Environmental Quality Act (CEQA) provides that a species that is not listed on the federal or state endangered species list may be considered rare or endangered if the species meets certain criteria. Under CEQA, public agencies must determine if a project

would adversely affect a species that is not protected by FESA or CESA. Species that are not listed under FESA or CESA, but are otherwise eligible for listing, such as candidate or proposed species, may be the subject of cooperative conservation efforts between federal agencies, state and tribal governments, local government, industry, and the public until the opportunity to list the species arises for the responsible agency.

The CDFW has designated certain animal species that may be considered for review, referred to as Species of Special Concern (SSC), which are listed due to concerns about declining population levels, limited ranges, and continuing threats that have made these species vulnerable to extinction. The SSC designation is considered an administrative designation by CDFW; however, SSC are provided protection under CEQA Guidelines Section 15380 which includes species that are not currently threatened by extinction, but occur in such small numbers that they may become endangered if their environment changes. Other species identified as experiencing population declines which may result in their extinction are also afforded protection pursuant to CEQA Guidelines Section 15380.

The California Native Plant Society (CNPS) has developed a rating system for the state's rare, threatened, and endangered plants that are native to California and have low numbers, limited distribution, or are otherwise threatened with extinction. Plants rated by CNPS are subject to protection under CEQA.

California Fish and Game Code

The California Fish and Game Code establishes the basis of fish, wildlife, and native plant protection and management in the state. Section 1802 of the code establishes CDFW as having jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species.

California Native Plant Protection Act

The California Native Plant Protection Act is intended to preserve, protect, and enhance endangered or rare native plants in California. This Act directs the CDFW to establish criteria for determining what native plants are rare or endangered. Under this Act, a species is endangered when its prospects for survival and reproduction are in immediate jeopardy from one or more causes. A species is rare, although not threatened with immediate extinction, if it is in such limited numbers throughout its range that it may become endangered if its present environment worsens. This Act prohibits any person from importing, taking, possessing, or selling any endangered or rare native plants within

California, except as incidental to the possession or sale of the real property on which the plant is growing, or as otherwise excepted under the Act.

As stated above, the CNPS maintains a list of plant species native to California that have low numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California. Potential impacts to populations of rare plants receive consideration under CEQA review. The CNPS ranking system includes:

- **List 1A:** Plants presumed extinct
- **List 1B:** Plants rare, threatened or endangered in California and elsewhere
- **List 2:** Plants rare, threatened or endangered in California, more numerous elsewhere

Predatory Birds

Under the California Fish and Game Code, all predatory birds in the order Falconiformes or Strigiformes in California, generally called “raptors,” are protected. The law indicates that it is unlawful to take, possess, or destroy the nest or eggs of any such bird unless it is in accordance with the code. Any activity that would cause a nest to be abandoned or cause a reduction or loss in a reproductive effort is considered a take, and generally includes construction activities.

Local

City of Calistoga General Plan

The Open Space and Conservation Element of the City of Calistoga General Plan outlines goals, objectives, policies, and actions intended to protect open space and conserve species diversity in within the City. The following are applicable to the proposed project:

Objective OSC-1.2 Minimize impacts to sensitive natural habitats including riparian forest and scrub, freshwater marsh associated with drainages and geothermal areas, oak woodland and savannah, and native grasslands.

- Policy 1.2-3 Prior to approving specific development plans on undeveloped parcels, biological and wetland assessments to determine the presence or absence of populations of special-status species, sensitive natural communities, and wetland resources shall be conducted.

Objective OSC-1.3 Conserve Calistoga’s native trees and vegetation, which are important biological and aesthetic resources within the Planning Area.

- Policy 1.3-1 Continue to implement and enforce the provision of the Tree Preservation Ordinance, particularly with regard to preservation of native trees of significant size.

Objective OSC-1.5 Prevent the degradation and loss of Calistoga’s wetland areas.

- Policy 1.5-2 The City shall recognize Calistoga’s network of drainage ditches as important wetland resource in the Planning Area. Drainage ways shall be considered when evaluating impacts of proposed development on wetland resources.
- Policy 1.5-3 Wetlands shall be protected and enhanced. Adequate mitigation shall be provided where complete avoidance is not feasible.
- Policy 1.5-4 Any proposed modifications to wetlands shall require appropriate coordination with representatives of the California Department of Fish and Game (CDFG), and US Army Corps of Engineers (Corps) to ensure that the concerns and possible requirements of both agencies can be easily incorporated into the proposed plans.

Objective OSC-2.2 Expand efforts to ensure that development does not harm the water quality of the Napa River and its tributary drainages.

- Policy 2.2-1 Require developments which would contribute to erosion and silt flows into watercourses to mitigate these impacts.

Calistoga Municipal Code

Chapter 19.01 (Tree Preservation) of Title 19 (Environmental Protection) of the Calistoga Municipal Code provides local regulations for the protection of trees on public and private property. Trees designated as protected include any tree with a diameter at breast height (DBH) over 12 inches, native oaks with a DBH greater than 6 inches, any Valley Oak (*Quercus lobata*) of any size, and any tree bearing an active nest of a fully protected bird species, which reflects regulations contained in Section 3511 of the Fish and Game Code.. The requirements of this section include temporary protective fencing around all protected trees, and restrictions on activities that can occur within the root protection zone which is defined as a circle around the trunk of a tree equal in radius to the canopy of the tree plus 50 percent. A Tree Protection Plan is a required component for all permit applications to reduce and avoid impacts to protected trees. A Tree Removal/Disturbance Permit is required for removal of protected trees and may include conditions of approval to minimize the impact of disturbance, requirements for replacement trees to be planted, and are issued at the discretion of the Director of Public Works.

4.1.2 ENVIRONMENTAL SETTING

This section relies on information contained in the Biological Resources Analysis (BRA)

prepared by Monk & Associates, dated January 3, 2024 (Appendix 4.1-A), the Aquatic Resources Delineation Report prepared by Monk & Associates, dated December 7, 2023; the Jurisdictional Determination prepared by the Corps, dated May 6, 2024 (Appendix 4.1-B), Arborist Report prepared by MacNair & Associates, dated November 1, 2022 (Appendix 4.1-C), the Tree Impact Memo prepared by MacNair & Associates, dated January 1, 2024 (Appendix 4.1-D), and other project plans and information prepared by the applicant.

The BRA documents existing site conditions through a combination of background research, reconnaissance surveys, and special status plant surveys, as well as an aquatic resources delineation that was prepared in compliance with the Corps' standards. A request for Preliminary Jurisdictional Determination was submitted to the Corps in January 2024, and on May 6, 2024, the Corps issued an Approved Jurisdictional Determination, which found that there are no jurisdictional waters of the US on the Project site. Background research provided in the BRA relies on information contained in the most recent version of CDFW's Natural Diversity Database (CNDDDB) and the California Native Plant Society's (CNPS) *Inventory of Rare and Endangered Plants of California* (CNPS 2001). Known records of plant and animal occurrences were reviewed to determine the likelihood of occurrence of special-status species on and around the project site. Monk & Associates performed a reconnaissance-level survey February 13, 2023, to document biological resources, including plant and wildlife species, and to assess potential agency-regulated areas. Based on observations made during the initial site survey, subsequent protocol-level rare plant surveys were conducted on April 26, 2023, May 23, 2023, and July 14, 2023. Concurrently, site observations and delineation of potential jurisdictional wetlands, regulated by the Army Corps of Engineers (Corps) under Section 404 of the Clean Water Act were performed. Mapping of potential jurisdictional wetlands included collection of 22 data points comprised of vegetation, hydrology, and soil information.

Vegetation Communities

The CDFW ranks natural communities at both the global (full natural range within and outside of California) and statewide (within California) level and is based on considerations such as rarity, threat, distribution, and ecological integrity of occurrences. Ranks range from 1 to 5 on the global (G) and statewide (S) scales. Ranks of S1 to S3 are considered sensitive natural communities and are required to be analyzed consistent with CEQA.³ The

³ California Department of Fish and Wildlife, Natural Communities, <https://wildlife.ca.gov/Data/VegCAMP/Natural->

BRA identified 6 distinct vegetation communities within the project site, noting that the majority of native vegetation communities are located outside of areas previously developed and disturbed by the former Busk Estate.

Anthropogenic/Ruderal Herbaceous

Ruderal herbaceous plant communities are typically found in areas disturbed by human activities or natural events such as landslides and wildfires. On the project site, this community type is primarily located in the central portion of the site on areas disturbed by previous development associated with the former Busk Estate. These plant communities are fast growing, hardy, and distribute a large quantity of fast-germinating seeds or vegetative propagules early in their growth, allowing them to reproduce and spread rapidly. Ruderal plant communities may contain native species but are generally characterized by a high proportion of non-native weedy and invasive species that have been spread intentionally or accidentally as a result of human activities. This habitat type is generally suitable to animals that are adapted to living proximate to humans, such as racoons, Botta's pocket gopher, western fence lizard, and a variety of bird species. This community type is unranked by CDFW and is not considered rare or sensitive.

Upland Douglas Fir

Upland Douglas fir is a mixed forest type dominated by Douglas Fir (*Pseudotsuga menziesii* var. *menziesii*) and is located on the site's steepest slopes, just west of Kortum Canyon Road. The project site exhibits Douglas fir growing with Coast Redwood (*Sequoia sempervirens*) and a subcanopy of tanbark oak (*Notholithocarpus densiflorus* var. *densiflorus*), madrone (*Arbutus menziesii*), and California bay (*Umbellularia californica*). Due to the dense canopy layer and presence of partially decomposed and decaying organic matter on the ground surface, shrub and herbaceous layers are minimal except in open areas along Kortum Canyon Road. A variety of shrubs and herbaceous species, including a variety of ferns are present in the open areas along Kortum Canyon Road. Douglas fir seeds provide food for small mammals and birds and the forest provides cover, roosting, and nesting opportunities. This community type present onsite is most analogous to the douglas fir – tanoak forest – madrone forest and woodland type (CACode 82.250.00), is ranked G4/S4 by CDFW, and is therefore not considered a sensitive natural community.⁴

[Communities#natural%20communities](#), accessed March 2024.

⁴ California Department of Fish and Wildlife, California Natural Community List, June 1, 2023, Page 19.

Mixed Evergreen Forest

Mixed evergreen forest is dominant on the steeper slopes of the project site surrounding areas that were previously developed. This community is dominated by broadleaved trees that are adapted to long periods of dryness and heat. Tree species observed during site surveys includes valley oak (*Quercus lobata*), coast live oak (*Quercus agrifolia*), Douglas fir, California bay, madrone, tan oak, black oak (*Quercus kelloggii*), and deodar cedar (*Cedrus deodar*) which is not native but has naturalized on the site. Canopy density is variable, with the denser canopy occurring where Douglas fir and tan oak are the dominant species. Where the tree canopy is more open, the understory is more abundant. The understory layer within this community type varies across the site. On slopes north of the previously disturbed areas, the understory is dominated by one species, whereas the understory on slopes just west of Kortum Canyon Road features a diversity of shrub and herbaceous species. This community type provides habitat for a variety of small mammals and birds. The mixed evergreen forest contains tree species that are present in a variety of community types. Wherever valley oak is present within CDFW's list of natural communities it is given a rank of G3/S3 and marked as rare.⁵ As such, this analysis conservatively assumes that this community type is sensitive.

Mixed Oak Woodland

This habitat type is present in the northwestern portion of the project site, near Lerner Drive. In this area, the oak overstory is comprised of a relatively even mix of coast live oak and valley oak growing alongside other species including blue oak (*Quercus douglasii*), black oak, tanbark oak, and California bay. The shrub layer varies between dense monocultures of French broom, with some occurrences of Scotch broom (*Cytisus scoparius*) and more open assemblages containing a diversity of native and non-native species. In areas where the shrub layer is sparse, the herbaceous layer is more abundant and diverse, containing a diverse array of native and non-native species. Trees in the mixed oak woodland provide foraging, roosting, and nesting habitat for a wide variety of species including raptors and other common bird species. Similar to the mixed evergreen forest community discussed above, the mixed oak woodland community type contains a high percentage (approximately 50%) of valley oak, which when present on CDFW's list of natural communities is given a rank of G3/S3. As such, this analysis conservatively assumes that

⁵ California Department of Fish and Wildlife, California Natural Community List, June 1, 2023, Page 26.

this community type is sensitive.

Ephemeral and Intermittent Drainages and Riparian Woodland

The project site contains several discontinuous ephemeral drainage scours along steeper areas, however, many of these areas exhibit irregular flows due to hydrologic modifications previously made onsite including underground and overland drainage piping installed as part of the former Busk Estate. Areas containing these discontinuous drainage scours are characterized by a riparian overstory where mixed oak woodland or mixed evergreen forest intervene with riparian woodland species including black oak, Oregon ash (*Fraxinus latifolia*), California buckeye (*Aesculus californica*), bigleaf maple (*Acer macrophyllum*), and California sycamore (*Platanus racemosa*). The understory in areas of these drainages is comprised of a mixture of flowering plants, grasses, and ferns adapted for riparian conditions as well as non-native species such as English ivy (*Hedera helix*), honeysuckle (*Lonicera hispidula*), Himalayan blackberry (*Rubus armeniacus*), and periwinkle (*Vinca majoris*). In addition to these discontinuous ephemeral drainage scours, the Michele Caviglia Memorial Spring runs along and adjacent to Kortum Canyon Road where it flows into a bucket, then overflows down the western edge of Kortum Canyon Road, eventually entering the City's storm drain system via a drain inlet, which then flows north to the Napa River. Riparian woodland is a valuable wildlife habitat for its dense cover from predators, opportunities for food and hydration, and nesting opportunities. A wide variety of species may utilize this habitat for hunting, foraging, roosting, and nesting including amphibians, reptiles, birds, and mammals. As discussed in the BRA, specific species expected to utilize this area varies throughout the year, such as during the spring and fall migration months when a range of birds would be expected to occur in riparian habitats. The riparian woodland is most analogous to the valley oak riparian forest and woodland type (CaCode 71.045.00) on CDFW's list of natural communities, which is ranked G3/S3, making it a sensitive natural community.⁶

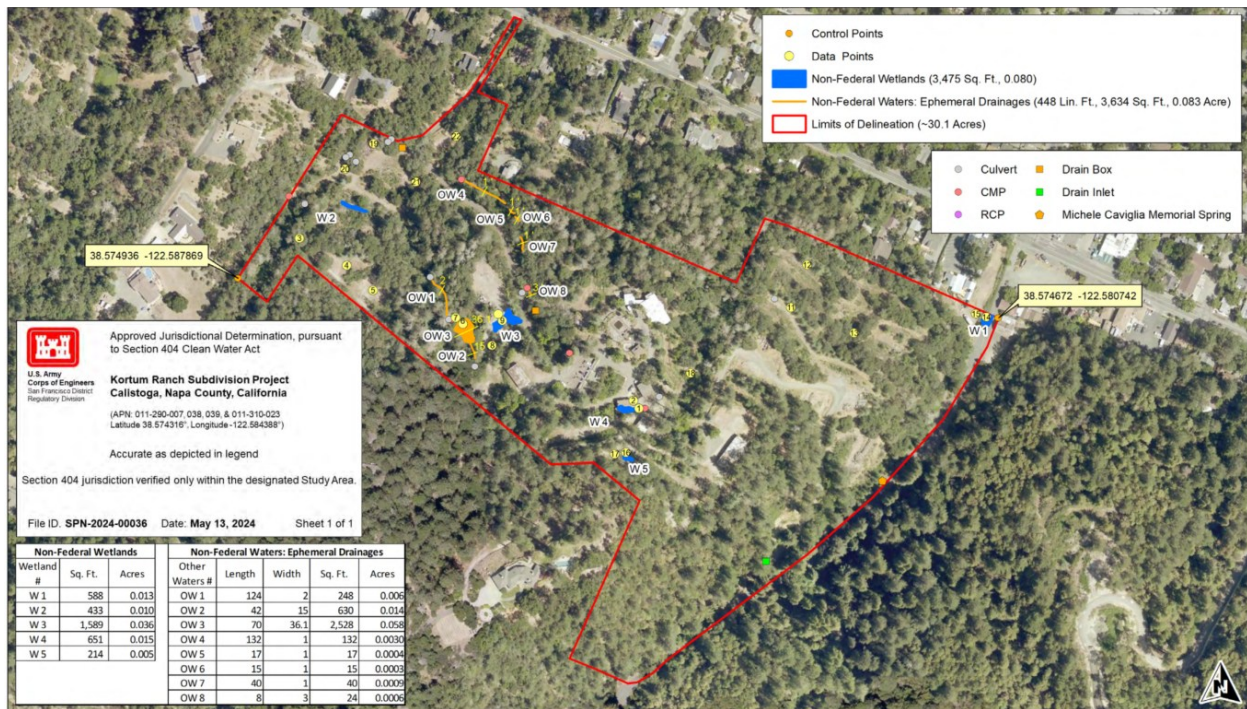
Seasonal Wetlands and Pond

Seasonal wetlands are areas that appear dry in the summer and fall months and become saturated when the winter and spring rains occur. Seasonal wetlands can remain inundated for weeks to months at a time due to saturation of soils or confining topography such as depressions. Hydric soils include soils that are saturated, flooded, or ponded for a

⁶ California Department of Fish and Wildlife, California Natural Community List, June 1, 2023, Page 18.

sufficient time during the growing season to develop anaerobic conditions. Wetland plants will tend to dominate these areas and are also used as a wetland indicator. As shown in Figure 4.1-1, the site contains approximately 0.080 acres of non-federal seasonal wetlands in five locations including areas modified by the former Busk Estate, a man-made berm that had approximately 2 feet of standing water at the time of the site survey (unique identifier W1), and one roadside ditch at the northeast portion of the project site where the City’s storm drain system daylights and flows north offsite for approximately 200 feet before re-entering the storm drain system via a culvert (unique identifier W5). Seasonal wetlands provide a variety of wildlife species with a water source and foraging opportunities during the wet months and may also provide suitable breeding habitat for amphibians and insects. Seasonal wetlands and ponds are not ranked by CDFW as a terrestrial community type. These community types may be considered sensitive if they are subject to additional protections and/or regulations by the applicable regulatory agencies (e.g. Corps, RWQCB).

FIGURE 4.1-1: MAPPED WETLANDS⁷



Jurisdictional Waters and Wetlands

The definition of waters of the United States, including wetlands, has changed overtime as

⁷ Approved Jurisdictional Determination, prepared by Army Corps of Engineers, dated May 6, 2024.

a result of several court cases, which has prompted revised definitions issued by various regulatory agencies. Most recently, the US EPA and Corps published a final revised definition which conforms to interpretations issued by the courts. In the published 2023 rule, waters of the United States include waters used in interstate and foreign commerce, seas, interstate waters, tributaries that are relatively permanent, standing, or continuously flowing bodies of water, wetlands meeting certain criteria, including wetlands adjacent to waters of the United States, and intrastate lakes and ponds that are relatively permanent, standing, or continuously flowing with a continuous surface connection to other waters of the United States.

Areas containing appropriate wetland vegetation, hydrology, and soils were documented, photographed, and mapped as nonfederal wetlands and ephemeral drainages. . The site contains approximately 0.080 acres (3,475 square feet) of non-federal wetlands and 0.083 acres (448 linear feet and 3,634 square feet) of non-federal waters that follow the natural topography of the site and were mapped as potential “other waters.” All mapped features flow north to the City of Calistoga’s storm drain system which eventually flows to the Napa River, a traditionally navigable waterway. On May 6, 2024, the Corps confirmed that neither connection through storm drains would be considered a continuous surface connection and the mapped wetlands and other waters onsite are not subject to the Corps’ jurisdiction pursuant to Section 404 of the Clean Water Act. .

Wildlife Habitat and Movement Corridors

As discussed in detail above, vegetation communities present onsite provide habitat for a variety of mammals, amphibians, reptiles, and birds. Wildlife may utilize a variety of habitat types to fulfill different needs such as reproduction, nesting, foraging, migration, and hibernation. To access different habitats, wildlife rely upon corridors to travel to different areas within a region to meet their individual needs. These needs might include travel to mating, nesting, or spawning grounds for reproduction, migration to seasonal hibernation areas, migration in response to seasonal abundance and scarcity of resources, escape from disturbances such as human activities or wildfire, and colonization or establishment of new populations. Access to wildlife movement corridors is critical to maintaining species diversity, abundance, and intraspecies genetic diversity. The entirety of the project site serves as a local wildlife corridor for common terrestrial species.

Special-Status Species

Based on the Biological Resources Analysis prepared for the project, the site contains one-

special status plan species and has the potential to support special status wildlife species, as discussed in detail below.

Special Status Plants

In California, plants that are not formally protected as threatened and endangered under CESA and FESA may still be recognized by the California Department of Fish and Wildlife (CDFW) as qualifying for protection based on their rank. The California Native Plant Society (CNPS) ranks native plants from 1 to 4 and the CDFW requests the inclusion of Rank 1 species in environmental documents despite these plants having no formal legal protection.

Narrow-anthered brodiaea (*Brodiaea leptandra*)

Narrow-anthered brodiaea is a CNPS Rank 1B.2 species, meaning that it is rare, threatened, or endangered in California and elsewhere and that it is fairly endangered in California with 20-80 percent of occurrences immediately threatened. However, it has no state or federal status. This species is a perennial species that sprouts from an underground stem (corm), flowers from May to July, and is found in broad-leaved upland forest, cismontane woodland, coniferous forest, valley and foothill grasslands, and chaparral habitats. This species is threatened by development, foot traffic, and collecting. As detailed in the BRA prepared for the project, individuals of the narrow-anthered brodiaea species are present on the west side of the project site.

Special Status Animals

The CDFW maintains the California Natural Diversity Database (CNDDDB) which archives records and geospatial data about rare species and their locations within the state. Records of sightings of rare species are used to determine where these species have occurred in the past, where they are currently located, and the location of critical habitat. During preparation of the BRA, Monk & Associates consulted the CNDDDB and performed site visits to determine whether there is suitable habitat for the following special status animal species.

Peregrine Falcon (*Flaco peregrinus anatum*)

The peregrine falcon is fully protected in California by the CDFW, though it was delisted as endangered or threatened by FESA and CESA due to successful recovery of the species. In 1980 there were fewer than 10 breeding pairs in California after being brought to the brink of extinction by widespread use of DDT. After DDT was banned, the species slowly

recovered. Peregrine falcons hunt medium-sized birds caught in flight and therefore forage in the open air. They nest on cliffs from the coast to the mountain ranges and occasionally man-made structures such as buildings and bridges. They prefer nesting sites that provide 360-degree views of their surroundings. The nearest documented nesting site is located approximately 2 miles southeast of the project site. Due to the absence of rocky cliffs and other high structures with panoramic views, the project site does not provide suitable nesting habitat for the peregrine falcon.

California Red-Legged Frog (CRLF) (*Rana draytonii*)

The California red-legged frog is federally listed as threatened and is a California “species of special concern.” The US Fish and Wildlife Service (USFWS) has established designated critical habitat for this species which includes areas containing ponds and slow-flowing portions of perennial and intermittent streams that maintain water through the dry seasons. Populations cannot be maintained if surface water evaporates because it takes 11-20 weeks of permanent water for the CRLF to metamorphosize. The CRLF may migrate during the wet season from 0.25 to 3 miles. The nearest CNDDDB record of CRLF within 3 miles of the project site is over 100 years old, a specimen collected prior to 1915, and the species is generally considered to be extirpated from Calistoga. The next closest record of the CRLF is from 1979, located 8.6 miles northeast of the project site. The project site is not designated as critical habitat for the CRLF, and although the man-made pond onsite could provide suitable habitat, the lack of direct connectivity to any other aquatic resources precludes occurrence of this species onsite.

Northern Spotted Owl (NSO) (*Strix occidentalis caurina*)

The Northern Spotted Owl is listed as a federally threatened species and is a “species of special concern” in California which affords it protection pursuant to CEQA. The owl’s roosting, foraging, and breeding habitat is old-growth forests containing many large trees, densely closed canopies, high levels of habitat structure, and naturally occurring nests or nests built by other animals. They prey on small mammals as well as bats, birds, insects, and reptiles and forage and nest in old-growth forests with large mature trees, dense canopies, and high habitat structure. Forests with mature western hemlock (*Tsuga heterophylla*), Douglas-fir, redwood, ponderosa pine (*Pinus ponderosa*), and western red cedar (*Thuja plicata*) are commonly associated with NSO. The nearest observation of a breeding pair is from 2004 and is located approximately 0.8 miles southwest of the project site. The largest tree observed onsite measures approximately 15 to 20-inches dbh, which is small for NSO cavity nests. Additionally, where larger trees are located, the forest lacks

multi-layered canopies, which, as stated previously, is a habitat requirement. Based on the lack of old-growth forest, the project site does not provide suitable nesting habitat for this species.

Western Pond Turtle (*Emys marmorata*)

The western pond turtle is a California “species of special concern” and is under review by the USFWS for federal listing. The western pond turtle is an aquatic species that only leaves bodies of water to lay eggs and hibernate. The species will occupy permanent or intermittent bodies of water but also requires upland areas for burrowing to create nests for breeding, which can be up to 1,200 feet away from the watercourses where it forages for plants, invertebrates, fish, and carrion. The closest CNDDDB documentation of this species is in the Napa River approximately 0.3 miles north of the project site in 2017. While the seasonal man-made pond onsite may provide suitable habitat for this species, the lack of a migration pathway between the closest record and this pond precludes the species from utilizing the site.

Pallid Bat (*Antrozous pallidus*)

The pallid bat is a California “species of special concern” and is therefore afforded protection pursuant to CEQA. The pallid bat occurs throughout California at low elevations but is most common in dry habitats with rocky areas for roosting. The bat roosts in social groups in rock formations and occasionally hollow trees and buildings where they can be protected from daytime high temperatures. The CNDDDB has records of pallid bats 1.4 miles east of the project site. There are no structures on the project site suitable for roosting, however large, mature, trees onsite may contain cavities suitable for roosting. Therefore, the Pallid Bat has the potential to occur onsite, though evidence of this species has not been previously documented.

Townsend's Big-Eared Bat (*Corynorhinus townsendii townsendii*)

The Townsend's big-eared bat is a California “species of special concern” due to disturbance of its roosting sites which include caves, mines, tunnels, and high buildings or other human-made structures for roosting and maternity sites. The bat eats insects and moths. The nearest CNDDDB record of this species was an abandoned building approximately one mile north of the project site. There are no abandoned buildings, caves, or mines on the project site that would provide suitable roosting habitat for this species. Therefore, the project site does not contain suitable habitat to support this species.

Migratory Birds

Trees on the project site provide suitable habitat for a variety of bird species protected under the MBTA. In particular, trees in the oak woodland plant community and riparian woodland provide hunting/foraging, roosting, and nesting habitat for a variety of species including raptors and common birds.

4.1.3 THRESHOLDS OF SIGNIFICANCE

As provided in Appendix G of the CEQA Guidelines, a project would result in a significant impact to biological resources if it would:

- A. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
- B. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service.
- C. 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.
- D. 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.
- E. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- F. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.
- G. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect to biological resources (Impact LUP-B in Initial Study).

4.1.4 ANALYSIS, IMPACTS, AND MITIGATION MEASURES

Impacts to biological resources resulting from implementation of the proposed project are discussed below. The impact analysis contained herein is based on the Biological Resources Assessment (Appendix 4.1-A), Approved Jurisdiction Determination (Appendix 4.1-B),

Arborist Report (Appendix 4.1-C), and Tree Impacts Memo (Appendix 4.1-D). Impacts to biological resources are assessed using the significance criteria listed in 4.1.3, above. This analysis identifies the potential direct and indirect impacts to biological resources from construction, operation, and maintenance activities related to the proposed project.

Impact BIO-A: The project could result in a substantial adverse effect, either directly or through habitat modifications, on species identified as candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service (potentially significant impact).

The project site is located on approximately 30.11 acres, of which approximately 11.29 acres have slopes less than 30 percent and are suitable for locating single-family residences. The remaining 18.99 acres are steep wooded slopes that will be preserved as part of the project. As discussed previously and as detailed in the BRA, the project site contains suitable and marginally suitable habitat for one special-status plant species, special-status bats, and nesting birds.

Special-status Plant Species

Narrow-anthered brodiaea (*Brodiaea leptandra*)

As discussed in detail above, the narrow-anthered brodiaea, a CNPS rank 1B.2 species was observed and mapped during site surveys in 2023 . Because future development of single-family homes is proposed on or within proximity of portions of the site containing these special-status plant species, the project has the potential to result in significant impacts to narrow-anthered brodiaea. To offset impacts to special-status plant species, the project applicant in consultation with the CDFW shall develop a mitigation plan pursuant to **Mitigation Measure BIO-1**. As provided therein, the mitigation plan shall identify measures to address impacts such as through avoidance, relocation, purchase of mitigation credits, or a combination of measures as recommended by a qualified biologist and subject to approval by the CDFW. With implementation of a mitigation plan set forth in Measure BIO-1, impacts to special-status plant species will be reduced to less than significant.

Special-status Animal Species

As detailed in Section 4.1.2 Environmental Setting above, the project site does not contain suitable habitat for the majority of special-status animal species recorded within proximity

of the project site including the peregrine falcon, California red-legged frog, northern spotted owl, and Townsend's big-eared bat. While the site does contain suitable habitat for the Western pond turtle, the lack of suitable migration pathways precludes the species from utilizing the site.

Based on the lack of suitable habitat and/or lack of access for these special-status animal species, the Biological Resources Analysis concludes that they would not occur onsite. In the absence of these species' occurrence onsite, future construction and operation of single-family residences will result in no impacts to these special-status animal species.

As discussed in Section 4.1.2 above, the project site has the potential to support several special status species including the Pallid bat and nesting birds. As such, the project has the potential to result in potentially significant impacts to these species.

Pallid Bat (*Antrozous pallidus*)

As detailed above, the pallid bat, a California "species of special concern" has been recorded within one mile of the project site. Although no observations of the pallid bat have been made onsite, the presence of large, mature trees could support roosting cavities for this species as well as other bat species. As such, construction activities, including removal of trees could result in significant impacts to the pallid bat and other bat species, if present, through loss of maternity sites, roosting habitat, or death of individual adult and young bats. To address potential impacts to special-status bats, implementation of **Mitigation Measure BIO-2** shall be required. Measure BIO-2 specifies preconstruction surveys and the preferred time of year for tree removal to avoid periods of hibernation and formation of maternity colonies and sets forth requirements to conduct roosting bat surveys prior to site preparation and grading. Measure BIO-2 specifies actions to be taken if roosting or maternity sites are found, including protecting roosts in place until young have become independent and development of a plan for removal and exclusion prior to tree removal. Compliance with Measure BIO-2 would serve to adequately avoid and minimize potentially significant adverse impacts to bat species. Therefore, impacts to the special-status bat species, including the pallid bat as a result of project implementation will be reduced to less than significant with mitigation.

Nesting Birds

As detailed above, the project site provides foraging and nesting habitat for a variety of bird species. Although much of the steeply sloped, wooded areas of the project site will not be disturbed, a number of trees may be removed or trimmed during development of the

project roadways, grading of development sites, and through the installation of landscaping, site improvements, and implementation of the WFPP for fire fuel reduction purposes throughout the life of the project. Common species of raptor and passerine birds could nest on the project site and are protected by the Migratory Bird Treaty Act and their eggs and young are protected by the California Fish and Game Code. Furthermore, any tree bearing an active nest is considered a protected tree by the Calistoga Municipal Code and requires a Tree Removal/Disturbance permit to remove. Proposed tree removal and future construction of single-family homes could result in impacts to active nests. As such, **Mitigation Measure BIO-3** shall be implemented, which requires that a pre-construction nesting bird survey be performed by a qualified ornithologist. The preconstruction survey will identify any nesting birds onsite and within 200 feet of the project site that may be disturbed by noise, vibration, or tree removal and requires establishment of protective nest buffer areas where occupied nests are identified. The nest buffer areas will be protected by exclusion fencing and no construction activities can occur within these areas until the ornithologist determines that the young have left the nest and removed the exclusion fencing. With implementation of Measure BIO-3, potential impacts to nesting birds will be reduced to less than significant.

Conclusion

The project has the potential to result in significant impacts to the special-status species narrow-anthered brodiaea through direct disturbance or removal, and special-status bats and nesting birds as a result of direct impacts to individuals and disturbance of roosting sites or active nests, if present. With implementation of Mitigation Measures BIO-1, BIO-2, and BIO-3 potentially significant impacts to special-status species will be reduced to less than significant.

Impact BIO-A Mitigation Measures:

Mitigation Measure BIO-1: To address impacts to the special-status plant species narrow-anthered brodiaea (*Brodiaea leptandra*), the applicant shall hire a professional biologist to develop a mitigation plan in consultation with the CDFW and submit it to the City of Calistoga for review and approval prior to the issuance of grading permits. Avoidance shall be the preferred mitigation, followed by relocation, and mitigation credits. Deference regarding the appropriate mitigation action shall be given to the project biologist, in consultation with CDFW. The mitigation plan may include some or all of the following elements:

- **Avoidance:** The project development shall avoid development in locations where narrow-anthered brodiaea (*Brodiaea leptandra*) occurs, if feasible, and relocate any individuals found prior to site preparation.
- **Relocation:** A qualified botanist shall be contracted by the City at the applicant's expense to conduct a site survey, collect the seeds, propagules, and topsoils, or other parts of the plant (i.e., corms) that would ensure successful replanting of the population elsewhere. The seeds, propagules, or other plantable portions of all plants shall be collected at the appropriate time of the year. Half of the propagules collected shall be appropriately stored in long-term storage (for example, at California Academy of Sciences). The other half of the seeds, propagules, or other plantable portion of all plants shall be planted at the appropriate time of year (late-fall months) in an area of the subject property or an off-site, protected property that will not be impacted by the project (if the project has a designated off-site mitigation site for impacts on other special-status species, the plants can be seeded on the mitigation site). This area shall be fenced with permanent fencing (for example, chain link fencing) to ensure protection of the species. The applicant should hire a qualified biologist to conduct annual monitoring surveys of the transplanted plant population for a five-year period and should prepare annual monitoring reports reporting the success or failure of the transplanting effort. These reports should be submitted to the City of Calistoga and any other appropriate resource agency (i.e., CDFW) no later than December 1st each monitoring year.
- **Mitigation Credits:** All or a portion of the mitigation requirements may be satisfied via the purchase of qualified mitigation credits and the preservation of offsite habitat.

Mitigation Measure BIO-2: To avoid impacts to roosting pallid bats or other bat species the following procedures shall be implemented by a qualified biologist possessing a minimum of two years of experience surveying for roosting bats and in consultation with the CDFW. Specific survey actions depend on the time of year, and shall be as specified below.

- **January 1 – Feb. 28/29 (Hibernation)** For tree or building removal: A qualified biologist shall complete preconstruction surveys within 14 days prior to starting work to check for hibernating bats. If the qualified biologist finds evidence of bat presence during the surveys, then he/she shall develop a plan for removal and exclusion in conjunction with the CDFW.

- **March 1 –April 1 (Seasonal Bat Activity after hibernation and prior to maternity)** For tree or building removal: A qualified biologist shall complete preconstruction surveys for roosting bats within 14 days prior to starting work. If the qualified biologist finds evidence of bat presence during the surveys, then he/she shall develop a plan for removal and exclusion, in conjunction with the CDFW.
- **April 2 – August 30 (Maternity Time)** For tree or building removal: A qualified biologist shall complete preconstruction surveys within 14 days prior to starting work to check for maternity sites. If a maternity site is found, impacts to the maternity site will be avoided by establishment of a non-disturbance buffer until the young have reached independence. The size of the buffer zone shall be determined by the qualified bat biologist at the time of the surveys. Once young have reached independence, the biologist should develop a plan for bat removal and exclusion in conjunction with CDFW.
- **August 31 – Oct. 15 (Seasonal Bat Activity when bats are able to fly and feed independently)** For tree or building removal: A qualified biologist shall complete preconstruction surveys for roosting bats within 14 days prior to starting work. If the qualified biologist finds evidence of bat presence during the surveys, then he/she shall develop a plan for removal and exclusion, in conjunction with the CDFW.
- **Oct. 16 – Dec. 31 (Hibernation)** For tree or building removal: A qualified biologist shall complete preconstruction surveys within 14 days prior to starting work to check for hibernating bats. If hibernation roosts are found, the qualified biologist shall develop a plan for removal and exclusion in conjunction with the CDFW.

Mitigation Measure BIO-3: To avoid impacts to nesting birds, the following procedures shall be implemented by a qualified ornithologist with extensive experience working with nesting birds near and on construction sites.

- **Survey.** A preconstruction nesting bird survey shall be conducted within 15 days prior to construction work or tree removal if this work would start between February 1st and August 31st. The nesting bird survey should include an examination of all trees onsite and within 200 feet of the entire project site (i.e., within a zone of influence of nesting birds), not just trees slated for removal. The zone of influence includes those areas outside the project site where birds could be disturbed by earth-moving vibrations and/or other construction-related noise.
- **Nest Buffers.** If birds are identified nesting on or within the zone of influence of the construction project, the qualified ornithologist shall establish a temporary

protective nest buffer around the nest(s). The nest buffer should be staked with orange construction fencing and of a sufficient size to protect the nesting site from construction-related disturbance or utilize current best practices in establishment of construction exclusion barriers. Typically, adequate nesting buffers are 50 feet from the nest site or nest tree dripline for small birds and up to 300 feet for sensitive nesting birds that include several raptor species known from the region of the project site but that are not expected to occur on the project site. No construction or earth-moving activity may occur within any established nest protection buffer prior to September 1 unless it is determined by the ornithologist that the young have fledged (that is, left the nest) and have attained sufficient flight skills to avoid project construction zones, or that the nesting cycle is otherwise completed. In the region of the project site, most passerine species complete nesting by mid-July. This date can be significantly earlier or later and would have to be determined by the ornithologist. At the end of the nesting cycle, and fledging from the nest by its occupants, as determined by the ornithologist, temporary nesting buffers may be removed, and construction may commence in established nesting buffers without further regard for the nest site.

Impact BIO-B: The project could result in a substantial adverse effect on riparian habitats and/or other sensitive natural communities identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service (potentially significant impact).

Non-sensitive Communities

The anthropogenic/ruderal herbaceous and upland Douglas fir community types are not identified as sensitive natural communities in the Biological Resources Analysis nor are they identified as sensitive communities on CDFW's California Natural Community List.

Sensitive Natural Communities

In addition to information provide in the Biological Resources Analysis, CDFW's California Natural Community List was referenced to determine the most analogous natural community types for the mixed evergreen forest, mixed oak woodland, and riparian woodland vegetative communities present onsite. For the purposes of this analysis, these three vegetation types are conservatively considered to qualify as sensitive natural communities pursuant to CDFW's California Natural Community List as they contain specific species identified as rare and/or sensitive.

Construction activities associated with site development have the potential to impact sensitive natural communities onsite through direct removal of individual trees that are part of the larger natural community as well as through runoff associated with construction activities which could impact the riparian woodland community present onsite. Although future development of single-family residences will primarily occur on previously disturbed areas, the project has the potential to impact the peripheral areas of sensitive natural communities either through direct removal of trees and vegetation, or during construction activities occurring in proximity to these communities. Specifically, construction activities have the potential to damage tree roots, and ultimately the health and viability of individual tree species that contribute to the overall community. Runoff associated with ongoing operation of single-family residences also has the potential to impact the riparian woodland community type if not properly controlled.

The City of Calistoga's Tree Protection Ordinance requires approval of a Tree Removal Permit and preparation of a Tree Protection Plan for all discretionary permits. Protected trees in the City of Calistoga include valley oaks, all native oaks with a 6-inch DBH or greater, all trees over 12 inches DBH, and any tree bearing an active nest of a fully protected bird. As proposed, initial project development activities will remove 20 protected trees (14 Douglas fir, 4 coast live oak, 1 black oak, 1 coast redwood) to accommodate widening of the right-of-way that runs east/west through the site. Due to the high mortality rate of Douglas fir onsite, the project proposes replacement of oak trees only at a ratio of no less than 3:1 (15 replacement trees total). Prior to tree removal associated with initial project development as well as any tree removal associated with reasonably foreseeable future development of single-family residences, compliance with **Mitigation Measure BIO-4** shall be required. As specified below, BIO-4 requires submittal and approval of a Tree Removal Permit and Tree Protection Plan (TPP) in compliance with Chapter 19.01 (Trees) of the Calistoga Municipal Code. .

Future development of single-family residences will occur on previously developed portions of the site where trees are generally not present. Based on the proximity of protected trees to areas to be developed, the project has the potential to result in impacts to protected trees, including individuals that are part of larger sensitive natural communities. Through preparation and implementation of a Tree Protection Plan, incorporated herein as **Mitigation Measure BIO-4**, impacts to individual trees that are part of a larger sensitive natural community will be reduced to less than significant. Additionally, Compliance with Chapter 19.05 (Stormwater Pollution Control), **Mitigation Measures HYD-1** (requiring implementation of an approved Stormwater Pollution Prevention Plan), and

Mitigation Measure HYD-2 (requiring preparation of a final stormwater control plan prior to construction of single-family residences) will reduce impacts to the riparian woodland natural communities during construction and operation to less than significant.

Impact BIO-B Mitigation Measures:

Mitigation Measure BIO-4: Prior to removal of trees associated with road widening, including emergency vehicle access, a Tree Removal Permit and Tree Protection Plan shall be submitted for review and approval by the City of Calistoga.

Concurrent with application of discretionary entitlements for development of single-family residences, a separate Tree Removal Permit shall be required if trees are proposed for removal. The Tree Removal Permit shall specify trees proposed for removal and shall contain all other information specified in Chapter 19.01 (Trees) of the Calistoga Municipal Code. Application(s) for future discretionary entitlements associated with development of single-family residences shall also specify construction activities that will occur within the root protection zone of protected trees to be preserved, and a Tree Protection Plan shall accompany the application(s). Anticipated conditions of the Tree Removal Permit and Tree Protection Plan may include, but are not limited to the following:

Tree Removal Permit

- All replacement trees must be planted prior to final inspection of the building permit for which the removal was sought.
- Tree replacement shall occur at a rate of no less than three (3) replacement trees planted for every one (1) protected tree removed or killed, unless otherwise specified.
- Any removal or mortality of any Valley Oak (*Quercus lobata*) of any size on the project site shall be replaced at a ratio of no less than three (3) replacement trees planted for every one (1) removed.
- Replacement trees must be planted onsite or at a suitable off-site location as determined by the Department of Public Works or the mitigation fees stipulated in the Tree Removal/Disturbance Permit are forfeit.
- Tree removal shall occur between October 1 and January 31.
- Prior to tree removal, appropriate surveys shall be conducted as specified in Mitigation Measures BIO-2 and BIO-3.

Tree Protection Plan(s)

- Protected trees that are not designated for removal shall be protected with temporary chain-link fencing at least 6 feet tall installed around the outer margin of the root

protection zone (RPZ). The fence shall remain in place and be properly maintained for the duration of all work onsite.

- No grading, excavation, construction, storage, or dumping of materials shall occur within the RPZ without application to the City for a Tree Removal/Disturbance Permit.
- No underground services including utilities, drains, water, or sewer lines shall be routed within any RPZ without application to the City for a Tree Removal/Disturbance Permit.
- Any tree work performed on trees to be retained must be performed by an International Society of Arboriculture (ISA) Certified Arborist or Certified Tree Worker and shall adhere to the latest editions of the American National Standards Institute (ANSI) Z133 and A300 standards as well as the ISA Best Management Practices (BMPs) for Tree Pruning. Pruning contractors shall have the C25/D61 license specification.

Impact BIO-C: The project could have a substantial adverse effect on state protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other (potentially significant impact).

As detailed above, and as shown in Figure 4.1-1 **Error! Reference source not found.** the project site contains approximately 0.080-acres (3,475 square feet) of seasonal wetlands (uniquely identified as W1 through W5) and 0.087 acres (448 linear feet and 3,634 square feet) of ephemeral drainages (uniquely identified as OW1 through OW7) that could be impacted by construction of the proposed project either indirectly during construction activities occurring in proximity to these features or through direct modification. Based on the US Army Corps of Engineers May 6, 2024 Approved Jurisdiction Determination, all wetlands onsite are considered non-federal features and are not under the jurisdiction of the Corps. However, it is anticipated that the RWQCB will take jurisdiction over these features. As such, any direct or indirect impacts to the 0.080 acres of non-federal wetlands onsite will be subject to review and approval by RWQCB.

Indirect Impacts

Construction activities associated with widening Kortum Canyon Road has the potential to result in indirect impacts to the mapped wetland (W5) located on Kortum Canyon Road at the northern project boundary. As noted in the Biological Resources Analysis, this mapped wetland is a roadside swale/ditch where the City's storm drain system briefly daylights, flows north offsite for approximately 200 feet, and reenters the storm drain system via a culvert. As shown on Sheet 3.0 of the project plans (Appendix 3-A), this existing swale/ditch will be preserved, however, based on its proximity to the proposed roadway improvements, construction activities have the potential to result in impacts to this wetland. In addition to widening Kortum Canyon Road, other project activities, including

improvements to the east/west project right-of-way, installation of utilities, and future construction of single-family homes have the potential to result in indirect impacts during project construction to protected wetlands and other waters proposed to remain. As shown in Figure 4.1-1 above, all areas mapped as wetlands or other waters are located within building footprints on proposed lots and/or near the project roadway. Based on proximity of proposed site improvements to these features, the project has the potential to result in indirect impacts to protected waters during construction. To address indirect impacts to jurisdictional waters, implementation of **Mitigation Measure BIO-5**, which provides avoidance measures and best management practices to implement during all phases of construction, shall be required. With implementation of Measure BIO-5, indirect impacts to seasonal wetlands and drainage features during project construction will be reduced to less than significant.

Direct Impacts

The exact location of future single-family residences is not known at this time, however, based on the proposed building footprint, which identifies areas of the site that can be developed, future construction of these residences would result in direct impacts to protected wetlands and other waters through modification, such as fill, and it is unlikely that the wetlands can be avoided. To address direct impacts to protected wetlands and other waters, discretionary entitlement applications for future development of single-family residences shall comply with the requirements set forth in **Mitigation Measure BIO-6**. As avoidance is likely not feasible and project activities will result in fill of these jurisdictional features, compliance with **Mitigation Measure BIO-7** shall be required. As provided therein, approval of permits by the RWQCB shall be required for fill of jurisdictional features. As determined by the applicable regulatory agencies, creation or restoration of wetlands on- or off-site or purchase of mitigation credits may be required. Compliance with measures BIO-6 and BIO-7 will reduce or offset impacts to onsite wetlands to less than significant.

In addition to RWQCB jurisdiction, several of the drainage features onsite exhibit bed, bank, and channel features and are therefore also under jurisdiction of CDFW pursuant to Section 1602 of the California Fish and Game Code. To ensure impacts associated with changes/modifications to these features are adequately addressed, the project applicant shall be required to comply with **Mitigation Measure BIO-8**, which requires approval of a Streambed Alteration Agreement (SBAA) between the applicant and CDFW to permit removal or alteration of these drainage features. With implementation of measure BIO-8,

impacts to regulated drainage features onsite will be reduced to less than significant.

Impact BIO-C Mitigation Measures:

Mitigation Measure BIO-5: Indirect impacts to protected wetlands and drainage features shall be avoided through implementation of best management practices (BMPs) prior to earthwork. Construction exclusion zones shall be established by installing appropriate construction fencing, silt fencing, wildlife friendly hay wattles (no monofilament netting), gravel wattles, and other protective measures between project activities and the seasonal wetlands and drainage feature.

All non-native, invasive vegetation removed shall be discarded offsite and away from wetland areas to prevent reseeding.

Prior to implementation of the construction project, a biological monitor shall inspect installation of BMPs to ensure proper protection of the seasonal wetlands and jurisdictional drainage feature areas are in place. BMPs shall thereafter be routinely inspected by the construction manager to ensure BMPs remain in place for the duration of construction activities. Upon completion of project construction all exclusion fencing shall be removed along with any temporary BMPs.

Mitigation Measure BIO-6: Upon submittal of a Final Development Plan for Design Review approval for single-family residences on lots within 20 feet of mapped features, the owner(s) and/or applicant(s) shall demonstrate all feasible avoidance techniques to reduce direct impacts to seasonal wetlands and drainage features have been considered, and where viable, incorporated into the project. This shall include, at a minimum establishment of a 20-foot radius non-disturbance buffer around the mapped features which may be demarcated with a split rail fence, or other avoidance techniques such as installation of landscape/greenbelt buffers. All feasible avoidance techniques shall be established in coordination with a qualified biologist and subject to final review and approval by the Planning Commission. All avoidance techniques approved as part of the Design Review Permit for individual lots shall be clearly identified on all subsequent construction plans (e.g grading, building, and/or another similar permit).

If avoidance techniques are determined to be infeasible, a statement from a qualified biologist shall be required and shall clearly state reasons for infeasibility, subject to acceptance by the City of Calistoga. This mitigation shall only be considered satisfied if avoidance techniques are incorporated, or if a qualified biologist provides satisfactory evidence demonstrating the infeasibility of incorporation of such techniques. If avoidance

is not feasible, implementation of Mitigation Measure BIO-7 is required.

Mitigation Measure BIO-7: Where avoidance of wetlands and drainage features described in BIO-6 is not feasible, as determined by a qualified biologist, the owner(s) and/or applicant(s) of individual lots shall obtain all necessary permits from the Regional Water Quality Control Board (RWQCB) prior to approval of initial site development permit(s) (e.g. grading, building, or another similar permit). Measures to offset the loss of wetlands and drainage features that may be required by the RWQCB include but are not limited to the following. Specific measures will be as prescribed by the applicable permitting agency as part of the permit-approval process.

- Replacement of impacted wetlands at a 1:1 ratio. For permanent wetland impacts, wetlands can be replaced at a minimum ratio of one acre created for each acre, or fraction thereof, permanently impacted.
- Creation of in perpetuity preservation. Regulatory agencies generally require that wetlands not impacted by the proposed project and any new wetlands created to mitigate project impacts be set aside in perpetuity, either through deed restrictions or conservation easements.
- Establishment of a five-year monitoring program to monitor the progress of the wetland mitigation toward an established goal. At the end of each monitoring year, an annual report will be submitted to the RWQCB and other resource agencies that permitted the project. This report will document the hydrological and vegetative condition of the mitigation wetlands and will recommend remedial measures as necessary to correct deficiencies. The applicant(s)/property owner(s) shall provide the City with a copy of each annual report to demonstrate compliance.
- In lieu of creating compensation wetlands, as approved by the RWQCB, the applicant may purchase mitigation credits from an approved mitigation bank at a 1:1 ratio or as otherwise required by the RWQCB at the time permits are issued.

Mitigation Measure BIO-8: Prior to issuance of a grading permit, and prior to any modification to the bed, bank, or channel of the drainages onsite or removal of associated riparian vegetation, the project proponent shall secure a Streambed Alteration Agreement (SBAA) from the CDFW and provide documentation to the City. If removal of riparian vegetation will occur, a Tree Replacement and Riparian Enhancement Plan detailing the proposed plant palette, irrigation and maintenance of plantings, success criteria, and maintenance and monitoring consistent with CDFW requirements shall also be submitted.

Typical tree replacement is at a ratio of no less than 3:1 and may include

replacement/enhancement planting onsite along a constructed linear feature or along an existing onsite drainage; replacement/enhancement planting at an offsite location; and/or purchase of riparian credits from an approved mitigation or conservation bank. Specific compensation for impacts to drainage features and riparian vegetation shall be as specified by CDFW through the SBAA process.

Impact BIO-D: The project would not 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 (less than significant impact).

Wildlife movement corridors are linear habitats that provide connectivity to other natural vegetation communities. The entire site and surrounding area serves as a local corridor for terrestrial wildlife species. Though development of the proposed project may result in wildlife finding other suitable habitat to move through, it will not impede movement or result in a barrier to wildlife movement. As proposed, the project will be developed on previously disturbed areas, and heavily wooded areas on the site's perimeter will be maintained. There are no flowing rivers or streams on the project site that are used as wildlife corridors or habitat for any species of migratory fish. Therefore, the project will not interfere with the movement of fish or other wildlife species and impacts of the project will be less than significant.

Impact BIO-E: The project could conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (potentially significant impact).

Many trees on the project site are considered Protected Trees pursuant to Chapter 19.01 of the City's Municipal Code. The arborist report prepared for the proposed project by MacNair & Associates on November 1, 2022 (Appendix 4.1-C), documents trees onsite, and the Tree Impacts Memo prepared by MacNair & Associates on January 25, 2024 (Appendix 4.1-D) states that no significant trees are located within the proposed building envelopes, noting the absence of trees in these locations is a direct result of previous grading and building pads associated with the former Busk Estate development. As detailed in the Arborist report, 20 protected trees will be removed to accommodate widening of the east/west project roadway, inclusive of one black oak (*Quercus kelloggii*), four coast live oak (*Quercus agrifolia*), fourteen Douglas fir (*Pseudotsuga menziesii*), and one coast redwood (*Sequoia sempervirens*) cluster.

As specified in Section 19.01.040(E) of the CMC, all applications for discretionary projects or other permits under the municipal code are required to include a Tree Protection Plan to minimize impacts on protected trees. Section 19.01.040(F) of the CMC further requires that removal or disturbance of any protected trees shall be subject to review and approval of a Tree Removal/Disturbance Permit. The Tree Removal/Disturbance Permit requires deposits for removed trees be placed with the City pending the planting of replacement trees. To ensure compliance with the requirements of the CMC, and reduce potential impacts due to a conflict with local policies **Mitigation Measure BIO-4** is imposed. With implementation of measure BIO-4, impacts resulting from a conflict with local policies protecting biological resources will be reduced to less than significant.

Impact BIO-E Mitigation Measures

Mitigation Measure BIO-4: See Impact BIO-B Mitigation Measures above.

Impact BIO-F: The project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan (no impact).

There are no Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plans that would apply to the proposed project. Therefore, there will be no project impacts due to conflicts with the provisions of a habitat or natural community conservation plan.

Impact BIO-G (Impact LUP-B in Initial Study): The project could cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect to biological resources (potentially significant impact)

The project is consistent with General Plan policies and objectives adopted for the purpose of avoiding or mitigating an environmental impact to biological resources. Specifically, the project is consistent with Objective OSC-1.2, Policy 1.2-3, which seeks to minimize impacts to biological resources through preparation of assessments that determine the presence or absence of populations of special-status species, sensitive natural communities, and wetland resources. As detailed above, both biological and wetland assessments were prepared for the project and identified potential resources onsite. Consistent with this General Plan objective and policy, the project is subject to **Mitigation Measures BIO-1 through BIO-8**, which will reduce, offset, or avoid impacts to biological resources.

The project is also consistent with Objective OSC-1.3, Policy 1.3-1 as it will conserve stands of trees and vegetation on steeply sloped areas of the site, and where tree removal is proposed for roadway improvements or trees may be impacted by construction activities, **Mitigation Measure BIO-4** is imposed, which requires compliance with the City's Tree Preservation Ordinance.

As detailed above, wetlands onsite may be indirectly or directly impacted by the project. However, mitigation measures requiring implementation of best management practices during construction (**Mitigation Measure BIO-5**), avoidance of wetlands where feasible (**Mitigation Measure BIO-6**), and where wetlands will be modified, altered, or removed, compliance with applicable regulatory requirements (**Mitigation Measures BIO-7 and BIO-8**) will reduce impacts to wetlands to less than significant. As such, the project is consistent with Objective OSC-1.5, Policies 1.5-2, 1.5-3, and 1.5-4.

The project site contains discontinuous ephemeral drainage scours, as well as the Michele Caviglia Memorial Spring which flows down the western edge of Kortum Canyon Road, eventually entering the City's storm drain system via a drain inlet, which then flows north to the Napa River. The project is required to implement best management practices and erosion control measures, as set forth in **Mitigation Measure GEO-3**. Implementation of measure GEO-3 is consistent with General Plan Objective OSC-2.2, Policy 2.2-1 as it requires the proposed project to mitigate impacts associated with erosion and silt flows into watercourses.

As detailed above, the project, through implementation of applicable mitigation measures does not conflict with plans, policies, and regulations adopted for purposes of reducing or offsetting an impact to biological resources. As such, the project will result in less than significant land use impacts as it relates to biological resources.

Impact BIO-G Mitigation Measures:

Mitigation Measures BIO-1 through BIO-8: See Impact BIO-A, BIO-B, BIO-C, and BIO-E Mitigation Measures above.

4.1.5 CUMULATIVE IMPACTS

The geographic scope for analyzing cumulative biological resources impacts includes the project site and areas surrounding the project site. As shown in Figure 4-1 (Cumulative Projects Map), the Calistoga Hills project, located at 515 Foothill Blvd. is near the project site and exhibits a similar biological setting as the proposed project, in that it is a heavily

wooded site surrounded by low density development. Other projects considered in the cumulative geographic scope for biological resources include reasonably foreseeable future projects in the immediate vicinity of the site. Sites surrounding the proposed project are already developed with low-density residential and agricultural uses.

Cumulative projects that would occur on previously undeveloped land would be required to identify and mitigate any potentially significant impacts on biological resources, similar to the proposed project. Projects that would occur on previously developed land or in urbanized areas have less potential to significantly impact biological resources; however, there is a potential for nesting birds to be present in existing trees and landscaping or existing buildings. The combined construction of projects within the vicinity of the proposed project could deprive some species of habitable space. However, it is anticipated that species that are potentially affected by related projects would also be subject to the same requirements of CEQA as the project. Additionally, all projects within the City of Calistoga are subject to compliance with applicable general plan objectives and policies as well as compliance with municipal code regulations, such as those requiring implementation of tree protection measures and erosion control during construction activities. Determinations of impacts, applicable mitigation measures, and compliance with local regulations would be made on a case-by-case basis and the effects of cumulative development on wildlife would be mitigated to the extent feasible in accordance with CEQA and other applicable legal requirements.

Therefore, cumulative adverse effects on biological resources would be less than significant. The combined impact of the project and other projects is insignificant, and the project's incremental effect, with incorporation of mitigation measures identified above, is not cumulatively considerable.

4.1.6 APPENDICES

- Appendix 4.1-A: Biological Resources Assessment, prepared by Monk & Associates, January 3, 2024
- Appendix 4.1-B: Approved Jurisdictional Determination, prepared by Army Corps of Engineers, May 6, 2024
- Appendix 4.1-C: Arborist Report, prepared by Macnair & Associates, November 1, 2022
- Appendix 4.1-D: Kortum Canyon Tree Impacts Memo, prepared by MacNair & Associates, January 1, 2024

4.1.7 REFERENCES

1. California Fish and Game Code
 - a. Division 2. Department of Fish and Wildlife
 - b. Division 3. Fish and Game Generally
 - c. Division 4. Birds and Mammals
2. United States Code
 - a. Title 33 – Navigation and Navigable Waters
 - b. Title 16 – Conservation
3. California Department of Fish and Wildlife, Natural Communities, <https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities#natural%20communities>, accessed March 2024