Campbell Creek Culvert Replacement Project

Draft Initial Study/Mitigated Negative Declaration

December 2022

Cardno

now

Stantec

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Prepared for:

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Acronyms and Abbreviations

Air District	Bay Area Air Quality Management District
APN	Assessor Parcel Number
Basin Plan	Water Quality Control Plan for the San Francisco Bay Basin
BMPs	Best Management Practices
CAAQS	California Ambient Air Quality Standards
CALFIRE	California Department of Forestry and Fire Protection
CARB	California Air Resources Board
CCC	Central California Coast
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensations, and Liability Act
CGS	California Geological Survey
CNDDB	California Natural Diversity Database
CO_2	carbon dioxide
CRHR	California Register of Historical Resources
CRLF	California red-legged frog
CWA	Clean Water Act
dBA	A-weighted decibels
DBH	diameter at breast height
DWR	Department of Water Resources
EIR	Environmental Impact report
EPCRA	Emergency Planning and Community Right-to-Know Act
ESA	Endangered Species Act
ESU	Evolutionary significant unit
FYLF	Foothill yellow-legged frog
General Plan	Napa County General Plan
GHG	greenhouse gas
HHWE	Household Hazardous Waste Elements
HR	Hydrologic Region
HUC	Hydrologic Unit Code

Msl	Mean Sea Level
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NDFE	Non-Disposal Facility Elements
NMFS	National Marine Fisheries Service
NO_X	nitrogen oxides
NPDES	National Pollution Discharge Elimination System
NRIS	Natural Resource Information Systems
NSPOW	Northern spotted owl
NWP	Nationwide Permit
O&M	Operation and maintenance
O_3	ozone
PM	particulate matter
RCD	Resource Conservation District
RWQCB	Regional Water Quality Control Board
SJVAPCD	San Joaquin Valley Air Pollution Control District
SPRP	Spill Prevention and Response Plan
SPS	standalone power system
SRA	State Responsibility Area
SRRE	Source Reduction and Recycling Elements
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
URBEMIS	Urban Land Use Emissions Model
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UVA	Upper Valley Agency
VOCs	volatile organic compounds
WEAT	Worker Environmental Awareness Training

1 Introduction

1.1 Introduction and Regulatory Guidance

This Initial Study/Mitigated Negative Declaration has been prepared by Napa County to evaluate potential environmental effects resulting from the Campbell Creek Culvert Replacement (Project). The Project is located on Campbell Creek near the Lokoya Fire Station at 5900 Dry Creek Road in Napa County. Chapter 2, Project Description provides a detailed description of the Project.

This document has been prepared in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations Section 15000 et seq.). An Initial Study is prepared by a lead agency to determine if a project may have a significant effect on the environment (State CEQA Guidelines Section 15063[a]) and thus to determine the appropriate environmental document to prepare. In accordance with State CEQA Guidelines Section 15070, a "public agency shall prepare…a proposed negative declaration or mitigated negative declaration…when: (a) The Initial Study shows that there is no substantial evidence…that the project may have a significant impact on the environment, or (b) The Initial Study identifies potentially significant effects but revisions to the project plans or proposal are agreed to by the applicant and such revisions would reduce potentially significant effects to a less-than-significant level." In this circumstance, the lead agency prepares a written statement describing its reasons for concluding that the project would not have a significant effect on the environment and, therefore, does not require the preparation of an environmental impact report (EIR). By contrast, preparation of an EIR is required when the project may have a significant environmental impact that cannot clearly be reduced to a less-than-significant effect by adoption of mitigation or by revisions in the project design.

As described in the environmental checklist (Chapter 3), the Project would not result in any significant environmental impacts that cannot be mitigated to a less-than-significant level. Therefore, an Initial Study/Mitigated Negative Declaration is the appropriate document for compliance with the requirements of CEQA. This Initial Study/Mitigated Negative Declaration conforms to these requirements and to the content requirements of State CEQA Guidelines Section 15071.

Under CEQA, the lead agency is the public agency with primary responsibility over approval of the project. Napa County is the Project proponent, and a large portion of the Project takes place on land owned and managed by Napa County. In addition, the culvert that is the subject of the Project is owned and managed by Napa County. Napa County is considering a discretionary action to approve the Project. Therefore, Napa

County is the lead agency. The purpose of this document is to present to decision-makers and the public information about the environmental consequences of implementing the Project.

This disclosure document is being made available to the public for review and comment. This Initial Study/Mitigated Negative Declaration will be available for public review period from December 10, 2022, to January 10, 2022, at: XXX website (website address: www.countyofnapa.org/3428/Campbell-Creek-Fish-Passage-RDS-22-01).

Questions or comments regarding this Initial Study/Mitigated Negative Declaration should be addressed to:

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1.2 Summary of Findings

Chapter 3 of this document contains the analysis and discussion of potential environmental impacts of the Project. Based on the issues evaluated in that chapter, it was determined that the Project would have either no impact, a less-than-significant impact, or a less-than-significant impact with mitigation imposed related to all of the issue areas identified in the Environmental Checklist, included as Appendix G of the State CEQA Guidelines. These include the following resource areas:

- Aesthetics
- Agriculture/Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas (GHG) Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality

- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Tribal and Cultural Resources
- Utilities and Service Systems
- Wildfire
- Mandatory Findings of Significance

1.3 Document Organization

This Initial Study/Mitigated Negative Declaration is organized as follows:

- **Chapter 1, Introduction,** provides an introduction to the environmental review process and the purpose of this document, presents a summary of findings, and describes the organization of this document.
- **Chapter 2, Project Description,** describes Project goals and objectives, the location of the Project, and the surrounding land uses and environmental setting. It also provides a description of the Project—including details pertaining to Project construction; operations and maintenance; and expected permits.
- **Chapter 3, Environmental Impacts and Mitigation Measures,** analyzes a range of environmental resource areas identified in the Environmental Checklist (Appendix G of the State CEQA Guidelines) and determines if the Project would result in no impact, less-than-significant impact, less-than-significant impact with mitigation incorporated, or a potentially significant impact. As discussed above, none of the impacts were determined to be significant after incorporation of identified mitigation measures.
- **Chapter 4, References,** lists the references used in preparation of this Initial Study/Mitigated Negative Declaration.
- **Chapter 5, List of Preparers,** identifies report preparers.

2 Project Description

The Dry Creek Road Culvert (culvert) at the mouth of Campbell Creek conveys the water in Campbell Creek beneath Dry Creek Road into Dry Creek along the south edge of the paved roadway. The culvert is undersized for flood stage flows and is a barrier to fish passage. The Campbell Creek Culvert Replacement (Project) is a proposal by Napa County to replace the existing culvert, an 85-foot-long, 72-inch-diameter corrugated metal pipe, with a bottomless arch bridge precast culvert. In addition to replacement of the culvert, the Project is designed to improve the hydrologic function of Campbell Creek at the culvert's outlet and along approximately 160 linear feet of creek upstream of the culvert's inlet by resolving channel incision and reconnecting the creek to its historical floodplain.

2.1 Goal

The goal of the Project is to improve the hydrologic and aquatic habitat function of Campbell Creek where Campbell Creek crosses underneath Dry Creek Road. The Project is intended to install infrastructure and restore the creek bed to:

- accommodate 50-year and 100-year flood stage flows,
- cost effectively reduce sediment delivery in the Napa River watershed, and
- promote fish passage into Campbell Creek, including for spawning Central California Coast steelhead (*Oncorhynchus mykiss*), a federally threatened species under the Endangered Species Act (ESA).

2.2 Project Location

The Project is located along Campbell Creek in Napa County, California, in Township 7 North, Range 5 West, Section 32 on the U.S. Geological Survey (USGS) Rutherford, California, 7.5-minute quadrangle map, Mount Diablo Meridian. The existing culvert is approximately 100 feet from the intersection of Dry Creek Road and Oakville Grade Road and immediately east of the Lokoya Fire Station at 5900 Dry Creek Road (the fire station is accessed via a driveway from Dry Creek Road). The Project is located at an elevation of approximately 560 feet above mean sea level (msl). Coordinates at the approximate center of the existing culvert are 38.407229, −122.433236.

The total footprint of the area where Project activity would take place, inclusive of the work area along Campbell Creek as well as the areas identified for equipment staging and storage, is approximately 0.449 acre (19,558 square feet). For the purposes of this document, this area is referred to as the Project site. Within the Project site, the total footprint along the creek that would be impacted by the culvert replacement is

approximately 0.34 acre (14,810 square feet). The total footprint of the area identified for staging and storage of equipment and materials is 0.109 acre.

The length of creek within the work area includes the area from the mouth of the culvert, where Campbell Creek empties into Dry Creek, to approximately 280 linear feet upstream. The work area extends through the county right-of-way under and along Dry Creek Road and onto portions of three additional parcels. Specifically, upstream of the county right-of-way, the Project site extends north approximately 160 linear feet along Campbell Creek and is roughly coincident with the boundaries of two parcels: Assessor Parcel Number (APN) 027-310-036, a private parcel on the east side of the creek, and APN 027-310-026, a county-owned parcel on the west side of the creek. Downstream of Dry Creek Road, the Project site extends just slightly beyond the county right-of-way onto APN 027-310-014, a private parcel.

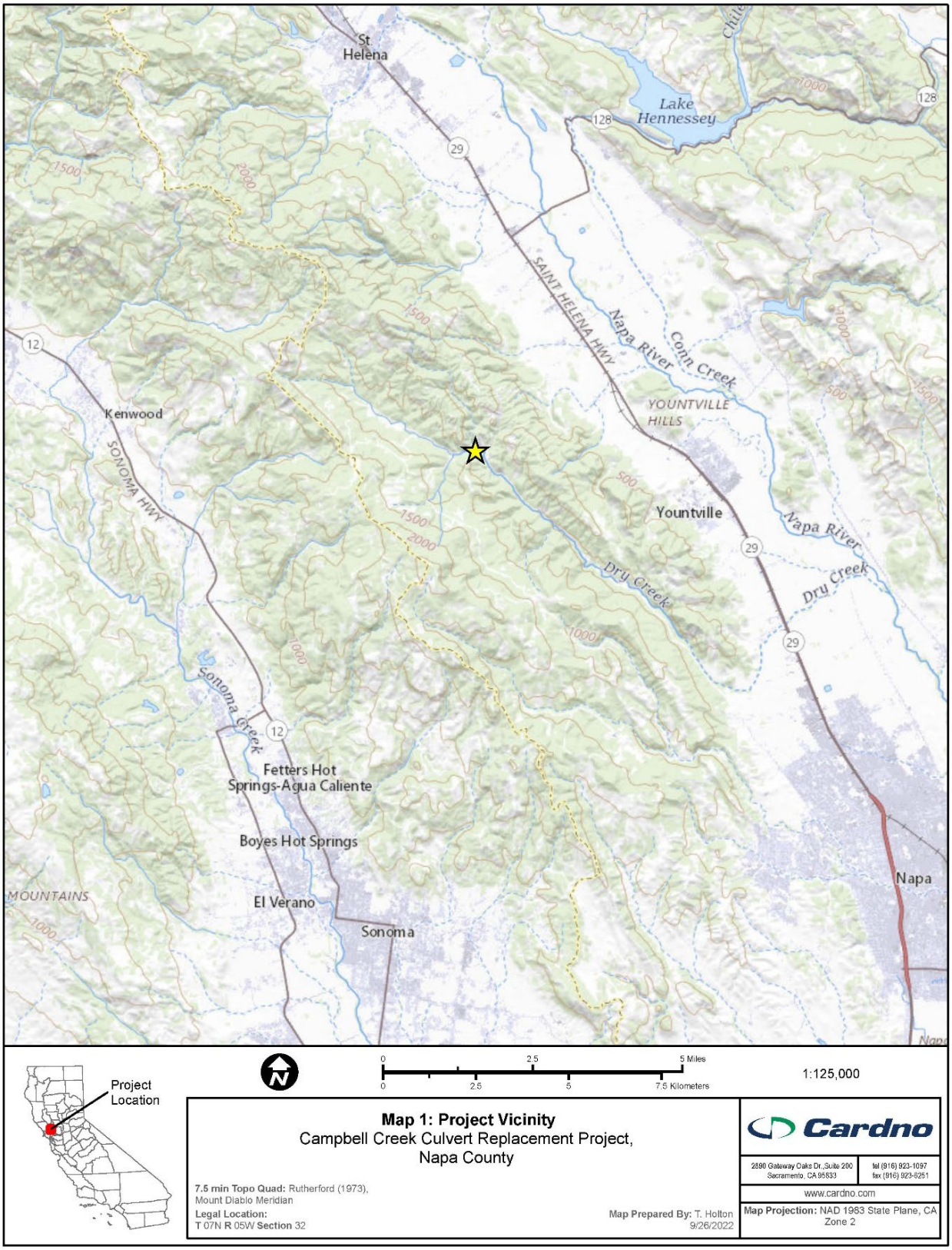
Map 1 indicates the general location of the Project. Map 2 illustrates the approximate footprint of the work area and of the two staging areas.

2.3 Surrounding Land Uses and Setting

The Project is located in a largely undeveloped and rural area dominated by California oak woodland and chaparral habitat. Land use around the Project site includes mostly rural private residential uses and vineyards. The Napa County General Plan (General Plan) designates the Project site and surrounding area as “Agriculture, Watershed, and Open Space” (Napa County 2016). The Project site and surrounding parcels are zoned “Agricultural Watershed (AW)” (Napa County 2015). There are no formal trails along Campbell Creek; however, an informal (volunteer) trail extends along the creek on its west side (adjacent to the fire station) upstream from Dry Creek Road. In its study of the Campbell Creek watershed, the Napa County Resource Conservation District (RCD) found that the watershed is entirely under private ownership (Napa County RCD 2011).

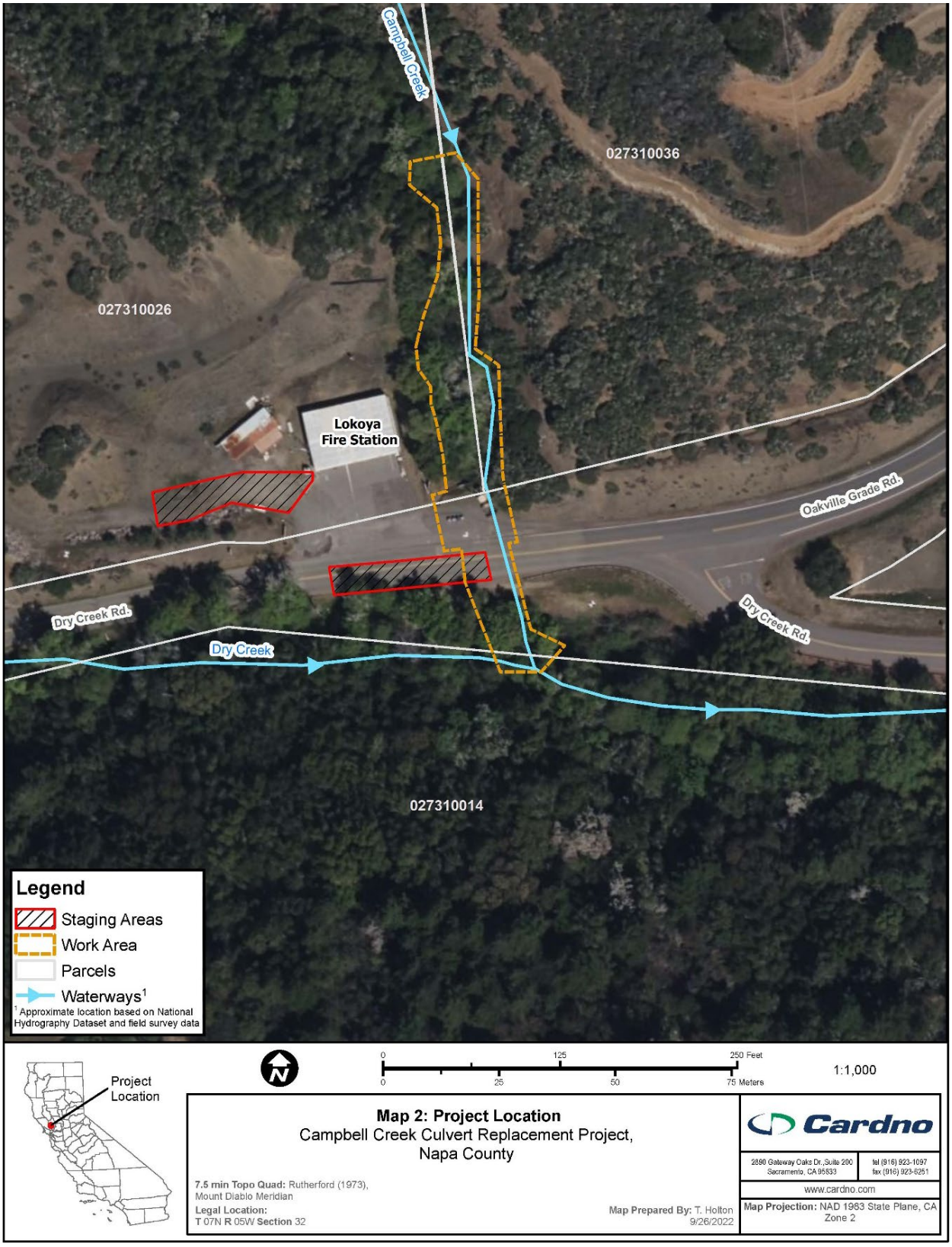
The Project site is approximately 7 miles northwest from the nearest city, Yountville, via Oakville Grade Road and State Route 29/St. Helena Highway. Dry Creek Road, the road under which the culvert conveys flow, is a two-lane asphalt-paved road that is classified as a rural minor collector. Dry Creek Road has a winding road alignment with limited views of Campbell Creek and Dry Creek due to trees and vegetation surrounding the roadway. The nearest recreational sites include Yountville Park, approximately 4 miles due east. Jack London State Historic Park and Sonoma Valley Regional Park are around 7 miles southwest of the Project site (along State Route 12/Sonoma Highway). Lake Hennessey City Recreation Area is approximately 7.5 miles to the northeast along State Route 128/Sage Canyon Road.

Map 1. Project Vicinity



9/26/2022, 11:46 AM | GIS Analyst: tom.holton | Map Document: S:\Holton\GIS\Cardno\Napa_County\map\Napa_County_Campbell_Creek_Project_Vicinity_8i11L_01.mxd | Plot Size: 8.5" x 11"

Map 2. Project Location



2.3.1 Campbell Creek

The culvert that is the focus of this Project empties water from Campbell Creek into Dry Creek. Campbell Creek is a perennial stream in an ungauged watershed basin. The creek bank slopes are relatively steep and moderately to heavily vegetated with grasses, berry bushes, and mature trees. Campbell Creek flows generally north to south from its headwaters along the ridgeline of the Mayacamas Mountains, approximately 2,100 feet above msl, to its mouth at Dry Creek, 560 feet above msl. The existing culvert invert is about 10 feet below the paved surface elevation on the north side of Dry Creek Road and about 12 feet below the paved road at the outlet into Dry Creek on the south side of the roadway (Miller Pacific Engineering Group 2022).

Dry Creek is a natural, lined waterway with a rocky to cobbly substrate and a complex stream habitat. At the Project site, Dry Creek is about 15 feet below the paved surface elevation of Dry Creek Road with an eroded “scour hole” a few feet deeper at the outfall of the existing culvert (Miller Pacific Engineering Group 2022). The creek flows from the northwest to the southeast (west to east through the Project site) into the Napa River, which flows south into San Pablo Bay and the San Francisco Estuary. The Napa River is listed as impaired for sediment by the San Francisco Bay Regional Water Quality Control Board (RWQCB).

The Campbell Creek watershed is 1.29 square miles and contains 3.91 miles of blue-line stream according to the USGS 7.5-minute quadrangle. Blue-line streams are watercourses designated by a solid line or dash and three dots symbol on the largest scale of the USGS maps. All USGS blue-line streams are recognized as “streams” by Napa County and subject to Napa County Conservation Regulations pertinent to streams (Napa County 2019b; Napa County Municipal Code 13.28.040). Mixed hardwood forest and chaparral dominate the watershed, with minor areas of grassland and rural residential development.

As documented in studies by the Napa County RCD, Campbell Creek offers perennial flow and high-quality salmon spawning and rearing habitat. Specifically, above the Dry Creek Road Culvert, Campbell Creek offers approximately 0.67 mile of high-quality spawning habitat for fish, including steelhead salmon. The Napa County RCD has noted that juvenile steelhead/rainbow trout (*O. mykiss*) are present in Campbell Creek, although the full degree of anadromous parentage is not known (Napa County RCD 2011). Central California Coast steelhead has been listed as a threatened species under the federal ESA since 1997.

2.4 Background and Need for the Project

As noted previously, Campbell Creek is a tributary to Dry Creek, which flows into the Napa River. The Napa River has been listed as impaired for sediment since 1990. The

San Francisco Bay RWQCB, in its rationale for impairment listing, notes that the high concentrations of sediment in the Napa River are a contributing factor to the mortality of salmon and/or steelhead egg and larvae. High concentrations of sediment also degrade the quality of juvenile rearing habitat for steelhead and salmon in the Napa River and its tributaries (Leidy et al. 2005; U.S. Fish and Wildlife Service [USFWS] 1968).

After the designation of Central California Coast steelhead as threatened under the federal ESA in 1997, the Napa River watershed was included as "critical habitat" for the species. The protection and restoration of streams within its boundaries is considered vital to recovery of the San Francisco Estuary's native salmonid populations. The Center for Ecosystem Management and Restoration has designated the Napa River drainage as the highest priority "anchor watershed" for steelhead, with its restoration considered critical to recovery of the San Francisco Bay Estuary's native salmonid populations (Becker et al. 2007).

In 2014, the Napa County RCD prepared a report for the Napa County Public Works Department identifying the condition of 234 stream crossings in the county (Napa County RCD 2014). The report found that the existing culvert is undersized for both 50- and 100-year storm events and that the culvert, perched approximately 3 feet above the pool at its outfall, presents a barrier to fish migration into Campbell Creek (Napa County RCD 2011). In addition, legacy impacts associated with constraints imposed by current and former roadways (Dry Creek Road and Oakville Grade Road) have contributed to incision in both Dry Creek and Campbell Creek, resulting in increased erosion of the banks and sediment loading to the creeks. The county, considering the urgent need to address and remedy sediment loading in the Napa River, protect and restore streams within the Napa River watershed for salmon migration, and its own priorities for human health and safety (e.g., during flooding events) selected the Campbell Creek Culvert Replacement Project as one of 19 priority stream crossing projects to implement before July 2026 (Napa Valley Register 2022).

The following provides additional information about each of the problems posed by the existing culvert and the Project reach immediately upstream.

2.4.1 Undersized for Flood Flow

Based on data from historical gauges, nearby gauges, and hydrologic models, peak flows of Campbell Creek during flood events are expected to range from 124 cubic feet per second during 2-year storm events to as much as 688 cubic feet per second during a 50-year flood event and 840 cubic feet per second during a 100-year flood event (Napa County RCD 2011). The Napa County RCD notes that while the culvert can safely convey stream flows from a 2-year peak flow event and 5-year peak flow event, at flows of around 320 cubic feet per second, the inlet to the culvert will be submerged

and ponding will occur upstream. At flows in excess of 320 cubic feet per second, Campbell Creek will likely overtop Dry Creek Road.

2.4.2 Barrier to Fish Passage

In a fish passage assessment of Campbell Creek conducted in 2011, the Napa County RCD identified that Campbell Creek offers 0.67 mile of high-quality steelhead spawning and rearing habitat, but that fish migration into this habitat is prevented by the elevation difference between the tailrace of the Dry Creek Road Culvert and the culvert itself. Under low-flow conditions, there is an approximately 3-foot drop from the outlet of the culvert to the water in the creek below (see Photo 1), an excessive jump height for fish given the general low flow of water and inadequate jump pool depth. The report notes that the culvert is the only anthropogenic barrier to fish passage on Campbell Creek.

2.4.3 Erosion and Sedimentation of the Watershed

In addition to the identified flooding risks and the barrier the culvert presents to fish passage up Campbell Creek, Campbell Creek is incised above the culvert. Due to channel incision, the creek no longer floods at a regularly recurring stormflow frequency. With a reduced cross-sectional flood relief area, channel velocities increase as flood stages increase, mobilizing and routing sediment through the waterbody. Additionally, flood flow restriction due to the limited capacity of the culvert has caused sediment to deposit within the creek upstream of the culvert, with the depositional wedge of sediment appearing to peak approximately 79 to 100 feet upstream of the culvert inlet. The depth of the accumulated sediment at its crown ranges from 1.6 to 1.9 feet deep (Cardno, now Stantec 2022). At higher flows, water in Campbell Creek is channeled through the culvert and empties at a high velocity into Dry Creek, eroding the Dry Creek channel at its end point. In the geotechnical investigation completed for the Project, the engineering firm, Miller Pacific Engineering Group, described a scour hole several feet deep at the outfall of the existing culvert (Miller Pacific Engineering Group 2022).

Photo 1. Outlet of the Dry Creek Road Culvert conveying flows from Campbell Creek to Dry Creek.

Source: Cardno, now Stantec. March 2022.

Photo 2. Inlet of the Dry Creek Road Culvert conveying flows from Campbell Creek to under Dry Creek Road.

Source: Cardno, now Stantec. June 2022.

2.5 Project Construction

The Project proposes to replace the existing culvert, an 85-foot-long, 72-inch-diameter corrugated metal pipe, with an approximately 60-foot-long (through the road) 20-foot-wide (across the creek) bottomless arch bridge precast culvert (bottomless culvert) composed of concrete. The interior height of the culvert will be approximately 9.5 feet. The new bottomless culvert will be anchored with concrete wingwalls extending 15 to 20 feet from each corner.

The key components of the Project are:

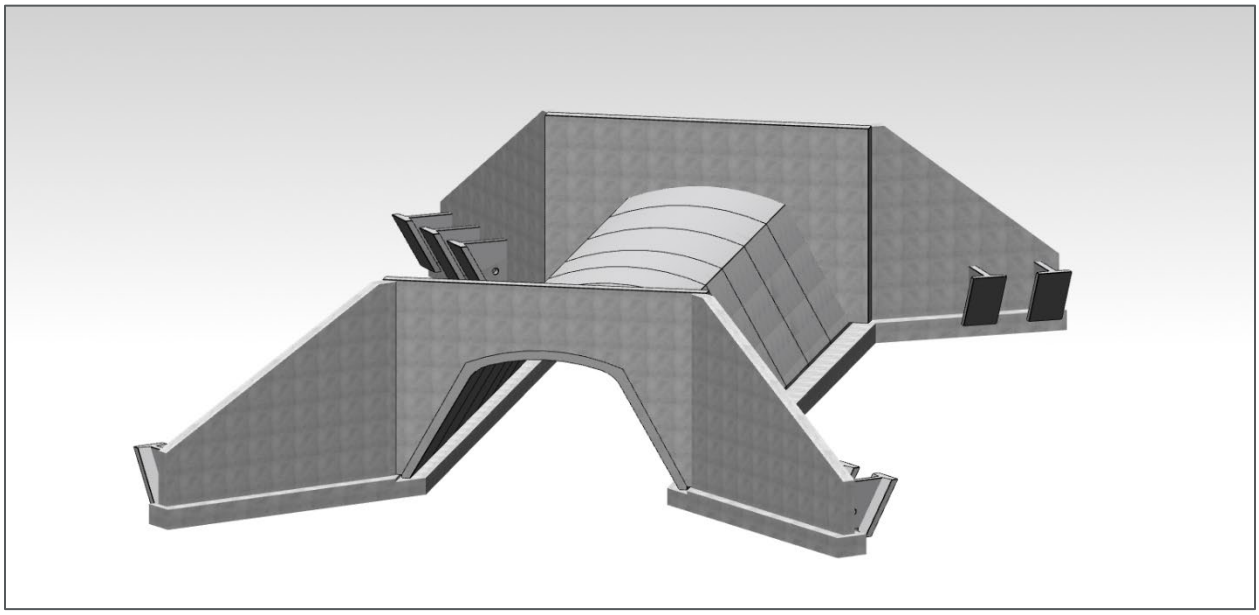
- Installation of the diversion and dewatering infrastructure.
- Removal/excavation of the existing culvert.
- Construction of the new bottomless arch bridge/culvert.
- Reconstruction of the existing roadway over the bridge.
- Grading of the streambank to lay back the banks to address incision and reconnect the creek to the original floodplain.

- Revegetation and restoration of the Campbell Creek streambank and bed.

The Project will be constructed by a crew or crews under contract with Napa County. A maximum of 12 construction personnel are anticipated to be working on the Project site at any one time during the construction period. Ground disturbance for installation of the bottomless arch bridge precast culvert will include excavation and replacement of the culvert and reconstruction of the creek bed 160 feet upstream from the culvert crossing, with work ending prior to the old Oakville Grade bridge. The Oakville Grade bridge is an abandoned concrete bridge approximately 175 feet upstream of the Project culvert crossing. It is a remnant from more than 50 years ago, when Oakville Grade Road crossed over Campbell Creek, and will be protected in place. Work activities will take place within a 30-meter buffer on either side of the existing culvert and up the creek. The Project site is accessible by vehicle via Dry Creek Road.

The illustration below (Figure 1) is a conceptual drawing of the bottomless arch bridge precast culvert that will be installed at the road crossing. Figures 2 and 3 show the elevations and dimensions of the inlet and outlet of the proposed bottomless culvert (based on 65% design plans). Photo 3 is an example of a bottomless arch bridge precast culvert being installed.

Figure 1. Bottomless Arch Bridge Precast Culvert Designed for the Campbell Creek Culvert Replacement Project



Source: Contech Engineered Solutions, LLC

Figure 2. Bottomless Culvert Inlet—Elevation and Dimensions

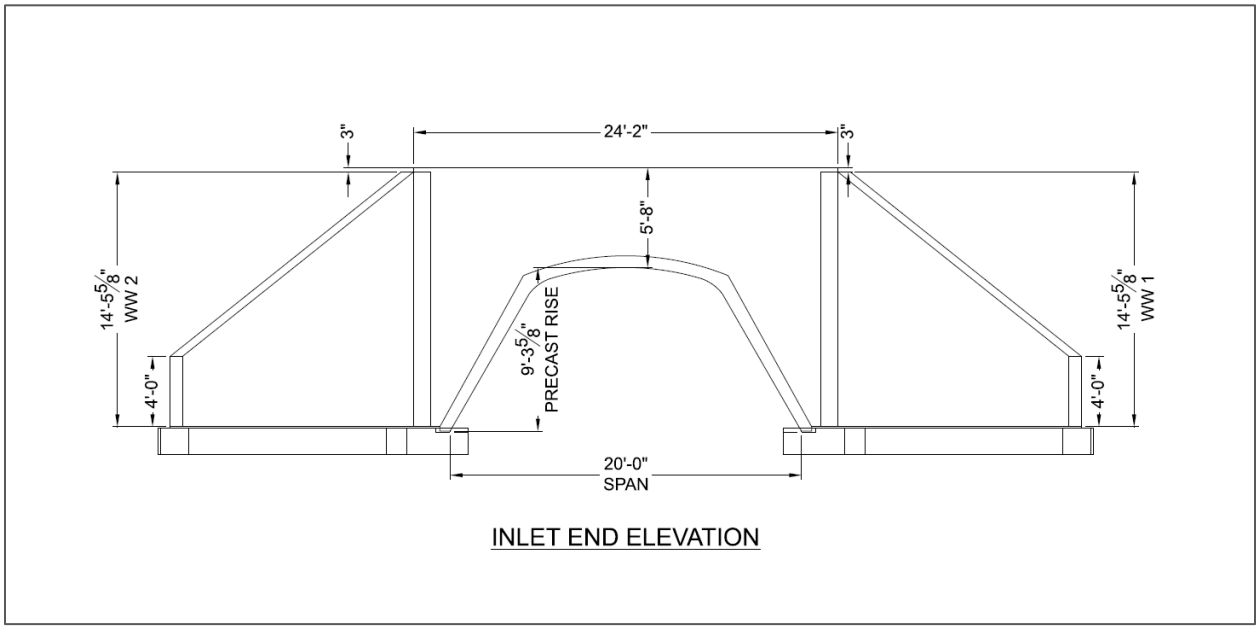


Figure 3. Bottomless Culvert Outlet—Elevations and Dimensions

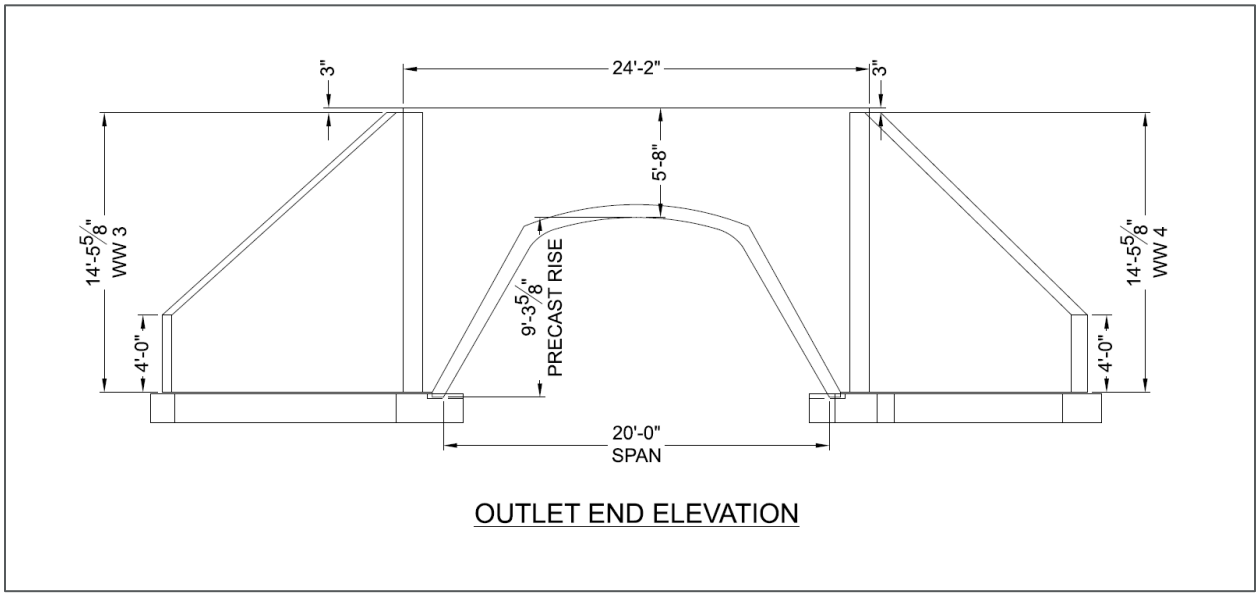


Photo 3 Installation of a Bottomless Arch Bridge Precast Culvert along Third Creek in Incline Village, Nevada

2.5.1 Construction Schedule and Timing

Project construction is anticipated to last approximately 3 to 4 months within one construction season. The current schedule anticipates construction initiation in the summer of 2024, with completion in the fall of 2024. Revegetation and site stabilization will be initiated once all engineered installations are complete, likely in the late summer/early fall. Daily construction hours will be Monday through Friday (though some weekend work may be required) and comply with the relevant Napa County noise ordinance—Section 8.16.070, Exterior Noise Limits (Napa County 2022)—that limits construction activity to the hours from 7:00 a.m. to 7:00 p.m.

The Project will be constructed in three phases beginning downstream, south of Dry Creek Road (Phase I), and moving upstream to the area around Dry Creek Road (Phase II) and then farther upstream along the Campbell Creek channel (Phase III). Following construction, the creek bed will be restored and revegetated. Each phase of the Project is expected to take between 2 to 4 weeks. The Project will require closure of a single lane of Dry Creek Road during Phases I and II of construction; however, two-way traffic will be maintained via an active traffic control plan. Likewise, the Lokoya Fire Station, accessed via Dry Creek Road, will remain open and accessible throughout Project construction.

The following bullets describe the expected construction activities per phase.

- Phase I – south side of the road
  - Establish the traffic control plan and set up Staging Area 1 on the south side of Dry Creek Road. Establish temporary erosion control best management practices (BMPs) around the staging area including a chain-link fence and fiber roll along the downstream perimeter.
  - Install the following diversion and dewatering infrastructure:
    - Two temporary sediment dams and discharge dissipater at the downstream end of the Project site.
    - Temporary diversion dam upstream of the existing culvert inlet and temporary dewatering pump upstream of the diversion dam.
    - Temporary diversion pipe to divert creek water around the work area (installation requires trenching under Dry Creek Road and placement of an 18-inch corrugated metal pipe sleeve in the trench).
  - Remove/excavate the downstream half of the existing culvert (south side of Dry Creek Road). Removal of the culvert will require ripping and removing the asphalt and fill under which the culvert is buried. At least a portion of the fill removed (likely composite of soil and aggregate) will be stockpiled for use to bury the new bottomless culvert. If not reused, it will be disposed of in

accordance with local and state regulations at an appropriate off-site facility. The culvert, once revealed (unburied), will be cut through using a metal saw and removed to the staging area and eventually to an off-site location for appropriate disposal.

  - Install the downstream portion of the new precast concrete bottomless culvert and bury the newly installed portions with the stockpiled fill and new fill.
  - Reconstruct and repave the road over the new culvert. The new road will include a 4-inch depth of asphalt over a 1-foot depth of aggregate base compacted to 95 percent.

- Phase II – north side of the road
  - Establish Staging Area 2 adjacent to the fire station. Establish temporary erosion control BMPs around the staging area including a chain-link fence and fiber roll around the majority of the staging area perimeter. Stabilize the ingress and egress to the staging area at its east end.
  - Modify the location of the temporary diversion pipe to avoid the work area on the north side of Dry Creek Road.
  - Repeat the activities associated with removal/excavation of the culvert for the remaining half of the culvert (on the north side of the road).
  - Install the upstream portion of the new precast concrete bottomless culvert and bury the newly installed portions with the stockpiled fill as well as new fill.
  - Reconstruct and repave the road over the new culvert. The new road will include a 4-inch depth of asphalt over a 1-foot depth of aggregate base compacted to 95 percent.
  - Install traffic striping that matches existing roadway marking per California Department of Transportation standards.
- Phase III – upstream channel
  - Install the following diversion and dewatering infrastructure:
    - Temporary diversion dam at the upstream extent of the Project site and two temporary dewatering pumps: one adjacent to the dam and one immediately downstream of the dam.
    - Install a temporary diversion pipe to divert creek water around the work area (installation requires trenching under Dry Creek Road and placement of an 18-inch corrugated metal pipe sleeve in the trench)
  - Grade/lay back the banks to address incision and reconnect the creek to the original floodplain. This activity will involve the use of a small excavator to

remove bed and bank depositional material to the subgrade. Excavated material that can be reused for the creek bed and bank restoration will be stockpiled in Staging Area 2.

- Backfill the modified creek bed with a cobble mix consisting of imported material as well as material stockpiled during creek bed excavation. The cobble mix will consist of clean, washed gravel and/or cobble that will be placed in all disturbed portions of the channel in Dry Creek and Campbell Creek to restore spawning substrate. The location and placement of the cobble mix will be directed by a fisheries biologist in consultation with appropriate agencies.
- Revegetate and stabilize the creek bed and banks according to the revegetation plans. Plants and seeds used for revegetation shall correspond to the elevation, soil types, and proximity to the creek channel and may include container plantings, tree planting, and/or seeding.

2.5.2 Vegetation Removal

Moderate vegetation trimming and removal will be required to construct the Project. Specifically, as many as 11 trees ranging in diameter at breast height (DBH) from 3.5 inches to 18 inches will be removed. These include two trees from the south side of the road, and as many as nine trees on the north side of the road. Table 1 identifies the species and DBH of the trees identified for removal.

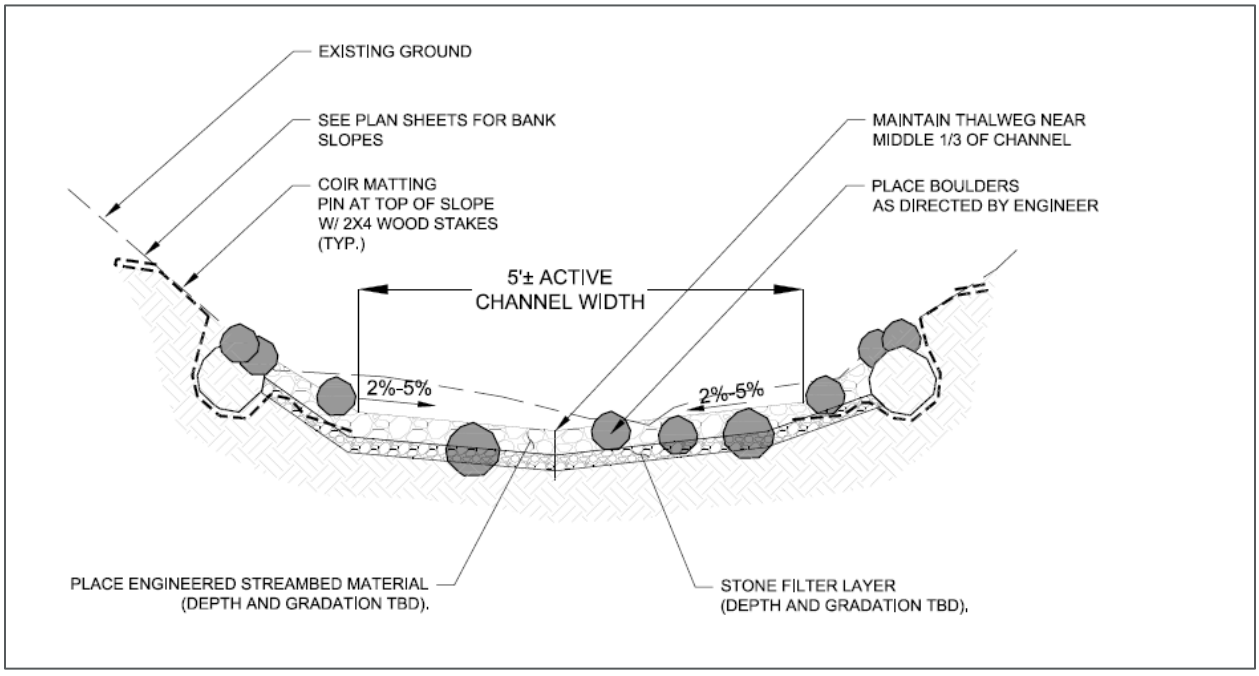
Table 1. Tree Removal Required for the Project

Species Common Name	Species Scientific Name	Approximate Diameter at Breast Height in Inches	Approximate location
Interior live oak	*Quercus wislizeni*	18	North side of road
California bay	*Umbellularia californica*	5.5	North side of road
California bay	*Umbellularia californica*	12	South side of road
Oregon ash	*Fraxinus latifolia*	3.5	North side of road
Oregon ash	*Fraxinus latifolia*	8	North side of road
Oregon ash	*Fraxinus latifolia*	10	North side of road
Oregon ash	*Fraxinus latifolia*	8	North side of road
Oregon ash	*Fraxinus latifolia*	5.5	North side of road
Oregon ash	*Fraxinus latifolia*	12	South side of road
Goodding's willow	*Salix gooddingii*	9.5	North side of road
Goodding's willow	*Salix gooddingii*	8	North side of road

2.5.3 Revegetation and Restoration

The revegetation plan proposes replanting of new vegetation including with native trees, shrubs, herbs and seed mixes. Plants and seeds used for revegetation shall correspond to the elevation, soil types, and proximity to the creek channel and may include container plantings, tree planting, and/or seedings. Tree species to be replanted will include Oregon ash, California bay laurel, interior live oak, and/ or Goodding's willow. Shrub species include fragrant sumac (*Rhus aromatica)*, and herb species include Santa Barbara sedge (*Carex barbarae*) and spreading rush (*Juncus patens*), or equivalent. Trees will be spaced with a minimum of 8- to 10-feet between plantings. Congruent with the revegetation effort, coir mats will be installed and pinned with wooden stakes to stabilize soil along the banks, while small and medium-sized boulders will further support slope stabilization. Figure 4 below illustrates the restoration design for a typical stream section.

Figure 4. Typical Revegetation and Restoration of a Stream Section



2.5.4 Access and Staging

The Project site is accessible from Dry Creek Road and from a volunteer trail that extends upstream along the west side of the creek (adjacent to the fire station). Crews will also use the creek channel for access to the upstream portions of the Project site.

There are two areas identified for equipment staging and storage: (1) a 0.05-acre area within the county right-of-way along the south side of Dry Creek Road and (2) a 0.06-acre level area adjacent to the west of the fire station on the county-owned parcel, APN 027-310-026. The area along the south side of Dry Creek Road will only be used

during Phase I of the Project. The area adjacent to the fire station will be used during Phases II and III and to support materials needed for revegetation of the creek bed. The total combined footprint of the areas identified for staging and storage of equipment and materials is 0.109 acre.

Two-way traffic will be maintained throughout Project construction, and the Lokoya Fire Station will remain accessible. Preliminary plans for temporary traffic control define the limits of the work and staging areas and specify the locations for the use of cones and signage. As indicated in the engineering design plan sheets for the Project, traffic control shall comply with the standard plans of the California Department of Transportation. In addition, the Project will comply with the Napa County *Road and Street Standards* during construction (Napa County 2021).

2.5.5 Construction Equipment

The following construction equipment will be required:

- Crane for Phases I and II
- Medium hydraulic excavator with bucket/thumb attachment
- One large excavator with bucket/thumb attachment
- One asphalt mixer
- Sheepsfoot (also known as Padfoot) compactor/roller
- Two large dump trucks/ haulers
- Water truck (for dust abatement)
- Two work trucks

For revegetation of the channel and for installation of bank stabilization material (e.g., new bank plantings and seeding) the following equipment will be used:

- One small-size excavator with bucket/thumb attachment
- Two large dump trucks/haulers

In addition to the construction equipment identified above, the construction contractor will be required (per Napa County contract requirements) to deliver and service temporary portable chemical toilet facilities (porta-potties) for use by construction personnel. Such facilities will be located adjacent to active construction sites for the duration of the construction period.

2.5.6 Construction Best Management Practices

The Project will adhere to all applicable Napa County regulations and ordinances including those pertaining to protection of vegetation (including riparian vegetation) as

detailed in Chapter 16.04.750, Riparian zones – Restricted Activities, and in Chapter 18.108, Conservation Regulations, of the Napa County Municipal Code. In addition, the following construction best practices will be adhered to:

- General Best Practices
  - Fencing will be placed at the limits of construction prior to the start of work. No vegetation removal, ground-disturbing activities, parking, or equipment storage will be permitted beyond the fencing. The contractor will install and maintain effective perimeter controls at all times.
  - All construction equipment will be maintained and properly tuned in accordance with the manufacturers' specifications.
  - Upon completion of construction, all areas used for staging and storage shall be restored to pre-Project conditions.
  - All trash (including Project-related material) will be disposed of within appropriate containers and removed from the site daily.
  - All vehicle traffic will be restricted to established roads and construction areas. Haul trucks will stay on designated haul roads.
- Wildlife Protection Measures
  - Plastic monofilament netting, or similar material in any form, will not be used at the construction area.
  - Construction materials stored on-site such as pipes, conduits, and other materials will be elevated above the ground or covered and screened.
- Erosion Control and Water Quality Protection Measures
  - The contractor must submit a detailed dewatering/diversion plan and equipment list to Napa County for approval prior to ground breaking.
  - The contractor will install stabilized construction entrances and exits where construction traffic leaves unstabilized areas of the site. If staging areas are stabilized with crushed rock or native material and no tracking or sediment is observed, construction entrances may not be necessary, as determined and directed by Napa County.
  - The contractor will store construction equipment in designated staging areas. Construction materials will be stored in a manner that limits exposure to precipitation and controls stormwater runoff. Additionally, the contractor will divert concentrated runoff around equipment, vehicles, and materials staging areas using gravel bags as required by the conditions of all applicable waters permits.

- The contractor will maintain covers on all stockpiles, typically geotextile fabric or erosion control blanketing. Stockpiles will be covered if left inactive for more than 3 days and prior to any forecasted wind or rain events. Perimeter controls will be installed around all stockpiles, typically gravel bags or fiber rolls.
- All BMPs shall be installed as outlined in California Stormwater Quality Association BMP handbook and construction fact sheets.
- The contractor will train/instruct on-site construction personnel in spill prevention practices and provide spill containment materials near all staging areas. The contractor is responsible for familiarizing its personnel and any subcontractors with all permit requirements related to spill prevention and control and providing a qualified environmental professional with a record of training, typically tailboard sign-in sheets and/or subcontractor notification letters.

2.6 Operations and Maintenance

Consistent with existing conditions, Napa County will remain responsible for ensuring the infrastructure conveying flow beneath Dry Creek Road remains functional and safe. Following Project construction Napa County will monitor the site to ensure proper creek function and vegetation establishment.

2.7 Permits

Napa County is the Project proponent and CEQA lead agency for the Project and has primary discretionary approval. The county is responsible for securing appropriate permission and access rights to complete the Project on the adjoining private parcels prior to Project initiation. In addition, the Project is within the jurisdiction of the U.S. Army Corps of Engineers (USACE), San Francisco Bay RWQCB, and California Department of Fish and Wildlife (CDFW). Permits from each of these agencies will be obtained prior to construction.

Table 2. Anticipated Permits Required

Agency	Permit or Approval	Action Requiring Permit Approval or Review
U.S. Army Corps of Engineers	Clean Water Act Section 404 permit—likely a Nationwide Permit	Discharge of dredged or fill material into waters of the United States
California Department of Fish and Wildlife	Section 1602 Streambed Alteration Agreement	Potential disturbance to the bed or bank of jurisdictional waters
San Francisco Bay Regional Water Quality Control Board	Clean Water Act Section 401 Water Quality Certification	Potential impacts on state water quality; required when a federal permit is issued

3 Environmental Impacts and Mitigation Measures

APPENDIX G
ENVIRONMENTAL CHECKLIST FORM

PROJECT INFORMATION

1. Project title:

   Campbell Creek Culvert Replacement Project

2. Lead agency name and address:

   Napa County

3. Contact person and phone number:

   Frank Lucido, PE
   Engineering Manager
   Napa County Public Works
   1195 Third Street, Room 101
   Napa, California 94559
   Phone (707) 259-8377
   Frank.Lucido@countyofnapa.org

4. Project location:

   The Project is located on Campbell Creek near the Lokoya Fire Station at 5900 Dry Creek Road in Napa County, California, in Township 7 North, Range 5 West, Section 32 on the USGS Rutherford, California, 7.5-minute quadrangle map, Mount Diablo Meridian. The Project it is located at an elevation of approximately 560 feet above msl. Coordinates at the approximate center of the existing culvert are 38.407229 longitude, −122.433236 latitude.

5. Project sponsor's name and address:

   Napa County

6. Zoning and General Plan designation:

   The General Plan designates the Project site and surrounding area as "Agriculture, Watershed, and Open Space" (Napa County 2016). The Project site and surrounding parcels are zoned "Agricultural Watershed (AW)" (Napa County 2015).

7. Description of Project. Describe the whole action involved, including, but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.

   The culvert at the mouth of Campbell Creek conveys the water in Campbell Creek beneath Dry Creek Road into Dry Creek along the south edge of the paved roadway. The culvert is undersized for flood stage flows and is a barrier to fish passage. The Project is a proposal by Napa County to replace the existing culvert, an 85-foot-long, 72-inch-diameter corrugated metal pipe, with an approximately 60-foot long (through the road) 20-foot-wide (across the creek) bottomless arch bridge precast culvert (bottomless culvert) composed of concrete. In addition to replacement of the culvert, the Project is intended to improve the hydrologic function of Campbell Creek at the culvert's outlet and along approximately 160 linear feet of creek upstream of the culvert's inlet by resolving channel incision and reconnecting the creek to its historical floodplain.

   The Project would be constructed in three phases. Each phase would last between 2 to 4 weeks during a single construction season in the summer/fall of 2024. The Project would require closure of a single lane of Dry Creek Road during Phases I and II of construction; however, two-way traffic would be maintained via an active traffic control plan. Likewise, the Lokoya Fire Station, accessed via Dry Creek Road, will remain open and accessible throughout Project construction.

8. Surrounding Land Uses and Setting: Briefly describe the project's surroundings.

   The Project is located in a largely undeveloped and rural area dominated by California oak woodland and chaparral habitat. Land use around the Project site includes mostly rural private residential uses and vineyards. There are no formal trails along Campbell Creek. In its study of the Campbell Creek watershed, the Napa County RCD found that the watershed is entirely under private ownership (Napa County RCD 2011).

   The Project site is approximately 7 miles northwest of the nearest city, Yountville, via Oakville Grade Road and State Route 29/St. Helena Highway. Dry Creek Road, the road that runs through the Project site, is classified as a rural minor collector. It has a winding road alignment with limited views of Campbell Creek and Dry Creek due to trees and vegetation surrounding the roadway. The nearest recreational sites include Yountville Park, approximately 4 miles due east

9. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement).

   Napa County is the Project proponent and CEQA lead agency for the Project and has primary discretionary approval. The county is responsible for securing

appropriate permission and access rights to complete the Project on the adjoining private parcels prior to Project initiation. In addition, the Project is within the jurisdiction of the USACE, San Francisco Bay RWQCB, and CDFW. Permits from each of these agencies will be obtained prior to construction.

10. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

    Napa County completed tribal consultation pursuant to Public Resources Code section 21080.3. and formally notified seven tribes about the Project in late September 2022. None of the tribes requested consultation

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this Project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages.

☐	Aesthetics	☐	Agriculture / Forestry Resources
☐	Air Quality	☐	Biological Resources
☐	Cultural Resources	☐	Energy
☐	Geology and Soils	☐	Greenhouse Gas Emissions
☐	Hazards and Hazardous Materials	☐	Hydrology and Water Quality
☐	Land Use and Planning	☐	Mineral Resources
☐	Noise	☐	Population and Housing
☐	Public Services	☐	Recreation
☐	Transportation	☐	Tribal Cultural Resources
☐	Utilities and Service Systems	☐	Wildfire
☐	Mandatory Findings of Significance		

DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project COULD have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Name, Title

12-6-22
Date

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors, as well as general standards (e.g., the project would not expose sensitive receptors to pollutants, based on a project- specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
4. “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less-Than-Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less-than-significant level.
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. No earlier CEQA analyses were used in preparation of this document.
6. The explanation of each issue should identify:
    a. the significance criteria or threshold, if any, used to evaluate each question; and
    a. the mitigation measure identified, if any, to reduce the impact to less than significance

ENVIRONMENTAL TOPICS NOT DISCUSSED

The Project would have no impact on select resource areas, and these topics are not discussed further in this Initial Study. A brief explanation as to why the Project would not affect these resources areas is provided below.

Agricultural and Forest Resources

The Project site is limited to an extent of approximately 0.25 acre and does not include Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland Mapping and Monitoring Program 2018). It also does not involve the conversion of any agricultural land, forest land, or timberland. The Project site does not contain land subject to Williamson Act contracts, and the land use designation of "Agriculture, Watershed, and Open Space" within the Project site and surrounding areas would remain the same after implementation of the Project. The Project would not result in any new land uses that would conflict with the existing agricultural zone. Therefore, the Project would have no impact, and the topic is not discussed further in this Initial Study.

Energy

Project-related energy consumption is limited to equipment used during construction. Project equipment would comply with California and U.S. Environmental Protection Agency Corporate Average Fuel Economy standards for vehicular fuel efficiency and GHG emissions and would therefore employ efficient engines and reduce unnecessary fuel consumption. Once constructed, the new culvert would not entail any energy consumption. In addition, the Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, there are no impacts associated with energy use.

Land Use and Planning

The Project would not divide an established community and is an existing allowable use consistent with the General Plan and zoning code for the area. The Project does not conflict with any land use plan, policy, or regulation. Implementation of the Project would have no impact to land use or planning; therefore, this topic is not discussed further in this Initial Study.

Mineral Resources

The Project site has no known mineral resources of potential value and is not within a mapped Mineral Resource Zone, as defined by the Surface Mining Control and Reclamation Act (California Geological Survey [CGS] 2015) or by the General Plan (Napa County 2008). Therefore, the Project would have no impact on availability or known mineral resources, and the topic is not discussed further in this Initial Study.

Population and Housing

The Project does not propose any facilities or modifications that would result in indirect or direct population growth. It does not include the development of new homes, businesses, or infrastructure, nor would it displace existing homes or people. Therefore, the Project would have no impact on population and housing, and these topics are not discussed further in this Initial Study.

Public Services

The Project does not involve any new government facilities, the alteration of any government facilities, or the need for new governmental facilities. The Project would not include new residences or otherwise create a situation in which fire protection service ratios, response times, or other performance objectives could not be met. Therefore, the Project would have no impact on public services, and the topic is not discussed further in this Initial Study.

Recreation

There are no existing recreational facilities within the Project site, and no new recreational facilities would be constructed as a part of the Project. The Project does not include and would not require the expansion or increased use of existing recreational facilities within the region. Therefore, the Project would have no impact on recreational facilities, and the topic is not discussed further in this Initial Study.

3.1 Aesthetics

Except as provided in Public Resources Code Section 21099, would the Project:

Environmental Issues	Impact Determination
a. Have a substantial adverse effect on a scenic vista?	Less-Than-Significant Impact
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	No Impact
c. In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	No Impact
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	No Impact

3.1.1 Setting

The Project is located in a largely undeveloped and rural area dominated by California oak woodland and chaparral habitat. Land use around the Project site includes mostly rural private residential uses and vineyards. There are no formal trails along Campbell Creek. An informal (volunteer) trail extends along the creek on its west side (adjacent to the fire station) upstream from Dry Creek Road. The terrain immediately around the Project site includes relatively steep hills on the north side of the road that slope into the heavily vegetated Dry Creek drainage on the south side of the road. In its study of the Campbell Creek watershed, the Napa County RCD found that the watershed is entirely under private ownership (Napa County RCD 2011).

Scenic Highways

The General Plan identifies over 280 miles of county-designated scenic roadways; however, none have been officially designated as Scenic Highways by the State of California. Although several segments of Highway 29 are eligible for state designation, the county has not pursued inclusion in the State Scenic Highway Program at this time. Instead, the General Plan has adopted a Viewshed Protection Program, that contains polices aimed at protecting the county-designated scenic roadways. These policies are primarily focused on ensuring aesthetic compatibility of new development or infrastructure constructed along these sensitive corridors. Dry Creek Road is identified as a scenic roadway in the General Plan.

Viewer Groups

With the exception of the county parcel on which the fire station is located, land in the immediate vicinity of the Project site is privately owned. Other than the roadway, there is no publicly accessible land in the area. Therefore, public views of the Project site are limited to viewers traveling along Dry Creek Road including motorists, bicyclists, and, less commonly, pedestrians. These viewers may include persons who live or work in the area, tourists, or people traveling to nearby recreation destinations.

3.1.2 Discussion

a. Have a substantial adverse effect on a scenic vista?

Impact Determination. Less-Than-Significant Impact

A scenic vista is generally considered to be a location from which the public can experience unique and exemplary high-quality views, typically from elevated vantage points that offer panoramic views of breadth and depth. Views from along Dry Creek Road at and near the Project site are of rolling vegetated hills and nearby dense oak and riparian vegetation. Views represent mostly unmodified countryside, apart from powerlines and poles, and some mid-slope grading lines on the hills to the north. Given that Dry Creek Road is in a canyon, views are not panoramic. However, Dry Creek Road is identified as a scenic roadway by the General Plan, and the General Plan repeatedly identifies scenic beauty as one of the county's most important and characteristic attributes. Therefore, for the purposes of this analysis, views from the Dry Creek Road corridor are regarded as scenic vistas.

Construction of the Project would cause temporary visual impacts in the form of earthwork, vegetation removal and trimming, and equipment staging. These impacts would be temporary over the course of the 3- to 4-month construction period. Earthwork visible to passersby along Dry Creek Road would be limited to the area in the immediate vicinity of the road during removal and replacement of the new culvert. Views of much of the work, including earthwork, planned along Campbell Creek upstream of the road are obstructed due to the distance from the road and site topography. Staging of equipment and materials within the roadway is limited to Phase I of the construction period, and staging of materials and equipment for Phases II and III requires a single small existing disturbed area adjacent to the fire station. As such, neither staging area would introduce equipment or materials that contrast starkly with the immediate built environment. Following Project completion, including revegetation and restoration of the channel upstream of the culvert crossing, the vista from the roadway is not anticipated to be substantially different from current conditions and would, over time, likely become indiscernible from existing conditions as the site matures and new vegetation becomes established. Because of the short-term duration of impacts (no more than 4 months), the small

size of the Project, the limited viewsheds upstream and downstream along Campbell Creek, and the limited size and short-term duration of equipment and materials within the staging areas, the Project would not have a substantial adverse effect on a scenic vista.

b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Impact Determination. No Impact

The Project is not within the immediate area or viewshed of a state scenic highway. In addition, the Project does not involve damage to any scenic resources such as large trees, rock outcroppings, or historic buildings. Vegetation removal is limited to a maximum of 11 small and medium-sized trees, mostly upstream of the culvert along Campbell Creek and not visible from the road. Because the Project is not within the corridor of a state scenic highway and, in any case, does not involve damage to any scenic resources, there would be no impact.

c. In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Impact Determination. No Impact

Public views of the Project site are limited to viewers traveling along Dry Creek Road including motorists, bicyclists, and, less commonly, pedestrians. As discussed under Section 3.1.2 (a), the Project would temporarily degrade the quality of views from Dry Creek Road. Construction of the Project would cause temporary visual impacts in the form of earthwork, vegetation removal and trimming, and equipment staging. These impacts would be temporary, occurring over the course of the 3- to 4-month construction period. Following project completion, including revegetation and restoration of the channel upstream of the culvert crossing, the vista from the roadway is not anticipated to be substantially different from current conditions and would, over time, likely become indiscernible from existing conditions as the site matures and new vegetation becomes established. Because of the short-term duration of impacts (no more than 4 months), the small size of the Project, the limited viewsheds upstream and downstream along Campbell Creek, and the limited size and short-term duration of equipment and materials within the staging areas, the Project would not substantially degrade the existing visual character or quality of public views of the site or of the surroundings.

d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Impact Determination. No Impact

The Project site is located in a rural area with the only likely nearby source of nighttime lighting being from safety lights at or around the fire station. The Project does not involve the installation of any new lighting. Construction activities are planned during daylight hours, and it is unlikely that construction activities would take place at night. If nighttime lighting for construction is required, its use would be limited to short periods of time within the construction period of 3 to 4 months. Overall, the Project would not create a new source of substantial light or glare. There would be no impact.

3.2 Air Quality

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:

Environmental Issues	Impact Determination
a. Conflict with or obstruct implementation of the applicable air quality plan?	Less-Than-Significant Impact with Mitigation Incorporated
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard?	Less-Than-Significant Impact
c. Expose sensitive receptors to substantial pollutant concentrations?	No Impact
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Less-Than-Significant Impact

3.2.1 Setting

Napa Valley is situated between the Mayacamas Mountains to the west and the Vaca Mountains to the east. As described in the General Plan (2008), Napa Valley is widest at its southern end and narrows to the north, and the mountains surrounding the valley serve as effective barriers to the prevailing northwesterly winds, meaning pollutants entering the valley can become trapped without pathways to disperse. During the summer and fall, prevailing winds can transport non-local air pollution from the San Pablo Bay and locally generated ozone (O_3) precursors northward where the valley narrows, effectively trapping and concentrating the pollutants under stable conditions (Napa County 2008). The local upslope and downslope flows set up by the surrounding mountains may also recirculate pollutants, adding to the total burden. The high frequency of light winds and associated stable conditions during the fall and winter contribute to the buildup of particulates and carbon monoxide from automobiles, agricultural burning, and fireplace burning (Napa County 2008).

The Project is located within the San Francisco Bay Area Basin, which is managed by the Bay Area Air Quality Management District (Air District). The Air District implements air quality programs required by state and federal mandates and enforces rules and regulations based on air pollution laws. The General Plan also includes policies to reduce air pollution by achieving and maintaining air quality in Napa County that meets or exceeds state and federal standards.

Ambient Air Quality Standards and Attainment Status

In accordance with the federal Clean Air Act, the U.S. Environmental Protection Agency has established National Ambient Air Quality Standards (NAAQS) for six principal pollutants considered harmful to public health and the environment. These "criteria" pollutants are carbon monoxide, O_3, particulate matter (PM_{10} and $PM_{2.5}$), nitrogen dioxide, sulfur dioxide, and lead. In California, the California Air Resources Board (CARB) is responsible for air quality management. CARB has established California Ambient Air Quality Standards (CAAQS) that are generally more stringent and include more pollutants than the NAAQS. Both the NAAQS and the CAAQS have been developed to protect human health and represent maximum acceptable concentrations of air pollution. The U.S. Environmental Protection Agency and CARB designate regions that are meeting the air quality standard for a given pollutant as being in "attainment" for that pollutant. Currently, Napa County is designated as "nonattainment" for $PM_{2.5}$ and 8-hour O_3 for the NAAQS and "nonattainment" for $PM_{2.5}$, PM_{10}, and O_3 for the CAAQS (CARB 2020).

Sensitive Receptors

The Air District generally defines a sensitive receptor as a facility or land use that houses or attracts members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of sensitive receptors include schools, hospitals, convalescent facilities, and residential areas. The county defines sensitive receptors/land uses as locations where people reside or where members of the population are located who are particularly sensitive to the effects of air pollutants (e.g., children, the elderly, and people with illnesses). Specific areas considered as sensitive receptors include residences, hospitals or healthcare facilities, parks and wildlife areas, and schools.

The closest school is Yountville Elementary School, located approximately 4 miles east of the Project location. There are no hospitals, healthcare facilities, or elder care homes within 1 mile of the Project site. The nearest park and wildlife area is Sugarloaf Ridge State Park, which is located approximately 5 miles north of the Project location. The remaining sensitive receptors in the Project vicinity are limited to sparsely populated single-family residences located at various distances within the vicinity of the Project, with the closest house located approximately 1,000 feet east of the Project.

3.2.2 Discussion

a. Conflict with or obstruct implementation of the applicable air quality plan?

Impact Determination. Less-Than-Significant Impact with Mitigation Incorporated

The applicable air quality plan governing the region is the Air District's 2017 Bay Area Clean Air Plan, which is intended to establish all feasible measures to reduce emissions of O_3 precursors, reduce the transport of O_3 and its precursors to neighboring air basins, and reduce emissions of fine PM and toxic air contaminants. The Air District CEQA Air Quality Guidelines (Air District 2017b) state that a project is consistent with the goals of the current Bay Area Clean Air Plan if the project can demonstrate compliance with the Air District-approved CEQA thresholds of significance. The Air District's project-level thresholds of significance (Air District 2017a) are included in Table 3 below.

Table 3. Air District Project-Level Thresholds of Significance

Criteria Air Pollutants and Precursors (Regional)	Average Daily Emissions (Pounds Per Day)	
	Construction-Related	Operations-Related
Reactive Organic Gases	54	54
Nitrogen Oxides	54	54
PM_{10}	82 (exhaust)	82
$PM_{2.5}$	54 (exhaust)	54
$PM_{10}/PM_{2.5}$ (fugitive dust)	Best Management Practices	None
Local carbon monoxide	None	9.0 ppm (8-hour average), 20.0 ppm (1-hour average)

Notes:

PM_{10} = particles less than 10 micrometer in diameter
$PM_{2.5}$ = particles less than 2.5 micrometer in diameter
ppm = parts per million

The only sources of criteria emissions and fugitive dust associated with the Project are from the operation of equipment and grading during construction. Construction emissions will be temporary and intermittent, occurring over the 3- to 4-month construction period. The Air District has established screening criteria to help applicants determine whether a detailed air quality assessment of a project's air pollutant emissions is needed to determine consistency with the Air District's project-level thresholds (Air District 2017b). Per these screening guidelines, construction-related impacts are considered less than significant if the following criteria are met:

- The project is below the applicable screening level size shown in Table 3-1 of the Air District's CEQA Air Quality Guidelines (2017b).

- All *Basic Construction Mitigation Measures* as identified in the Air District's CEQA Air Quality Guidelines (2017b) are included in the project design and implemented during construction; and
- Construction-related activities would not include any of the following:
  - Demolition;
  - Simultaneous occurrence of more than two construction phases (e.g., project would develop residential and commercial uses on the same site) (not applicable to high-density infill development);
  - Simultaneous construction of more than one land use type (e.g., project would develop residential and commercial uses on the same site) (not applicable to high-density infill development);
  - Extensive site preparation (i.e., greater than default assumptions used by the Urban Land Use Emissions Model [URBEMIS] for grading, cut/fill, or earth movement); or
  - Extensive material transport (e.g., greater than 10,000 cubic yards of soil import/export) requiring a considerable amount of haul truck activity.

The first appliable screening criteria requires that the size of a project[1] not exceed 67 acres. Because the Project site (inclusive of staging areas) is less than 0.5 acre, the Project meets this screening criteria.

The second screening criteria requires that the *Basic Construction Mitigation Measures* (as defined in the Air District's CEQA Air Quality Guidelines [2017b]) be incorporated into the project design. **Mitigation Measure AIR-1** specifies that all identified measures will be adhered to. Lastly, construction-related activities do not include substantive demolition (demolition is limited to removal of the roadway on top of the culvert), simultaneous occurrence of more than two construction phases, simultaneous construction of more than one land use type, extensive site preparation, or extensive material transport. For these reasons, the Project meets the Air District's screening guidelines, and it is reasonable to conclude that the construction emissions associated with this Project are well below the daily thresholds of significance for the criteria air pollutants and precursors established by the Air District. Because the Project's emissions (limited to the period of active

[1] Table 3-1 of the Air District's CEQA Air Quality Guidelines (2017b) screens operational-related air emissions for projects based on land use type. This screening criteria is based on default assumptions used by the Urban Land Use Emissions Model. Among the available options are residential land uses, commercial land uses, and industrial land uses. "City park" is the land use type most applicable to this rural culvert replacement and creek restoration project.

construction) would fall well within these approved thresholds, the Project would not conflict with or obstruct implementation of the Air District's 2017 Bay Area Clean Air Plan. With incorporation of Mitigation Measure AIR-1, any impacts would be less than significant.

b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard?

Impact Determination. Less-Than-Significant Impact

Napa County is designated as nonattainment for $PM_{2.5}$ and 8-hour O_3 for the NAAQS and as nonattainment for $PM_{2.5}$, PM_{10}, and O_3 for the CAAQS. As discussed in response (a) above, the Project meets the screening criteria for less-than-significant impacts. Therefore, the Project's impact on criteria pollutants for which the Project region is nonattainment under applicable federal or state ambient air quality standards is less than significant.

c. Expose sensitive receptors to substantial pollutant concentrations?

Impact Determination. No Impact

As described in Section 3.2.1, the Air District generally defines a sensitive receptor as a facility or land use that houses or attracts members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Because no facilities or land uses that attract sensitive populations are located within the vicinity of the Project site, the Project would have no impact on sensitive receptors.

d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Impact Determination. Less-Than-Significant Impact

The use of construction equipment during Project construction may result in objectionable odors. However, Project construction would be short term and intermittent, and would occur in a sparsely populated rural location. As such, odors, if any, would likely be imperceptible to any visitor on-site. Given the temporary nature and small scale of construction and considering the minimal number of people potentially impacted by the odors, the Project would have a less-than-significant impact.

3.2.3 Mitigation Measures

Mitigation Measure: AIR-1 Basic Construction Mitigation Measures

The following *Basic Construction Mitigation Measures* as defined by the Air District's CEQA Air Quality Guidelines (2017b) shall be adhered to:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
- All roadways, driveways, and sidewalks to be paved shall be paved as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California Airborne Toxic Control Measures under Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with the manufacturers' specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- A publicly visible sign shall be posted with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

3.3 Biological Resources

Would the project:

Environmental Issues	Impact Determination
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 Wildlife or U.S. Fish and Wildlife Service?	Less-Than-Significant Impact with Mitigation Incorporated
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 Wildlife or U.S. Fish and Wildlife Service?	Less-Than-Significant Impact with Mitigation Incorporated
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?	Less-Than-Significant Impact with Mitigation Incorporated
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?	Less-Than-Significant Impact with Mitigation Incorporated
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Less-Than-Significant Impact
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?	No Impact

3.3.1 Setting

The Project is located on Campbell Creek in the southeastern Mayacamas Mountains at an elevation of approximately 560 feet above msl. The average temperature at the Project site ranges from a low of 34 degrees Fahrenheit in December to a maximum of 85 degrees Fahrenheit in August, and the average annual precipitation is 32.5 inches, with the wettest period being from November to March (Western Regional Climate Center 2022).

The Project work area, including the 0.34-acre work area and 0.109-acre staging areas, is adjacent to the existing disturbed road prism along Dry Creek Road. Riparian vegetation is present around Dry Creek to the south, with forested habitat present upslope. There is oak woodland, open shrub, and chaparral habitat to the northwest and northeast, with mixed hardwood and riparian vegetation present along Campbell Creek north of the Project site. The vegetation community along Campbell Creek within the Project site is dominated by Oregon ash, California bay laurel, and Gooding's willow,

with sedges and rushes in the understory. Surrounding lands include rural residential parcels, undeveloped forested lands, and agricultural areas.

The Project site is located within the Dry Creek Hydrologic Unit Code (HUC) 12 watershed (18,472 acres), within the larger San Pablo Bay HUC 8 watershed (784,984 acres) (University of California – Davis 2022). The nearest waterbodies include Dry Creek and Campbell Creek, both identified as perennial streams. Campbell Creek is a tributary to Dry Creek and flows directly into Dry Creek via the culvert to be replaced under Dry Creek Road. Dry Creek is a tributary to the Napa River.

A biological resources evaluation was prepared for the Project in April 2022 to evaluate special-status wildlife and plant species with potential to be present in the area. The California Natural Diversity Database (CNDDB), California Native Plant Society database, USFWS Information for Planning and Conservation resource list, and USFWS database of designated critical habitats were reviewed to identify special-status species with observation records, range, or critical habitat within a 1-mile buffer of the Project site. Additional resources used to support species determinations included Napa County RCD reports, the *Jepson Manual*, CDFW California Wildlife Habitat Relationships System, and the *Manual of California Vegetation* classification system.

Based on species occurrence information and the literature review, a list of special-status plant and wildlife species that have the potential to occur within the Project vicinity was developed. Each of these species' likelihood of occurrence within the Project site was assessed based on the following criteria:

- Occurs – species is definitively determined to be present based on a field survey or known to occur within the Project site based on documented occurrences in CNDDB or other literature;
- Likely to occur – all site features indicate that this species is very likely present and should be expected to occur;
- Unlikely to occur – species could occur, but would not be likely to occur or be encountered; and
- Does not occur – species would not occur because the Project site is outside known or current species range, lacks habitat or suitable conditions, and/or there is reasonable certainty to assume absence based on existing records.

The impact discussion and conclusions below reflect the results of the April 2022 biological resource research and evaluation.

3.3.2 Discussion

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 Wildlife or U.S. Fish and Wildlife Service?

Impact Determination. Less-Than-Significant Impact with Mitigation Incorporated

Thirty special-status species were identified in the biological resources evaluation that may be present within the Project site or within a 1-mile radius. Of these 30 species, six were determined to be likely to occur, two were determined unlikely to occur, and the remainder are not expected to occur. These species and their potential for occurrence within and around the Project site are summarized in Table 4.

Table 4. Special-Status Species Potentially Occurring within a 1-Mile Radius of the Project Site

Special-Status Species	Status[1]	CNDDB Records	Suitable Habitat	Potential to Occur in the Project Site[2]	Potential Impact
Plants					
Napa false indigo *Amorpha californica* var. *napensis*	CRPR 1B.2	No	No	Does not occur	No impact
Bent-flowered fiddleneck *Amsinckia lunaris*	CRPR 1B.2	No	No	Does not occur	No impact
Rincon Ridge manzanita *Arctostaphylos stanfordiana* ssp. *decumbens*	CRPR 1B.1	No	No	Does not occur	No impact
Narrow-anthered brodiaea *Brodiaea leptandrin*	CRPR 1B.2	No	No	Does not occur	No impact
Clara Hunt's milk-vetch *Astragalus claranus*	FE, ST, CRPR 1B.1	No	No	Does not occur	No impact
Rincon Ridge ceanothus *Ceanothus confuses*	CRPR 1B.1	No	No	Does not occur	No impact
Calistoga ceanothus *Ceanothus divergens*	CRPR 1B.2	No	No	Does not occur	No impact
Sonoma ceanothus *Ceanothus summonses*	CRPR 1B.2	No	No	Does not occur	No impact
Greene's narrow-leaved daisy *Erigeron greenei*	CRPR 1B.2	No	No	Does not occur	No impact
Jepson's coyote-thistle *Eryngium jepsonii*	CRPR 1B.2	No	No	Does not occur	No impact
Jepson;s leptosiphon *Leptosiphon jepsonii*	CRPR 1B.2	No	No	Does not occur	No impact

Special-Status Species	Status[1]	CNDDB Records	Suitable Habitat	Potential to Occur in the Project Site[2]	Potential Impact
Napa lomatium *Lomatium repostum*	CRPR 1B.2	No	No	Does not occur	No impact
Cobb Mountain lupine *Lupinus sericatus*	CRPR 1B.2	No	No	Does not occur	No impact
Green jewelflower *Streptanthus hesperidis*	CRPR 1B.2	No	No	Does not occur	No impact
Fish					
Central California Coast steelhead *Oncorhynchus mykiss*	FT	No	Yes	Likely to occur	Less than Significant with Mitigation
Fall-run Chinook *Oncorhynchus tshawytscha*	SSC	No	Yes	Likely to occur	Less than Significant with Mitigation
Pacific lamprey *Entosphenus tridentatus*	SSC	No	Yes	Likely to occur	Less than Significant with Mitigation
Amphibians					
California giant salamander *Dicamptodon ensatus*	SSC	Yes	Yes	Likely to occur	Less than Significant with Mitigation
Western pond turtle *Emys marmorata*	SSC	No	Yes	Likely to occur	Less than Significant with Mitigation
Foothill yellow-legged frog (Northwest/North Coast clade) *Rana boylii*	SSC	Yes	Yes	Likely to occur	Less than Significant with Mitigation
California red-legged frog *Rana draytonii*	FT, SSC	No	Yes	Unlikely to occur	Less than Significant with Mitigation
Red-bellied newt *Taricha rivularis*	SSC	No	No	Does not occur	No impact
Birds					
Northern goshawk *Accipiter gentilis*	SSC	No	No	Does not occur	No impact
Swainson's hawk *Buteo swainsoni*	ST (nesting)	No	No	Does not occur	No impact
American peregrine falcon *Falco peregrinus anatum*	FP (nesting)	No	No	Does not occur	No impact

Special-Status Species	Status[1]	CNDDB Records	Suitable Habitat	Potential to Occur in the Project Site[2]	Potential Impact
Bald eagle *Haliaeetus leucocephalus*	FP (nesting)	No	No	Does not occur	No impact
Northern spotted owl *Strix occidentalis caurina*	FT, ST, SSC	No	Yes	Unlikely to occur	Less than Significant with Mitigation
Crustaceans					
California freshwater shrimp *Syncaris pacifica*	FE, SE	No	No	Does not occur	No impact
Insects					
Monarch butterfly (overwintering) *Danaus plexippus*	FC	No	No	Does not occur	No impact
Mammals					
Pallid bat *Antrozous pallidus*	SSC	No	No	Does not occur	No impact

[1] Status Key: CRPR = California Rare Plant Rank
CRPR 1B = Rare, threatened or endangered in California and elsewhere
CRPR 2B = Rare, threatened or endangered in California but more common elsewhere
FC = Candidate for Federal Listing
FE = Federal Endangered
FP = CDFW Fully Protected
FT = Federal Threatened
SE = State Endangered
SSC = CDFW Species of Special Concern
ST = State Threatened

[2] **Likelihood of Occurrence Key:** *Occurs* - Species definitively determined to be present based on a field survey; *Does not occur* - would not occur because the Project site is outside known or current range, lacks habitat or suitable conditions, and/or there is reasonable certainty to assume absence based on existing records; *Unlikely* - could occur, but would not likely occur or be encountered; *Likely* - all site features indicate that this species is very likely present and should be expected.

The following sections provide additional information about each of the special-status species identified in Table 4, including their habitat requirements and potential to be affected by the Project. The discussion categorizes the species into three groups: (1) species with suitable habitat and the potential to occur within and around the Project site, (2) species with suitable habitat within and around the Project site that are not likely to occur, and (3) species with no suitable habitat within or around the Project site.

Species With Suitable Habitat and the Potential to Occur Within and Around the Project Site

There are six species with suitable habitat and the potential to occur within and around the Project site: Central California Coast steelhead, Chinook salmon, Pacific lamprey, California giant salamander, western pond turtle, and foothill yellow-legged frog (FYLF; Northwest/North Coast clade). In addition, migratory birds and raptors have the potential to nest within or adjacent to the Project site.

Central California Coast Steelhead

Steelhead are the anadromous form of rainbow trout that emigrate to the ocean as juveniles and migrate back to inland waters as adults to spawn. This species is federally listed as threatened under the ESA. Steelhead are present in the Napa River, and its tributaries are considered part of the Central California Coast steelhead evolutionary significant unit (ESU) (CalTrout 2017a; Napa County RCD 2020).

Central California Coast steelhead are considered winter steelhead based on when adults return to fresh water from the ocean (Moyle 2002). Winter steelhead typically enter streams when winter rains provide large amounts of cold water for migration and spawning and often ascend long distances to spawn in tributaries to mainstem rivers. Pools with low velocities that are associated with instream and near-stream cover such as large woody debris, undercut banks, or submerged or overhanging vegetation can provide desirable resting areas for migrating adult steelhead (Moyle 2002). After reaching their spawning areas, females excavate redds in clean gravel substrate to spawn. Steelhead spawning generally occurs in swift, relatively shallow riffles or pool tailouts, or along the edges of fast runs with an abundance of loose gravel (Bjornn and Reiser 1991). Substrate composition is a critical factor determining the suitability of spawning habitat. Steelhead require clean, loose gravel that will remain stable during incubation and emergence. Substrate composition must be low in sand and fines so that water can flow through the gravel, carrying oxygen to the eggs and carrying waste products away from the eggs. This process allows successful incubation and emergence of the juveniles (Bjornn and Reiser 1991). Steelhead fry emerge from gravel redds in late spring and rear for 1 to 3 years in fresh water before migrating to the ocean (Moyle 2002). Steelhead generally spend 2 years in the ocean before returning to fresh water to spawn.

The Napa County RCD recorded steelhead during its 2019–2020 fish population monitoring efforts in the Napa River (Napa County RCD 2020). As a tributary to the Napa River, Dry Creek was designated as critical habitat for this species in September 2005 (NMFS 2005). The removal of a fish passage barrier in 2007 downstream of the Project site opened up approximately 17 miles of stream in Dry Creek to steelhead spawning (Jones and Sharp 2008; USFWS 2005). Dry Creek adjacent to the Project

site is considered critical habitat, and anadromous fish passage may occur through the culvert under Dry Creek Road from Dry Creek into Campbell Creek during ideal flow conditions (Cardno, now Stantec 2022). Based on the recorded observations of Central California Coast steelhead in the Napa River and the availability of suitable spawning and rearing habitat, there is potential for this species to be present within Dry Creek and Campbell Creek in or adjacent to the Project site.

Project activities such as dewatering could directly impact steelhead if they are present within the work area. Vegetation removal, excavation and grading, removal of the existing culvert, and installation of the new precast culvert could directly impact steelhead critical habitat. With implementation of **Mitigation Measures BIO-01, BIO-02, BIO-04, and BIO-09,** direct impacts to steelhead and steelhead critical habitat will be less than significant. Impacts to downstream water quality that may indirectly impact steelhead critical habitat will be less than significant through implementation of construction BMPs and adherence to required conditions in the Project's environmental permits.

In addition, Project activities could result in beneficial long-term impacts to steelhead critical habitat due to the improvement of fish passage, creation of a more natural streambank profile, and reduction in sediment delivery to improve downstream water quality.

Chinook Salmon

Chinook salmon are present in the Napa River (Napa County RCD 2020). However, the Napa River Chinook salmon population is not included in either of the nearby Chinook salmon ESUs—the Central Valley fall/late-fall run and the California Coastal Chinook salmon ESU. However, a recent genetic analysis of Napa River Chinook by Garza and Crandall (2013) found that the ancestry of Chinook salmon in the Napa River is primarily from the Central Valley fall/late-fall run. Therefore, this discussion focuses on this ESU, currently listed as a species of special concern by CDFW.

Fall/late-fall run Chinook salmon is an anadromous species that moves inland from the ocean in late summer, fall, and late fall and typically spawns within a few days or weeks of arriving at the spawning grounds (Moyle 2002). Females lay eggs in redds in clean gravel. Chinook salmon use the largest substrate of any California salmonid for spawning—typically a mixture of large gravel and small cobble (Kondolf and Wolfman 1993). For maximum embryo survival, water temperatures must be between 5 and 13 degrees Celsius and oxygen levels must be close to saturation (CalTrout 2017b). Under optimal conditions, embryos typically hatch after around 40 to 60 days, remain in the gravel as alevins for another 4 to 6 weeks until the yolk sac is fully emerged, and then become juvenile fry. Juvenile Chinook emerge from spawning gravel in spring and move

downstream within a few months to rear in mainstem rivers or estuaries before heading out to sea (Moyle 2002).

The Napa County RCD recorded this species during its 2019–2020 fish population monitoring efforts in the Napa River (Napa County RCD 2020). The removal of a fish passage barrier in Dry Creek in 2007 downstream of the Project site opened up approximately 17 miles of stream in Dry Creek to Chinook spawning in the Napa River watershed (Jones and Sharp 2008). Dry Creek adjacent to the Project site is considered critical habitat, and anadromous fish passage may occur through the culvert under Dry Creek Road from Dry Creek into Campbell Creek during ideal flow conditions (Cardno, now Stantec 2022). Based on the recorded observations of Chinook salmon in the Napa River and the availability of suitable spawning and rearing habitat, there is potential for this species to be present within Dry Creek and Campbell Creek in or adjacent to the Project site.

Project activities such as dewatering could directly impact Chinook salmon if present within the work area. Vegetation removal, excavation and grading, removal of the existing culvert, and installation of the new precast culvert could directly impact available salmonid habitat. With implementation of **Mitigation Measures BIO-01, BIO-02, BIO-04, and BIO-09,** direct impacts to Chinook salmon and associated habitat will be less than significant. Impacts to downstream water quality that may indirectly impact salmonid habitat will be less than significant through implementation of construction BMPs and adherence to required conditions in the Project's environmental permits.

In addition, Project activities could result in beneficial long-term impacts to available Chinook salmon habitat due to the improvement of fish passage, creation of a more natural streambank profile, and reduction in sediment delivery to improve downstream water quality.

Pacific Lamprey

Pacific lamprey, a CDFW-listed species of special concern, is an anadromous species that migrates to fresh water to spawn; juveniles return to the ocean to mature. Spawning sites are typically in low-gradient riffles with gravel substrates, and nests are built in a depression and then covered (Moyle et al. 2015). Once hatched, the benthic filter-feeding ammocoete (larval stage) lasts 5 to 7 years. Juvenile lampreys migrate to the ocean with peak winter and spring flows (Moyle et al. 2015). Pacific lamprey are presumed to spawn and rear in the Napa River and its tributaries, and Napa County RCD recorded this species during its 2019–2020 fish population monitoring efforts in the Napa River (Napa County RCD 2020). Based on the recorded observations of Pacific lamprey in the Napa River and the availability of suitable spawning and rearing habitat, there is potential for this species to be present within Dry Creek and Campbell Creek in or adjacent to the Project site.

Project activities such as dewatering could directly impact lamprey if they are present within the work area. Vegetation removal, excavation and grading, removal of the existing culvert, and installation of the new precast culvert could directly impact available lamprey habitat. With implementation of **Mitigation Measures BIO-01, BIO-02, BIO-04, and BIO-09,** direct impacts to lamprey and associated habitat will be less than significant. Impacts to downstream water quality that may indirectly impact lamprey habitat will be less than significant through implementation of construction BMPs and adherence to required conditions in the Project's environmental permits.

In addition, Project activities could result in beneficial long-term impacts to available lamprey habitat due to the creation of a more natural streambank profile and reduction in sediment delivery to improve downstream water quality.

California Giant Salamander

California giant salamander, a CDFW-listed species of special concern, are year-round residents of north-central California, occurring at elevations up to 6,500 feet, primarily in humid coastal Douglas-fir, redwood, red fir, and montane and valley-foothill forests (Zeiner et al. 1988). Aquatic adults and larvae are found in cool, rocky streams, and terrestrial adults are found under surface litter and existing animal burrows near streams in damp forests. This species breeds from March to May, and larvae may either retain gills for an aquatic adult stage or transform to a terrestrial adult after 1 to 2 years.

One CNDDB occurrence of California giant salamander was mapped approximately 0.7 mile south of the Project site in Dry Creek, and suitable habitat is present in Campbell Creek and Dry Creek. Based on the presence of suitable habitat within Dry Creek and Campbell Creek and the nearby occurrence record, there is potential for this species to be present within the Project site.

Project activities such as vegetation removal, excavation and grading, removal of the existing culvert, and installation of the new precast culvert could directly impact California giant salamander if they are present in the work area by trampling or crushing them. With implementation of **Mitigation Measures BIO-01, BIO-02, BIO-05, and BIO-09,** direct impacts to giant salamander and associated habitat will be less than significant. Impacts to downstream water quality that may indirectly impact salamander habitat will be less than significant through implementation of construction BMPs and adherence to required conditions in the Project's environmental permits.

Western Pond Turtle

Western pond turtle is a native freshwater turtle that is found in perennial wetlands and slow-moving creeks and ponds with preferred basking sites such as partially submerged logs, rocks, floating vegetation, or open banks above the waterline (Zeiner et al. 1988). Pond turtles spend most of their time in the water but do use nearby upland areas for

nesting habitat. Stebbins (2003) describes the elevation range of pond turtle as sea level to around 6,696 feet above msl, but mostly below 4,980 feet above msl.

Napa County RCD (2020) reports the presence of pond turtles in the Napa River, and a confirmed pond turtle individual was observed in Dry Creek approximately 400 feet downstream from the Project site during the fish passage assessment site visit in March 2022 (personal communication between Caroline Hamilton, Cardno biologist and Peter Drobny, Cardno fisheries senior biologist, 2022). Suitable aquatic habitat for this species is present in Campbell Creek, and suitable upland nesting habitat is present adjacent to Campbell Creek and Dry Creek. Based on the Project's location within the current range of pond turtle, available suitable habitat, and the recent observation, there is potential for this species to be present within the Project site.

Project activities such as vegetation removal, excavation and grading, removal of the existing culvert, and installation of the new precast culvert could directly impact pond turtles if they are present in the work area by trampling or crushing them. With implementation of **Mitigation Measures BIO-01, BIO-02, BIO-06, and BIO-09,** direct impacts to pond turtle and associated habitat will be less than significant. Impacts to riparian vegetation or downstream water quality that may indirectly impact pond turtle habitat will be less than significant through implementation of construction BMPs and adherence to required conditions in the Project's environmental permits.

Foothill Yellow-Legged Frog (Northwest/North Coast Clade)

FYLF north/northwest clade is a CDFW-listed species of special concern. FYLF inhabit streams of California in the Sierra Nevada and coastal ranges, preferring rocky streams and rivers with open, sunny banks in forests, chaparral, and woodlands. FYLF may also be found in isolated pools, vegetated backwaters, and deep, shaded, spring-fed pools. The species is rarely found away from permanent waters (Zeiner et al. 1988).

There are two CNDDB occurrences of FYLF within 1 mile of the Project site centered around the confluence of Dry Creek and Campbell Creek (CDFW 2022). There is suitable habitat for this species present within the Project site in Campbell Creek, Dry Creek, and adjacent riparian habitat. Based on the recorded occurrences and the presence of suitable habitat, there is potential for this species to be present within the Project site.

Project activities such as vegetation removal, excavation and grading, removal of the existing culvert, and installation of the new precast culvert could directly impact FYLF if they are present in the work area by trampling or crushing them. With implementation of **Mitigation Measures BIO-01, BIO-02, BIO-05, and BIO-09,** impacts to FYLF and associated habitat will be less than significant. Impacts to riparian vegetation or downstream water quality that may indirectly impact FYLF habitat will be less than

significant through implementation of construction BMPs, and adherence to required conditions in the Project's environmental permits.

Nesting Birds

In addition to the above-mentioned specific species, nesting birds and raptors have the potential to nest within or adjacent to the Project site. The occupied nests and eggs of these birds are protected by federal and state laws, including the Migratory Bird Treaty Act and California Fish and Game Code Sections 3503 and 3503.5. Project noise involving equipment operation that occurs during the breeding season or vegetation trimming could disturb nesting migratory birds and raptors if an active nest is located near these activities. Any disturbance that causes bird or raptor nest abandonment and subsequent loss of eggs or developing young at active nests located at or near the Project site would violate California Fish and Game Code Sections 3503 or 3503.5 and the Migratory Bird Treaty Act. This would be avoided through implementation of **Mitigation Measure BIO-03**, which requires that the Project attempt to avoid the avian nesting season, which typically extends from February 15 to August 31. If this season cannot be avoided, then nesting bird surveys would be completed before construction, and any nests found would be protected.

Species With Suitable Habitat Within and Around the Project Site That are Not Likely to Occur

There are two species with suitable habitat around the Project site that are not likely to occur based on the database review of species records: California red-legged frog (CRLF) and northern spotted owl (NSPOW).

California Red-Legged Frog

The CRLF is federally listed as threatened under the ESA and is listed by the CDFW as a species of special concern. CRLF inhabits quiet pools of streams, marshes, and ponds along the Coast Ranges from Mendocino County south to northern Baja California and in portions of the Sierra Nevada and Cascades ranges, usually at elevations below 4,000 feet above msl (Zeiner et al. 1988). A highly aquatic amphibian, CRLF prefers shorelines with extensive vegetative cover and pools that are 3 feet or more deep. It requires permanent pools for reproduction, and intermittent streams must retain surface water in pools year-round for frog survival. This species spends considerable time resting and feeding in riparian vegetation adjacent to waterways, and dispersing frogs have been recorded covering distances from 0.25 mile to more than 2 miles.

There are no CNDDB occurrences of this species documented within the Project site or within 1 mile of the Project; however, the Project site is within the current range of

CRLF, and there is also potentially suitable aquatic and riparian habitat present within the Project site in Campbell Creek and Dry Creek. Although presence of CRLF within the Project site is likely low, there is potential to encounter this species.

Project activities such as vegetation removal, excavation and grading, removal of the existing culvert, and installation of the new precast culvert could directly impact CRLF if they are present in the work area by trampling or crushing them. With implementation of **Mitigation Measures BIO-01, BIO-02, BIO-05, and BIO-09,** direct impacts to CRLF and associated habitat will be less than significant. Impacts to riparian vegetation or downstream water quality that may indirectly impact CRLF habitat will be less than significant through implementation of construction BMPs and adherence to required conditions in the Project's environmental permits.

Northern Spotted Owl

NSPOW is federally listed as threatened under the ESA, state listed as threatened under the California Endangered Species Act, and CDFW listed as a species of special concern. NSPOW is an uncommon resident of northern and coastal California conifer forests, occurring in dense, old-growth, multi-layered mixed conifer, redwood, and Douglas-fir habitats from sea level to around 7,600 feet (Zeiner et al. 1988). Dense canopy cover appears necessary for roost seclusion to protect the owl from high temperatures, and mature, multi-layered forest stands are required for foraging and breeding (Remsen 1978). Nests are typically in snags or tree cavities, or in the broken tops of large trees. NSPOW require moderate forest connectivity, with large blocks of 100 to 600 acres or greater of mature forest and suitable nesting habitat. In northern California, NSPOW appear to prefer narrow, steep-sided canyons with north-facing slopes (Zeiner et al. 1988).

There are no CNDDB occurrences of this species documented in the Project site. The closest positive CNDDB occurrence is approximately 0.5 mile from the Project. USFWS-designated critical habitat is present approximately 1.6 and 1.7 miles southeast and southwest of the Project site, respectively (USFWS 2022) There is potentially suitable nesting habitat on the north-facing slope above Dry Creek, approximately 400 feet south of the Project site. There is also suitable foraging habitat at this location. Noise during construction could potentially disturb this species, if present, during its nesting season.

Mitigation Measure BIO-08 requires that a qualified biologist be consulted if work is to be performed during northern spotted owl nesting season (March 15 to August 31); provides that modified 1-year call back surveys will be conducted within 0.25 mile of suitable nesting habitat; and provides instructions if an active spotted owl nest is discovered during surveys. This measure will prevent significant impacts to this species from the Project. With implementation of **Mitigation Measures BIO-08**, impacts to NSPOW will be less than significant.

Species With No Suitable Habitat Within or Around the Project Site

There is no suitable habitat within or around the Project site for the remaining 22 species identified in the biological resources evaluation. A brief discussion of each of these species is included below; however, due to the lack of suitable habitat and absence of observations, the Project is not expected to impact any of these species.

Plants

Napa false indigo

Napa false indigo is a perennial deciduous shrub found in openings in broadleaved upland forests, chaparral, and cismontane woodland at approximate elevations of 400 to 6,500 feet above msl. There are no CNDDB occurrences within the Project site or the 1-mile buffer around the Project site, there is no suitable habitat within or near the Project site, and the species was not observed during the April 2022 site visit. Therefore, Napa false indigo is not expected to be present within the Project site and would not be affected by the Project..

Bent-flowered fiddleneck

Bent-flowered fiddleneck is an annual herb found in gravelly slopes, grassland, and woodland openings, often in serpentine soils at approximate elevations of sea level to 2,000 feet above msl. There are no CNDDB occurrences within the Project site or the 1-mile buffer around the Project site, there is no suitable habitat within or near the Project site, and this species was not observed during the April 2022 site visit. Therefore, bent-flowered fiddleneck is not expected to be present within the Project site and would not be affected by the Project..

Rincon Ridge manzanita

Rincon Ridge manzanita is aperennial evergreen shrub that grows in chaparral at approximate elevations of 250 to 1,200 feet above msl. There are no CNDDB occurrences within the Project site or the 1-mile buffer around the Project site, there is no suitable habitat within or near the Project site, and this species was not observed during the April 2022 site visit. Therefore, Rincon Ridge manzanita is not expected to be present within the Project site and would not be affected by the Project..

Narrow-anthered brodiaea

Narrow-anthered brodiaea is a perennial bulbiferous herb found in open, mixed evergreen forests, chaparral, foothill woodlands, and valley grasslands in gravelly soil at approximate elevations of 350 to 3,000 feet above msl. There are no CNDDB occurrences within the Project site or the 1-mile buffer around the Project site, there is no suitable habitat within or near the Project site, and this species was not observed

during the April 2022 site visit. Therefore, narrow-anthered brodiaea is not expected to be present within the Project site and would not be affected by the Project..

Clara Hunt's milk-vetch

Clara Hunt's milk-vetch is an annual herb that grows in open, grassy areas in thin, rocky clay soils derived from volcanic or serpentine substrates. There are no CNDDB occurrences within the Project site or the 1-mile buffer around the Project site, there is no suitable habitat within or near the Project site, and this species was not observed during the April 2022 site visit. Therefore, Clara Hunt's milk-vetch is not expected to be present within the Project site and would not be affected by the Project.

Rincon Ridge ceanothus

Rincon Ridge ceanothus is a perennial evergreen shrub found on volcanic slopes in chaparral and pine/oak woodland at approximate elevations of 245 to 4,000 feet above msl. There are no CNDDB occurrences within the Project site or the 1-mile buffer around the Project site, there is no suitable habitat within or near the Project site, and this species was not observed during the April 2022 site visit. Therefore, Rincon Ridge ceanothus is not expected to be present within the Project site and would not be affected by the Project.

Calistoga ceanothus

Calistoga ceanothus is a perennial evergreen shrub that grows on volcanic or serpentine soils on slopes in chaparral and pine/oak woodlands at approximate elevations of 500 to 3,100 feet above msl. There are no CNDDB occurrences within the Project site or the 1-mile buffer around the Project site, there is no suitable habitat within or near the Project site, and this species was not observed during the April 2022 site visit. Therefore, Calistoga ceanothus is not expected to be present within the Project site and would not be affected by the Project.

Sonoma ceanothus

Sonoma ceanothus is a perennial evergreen shrub found on volcanic or serpentine soils on slopes in chaparral and pine/oak woodlands at approximate elevations of 700 to 2,600 feet above msl. There are no CNDDB occurrences within the Project site or the 1-mile buffer around the Project site, there is no suitable habitat within or near the Project site, and this species was not observed during the April 2022 site visit. Therefore, Sonoma ceanothus is not expected to be present within the Project site and would not be affected by the Project.

Greene's narrow-leaved daisy

Greene's narrow-leaved daisy is a perennial herb that generally grows on serpentine soils in chaparral, woodland, and conifer forests, and sometimes on rocky alluvium. There are no CNDDB occurrences within the Project site or the 1-mile buffer around the Project site, there is no suitable habitat within or near the Project site, and this species was not observed during the April 2022 site visit. Therefore, Greene's narrow-leaved daisy is not expected to be present within the Project site and would not be affected by the Project.

Jepson's coyote-thistle

Jepson's coyote-thistle is a perennial herb found on moist, clay soils in wetland or riparian communities at elevations below 1,650 feet above msl. There are no CNDDB occurrences within the Project site or the 1-mile buffer around the Project site, there is no suitable habitat within or near the Project site, and this species was not observed during the April 2022 site visit. Therefore, Jepson's coyote-thistle is not expected to be present within the Project site and would not be affected by the Project.

Jepson's leptosiphon

Jepson's leptosiphon is an annual herb that grows in open or partially shaded grassy slopes in chaparral, cismontane woodland, and valley and foothill grassland at approximate elevations of 300 to 1,600 feet above msl. There are no CNDDB occurrences within the Project site or the 1-mile buffer around the Project site, there is no suitable habitat within or near the Project site, and this species was not observed during the April 2022 site visit. Therefore, Jepson's leptosiphon is not expected to be present within the Project site and would not be affected by the Project.

Napa lomatium

Napa lomatium is a perennial herb found in woodland, brush slopes in yellow pine forests, foothill woodlands, and chaparral at approximate elevations of 500 to 5,900 feet above msl. There are no CNDDB occurrences within the Project site or the 1-mile buffer around the Project site, there is no suitable habitat within or near the Project site, and this species was not observed during the April 2022 site visit. Therefore, Napa lomatium is not expected to be present within the Project site and would not be affected by the Project. However, if this species were found to be present during pre-construction surveys, the construction BMPs and identified biological mitigation measures would ensure any impacts to this species are avoided.

Cobb Mountain lupine

Cobb Mountain lupine is a perennial herb that grows in open wooded slopes, broadleaf upland forest, chaparral, and lower montane conifer forests at approximate elevations of 900 to 5,000 feet above msl. There are no CNDDB occurrences within the Project site or the 1-mile buffer around the Project site, there is no suitable habitat within or near the Project site, and this species was not observed during the April 2022 site visit. Therefore, Cobb Mountain lupine is not expected to be present within the Project site and would not be affected by the Project.

Green jewelflower

Green jewelflower is an annual herb found in serpentine barrens and associated openings in chaparral, oak woodland, and cypress woodland at approximate elevations of 130 to 430 feet above msl. There are no CNDDB occurrences within the Project site or the 1-mile buffer around the Project site, there is no suitable habitat within or near the Project site, and this species was not observed during the April 2022 site visit. Therefore, green jewelflower is not expected to be present within the Project site and would not be affected by the Project.

Amphibians

Red-bellied newt

This species is found in flowing streams or rivers in coastal woodlands and redwood forests along the coast of Northern California. Adults are terrestrial, becoming aquatic when breeding. Terrestrial adults spend the dry season in moist habitats under woody debris and rocks and in existing animal burrows. There are no CNDDB occurrences within the Project site or the 1-mile buffer around the Project site, there is no suitable habitat within or near the Project site, and this species was not observed during the April 2022 site visit. Therefore, red-bellied newt is not expected to be present within the Project site and would not be affected by the Project.

Birds

American peregrine falcon

American peregrine falcon nesting and wintering habitats include riparian areas near wetlands, lakes, rivers, or other waters, woodlands, cities, agricultural areas, and coastal habitats. Nesting sites are typically on ledges of large cliff faces or city buildings or bridges. There are no CNDDB occurrences within the Project site or the 1-mile buffer around the Project site, there is no suitable nesting habitat within or near the Project site, and this species was not observed during the April 2022 site visit. Therefore,

peregrine falcon is not expected to be present within the Project site and would not be affected by the Project.

Swainson's hawk

This species spends the breeding season in the Central Valley of California and nests in grasslands and agricultural areas with scattered groves of trees; nest sites are usually in trees or large shrubs adjacent to open habitats used for foraging. Nests may be placed in windbreaks and disturbed areas. There are no CNDDB occurrences within the Project site or the 1-mile buffer around the Project site, there is no suitable nesting habitat within or near the Project site, and this species was not observed during the April 2022 site visit. Therefore, Swainson's hawk is not expected to be present within the Project site and would not be affected by the Project.

Northern goshawk

Northern goshawk nests in mature, dense, closed-canopy conifer forests in a broad range of conifer and conifer-hardwood types, primarily Pacific ponderosa, Jeffrey, and lodgepole pine, and mixed conifer, white and California red fir, Douglas-fir, and mixed Douglas-fir hardwood communities. Similarly, northern goshawk forages in mature and old-growth forests with relatively dense canopies. There are no CNDDB occurrences within the Project site or the 1-mile buffer around the Project site, there is no suitable nesting habitat within or near the Project site, and this species was not observed during the April 2022 site visit. Therefore, northern goshawk is not expected to be present within the Project site and would not be affected by the Project.

Bald eagle

This species nests primarily in large trees, generally within 0.5 to 1 mile of rivers, ocean shores, lake margins, and waters where fish are abundant. There are no CNDDB occurrences within the Project site or the 1-mile buffer around the Project site, there is no suitable nesting habitat within or near the Project site, and this species was not observed during the April 2022 site visit. Therefore, bald eagle is not expected to be present within the Project site and would not be affected by the Project.

Crustaceans

California freshwater shrimp

This species occurs in low- to moderate-gradient perennial creeks and streams up to 300 feet above msl where there is some emergent vegetation, high water quality, low levels of pollution, and good oxygen levels. There are no CNDDB occurrences within the Project site or the 1-mile buffer around the Project site, and there is no suitable

habitat within or near the Project site. Because this species is not expected to be present within the Project site, it would not be affected by the Project.

Insects

Monarch butterfly (overwintering)

Monarch butterfly overwintering sites are typically situated on south, southwest, or west-facing slopes or in shallow canyons or gullies; sites provide dappled sunlight, high humidity, and fresh water, and are absent of freezing temperatures or high winds. Monarchs most commonly roost in non-native blue gum eucalyptus and native Monterey pine and Monterey cypress and occasionally in non-native red gum eucalyptus and native western sycamore, coast redwood, coast live oak, and others. There are no CNDDB occurrences within the Project site or the 1-mile buffer around the Project site, there is no suitable habitat within or near the Project site, and this species was not observed during the April 2022 site visit. Overwintering monarch butterflies are not expected to be present within the Project site and would not be affected by the Project.

Mammals

Pallid bat

This species is found in semi-arid and arid landscapes, primarily in grasslands, shrub-steppe, and desert environments with rocky outcrops, and in dry open oak or ponderosa forest. Roosts are most commonly in rock crevices, but buildings, bridges, live trees, and snags are also used. There are no CNDDB occurrences within the Project site or the 1-mile buffer around the Project site. There is potential foraging habitat for this species within the Project site; however, construction activities are not expected to disturb foraging bat species, as these would be conducted primarily during daylight hours and not during dusk or dark when bats would be actively foraging. This species is not expected to roost within the Project site, and would not be foraging within or near the Project site during normal construction hours and therefore would not be affected by the Project.

Construction BMPs identified in Section 2.5.5 and general avoidance and minimization measures **Mitigation Measures BIO-01, Worker Environmental Awareness Training, and BIO-02, Invasive Species Protection** will be implemented to support protection of listed wildlife and plants. With the additional implementation of species-specific **Mitigation Measures BIO-03 through BIO-09** described below, Project implementation would not have a substantial adverse effect on special-status species or their habitat.

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 Wildlife or U.S. Fish and Wildlife Service?

Impact Determination. Less-Than-Significant Impact with Mitigation Incorporated

Napa County defines the "riparian zone" as *an area extending laterally outward fifty feet beyond the top of the banks on either side of a watercourse channel, except that the riparian zone of the Napa River from the southern boundary of the county to Zinfandel Lane shall include an area extending laterally outward one hundred feet beyond the top of the banks on either side of its channel* (Napa County Municipal Code, 16.04.410, Riparian zone).

Riparian habitat is present within the Project site and is the only sensitive natural community that would be affected by the Project. Project plans specify that as many as 11 trees would be removed along the Campbell Creek corridor, but do not specify what additional removal and trimming of riparian vegetation may be required. The size of the work area, extending along both sides of the creek for approximately 160 linear feet, is a relatively small reach compared to the total length of Campbell Creek. Impacts caused by tree removal, and by any additional trimming or removal of riparian plants or shrubs would be temporary because the Project includes a restoration and revegetation plan intended to restore the function of the creek and reestablish riparian vegetation following construction. Further, the Project would comply with the relevant measures of the Napa County Code of Ordinances including requirements pertinent to removal and revegetation in riparian zones (Chapter 16.04.750, Riparian zones – Restricted activities, and 18.108 – Conservation Regulations of the county's Municipal Code, respectively). **Mitigation Measure BIO-09** would ensure that these and any other pertinent regulations (such as those defined by CDFW in their anticipated permit) are adhered to.

Compliance with existing code and permit requirements, as ensured through **Mitigation Measure BIO-9**, combined with the construction BMPs identified in Section 2.5.5, would minimize construction impacts on the existing riparian community to the greatest extent feasible. The long-term impact of the Project is anticipated to be a benefit to riparian vegetation because the Project reconnects Campbell Creek to the historical floodplain in the reach above the culvert, an effort that will increase the total area that will be wetted by the creek during higher flow, ultimately potentially increasing the total square footage of riparian habitat.

In summary, with implementation of **Mitigation Measure BIO-09,** the Project will have a less-than-significant short-term impact to the riparian community within the Project site and is anticipated and intended to have a beneficial long-term impact.

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?

Impact Determination. Less-Than-Significant Impact with Mitigation Incorporated

Construction activities within Campbell Creek including water diversion, vegetation removal, existing culvert and bridge removal, new culvert and bridge installation, slope regrading, and bank stabilization efforts would have temporary impacts on wetland and non-wetland waters and riparian vegetation under jurisdiction of USACE, RWQCB, and CDFW.

Because the Project would result in impacts on waters of the U.S. and state, a Section 404 permit and a Section 401 Water Quality Certification would be required. In addition, because work would be conducted within Campbell Creek, which is under the jurisdiction of CDFW, a Section 1602 Streambed Alteration Agreement would be required. Permit applications would be submitted to the regulatory agencies prior to initiation of construction.

With implementation of construction BMPs identified in Section 2.5.5 and **Mitigation Measure BIO-09** ensuring compliance with all regulatory permits, Project implementation would not have a substantial adverse effect on waters of the state or federally protected wetlands.

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?

Impact Determination. Less-Than-Significant Impact with Mitigation Incorporated

The following discussion is organized by terrestrial wildlife species and aquatic wildlife species.

Terrestrial Species. Habitat for common wildlife species occurs within and adjacent to the Project site. Dry Creek Road and adjacent land uses are potential barriers to regional terrestrial wildlife movement for some species. Project activities will avoid disturbance of natural vegetation communities and habitats that support common wildlife species to the greatest extent feasible. No Project features are expected to substantially adversely affect the ability of most terrestrial wildlife species to pass through the Project site. Increasing the size of the culvert feature in the Project site may improve access for some wildlife species passing under Dry Creek Road.

Aquatic Species. A 2011 Napa County RCD report identified that Campbell Creek offers 0.67 mile of high-quality spawning habitat for fish above Dry Creek Road, including steelhead spawning and rearing habitat, but that fish migration into this habitat is prevented by a fish barrier resulting from the elevation difference between

the tailrace of the existing Dry Creek Road Culvert and the culvert itself. Under low-flow conditions, there is an approximately 3-foot drop from the outlet of the culvert to the water in the creek below, which is considered an excessive jump height for fish given the general low flow of water and inadequate jump pool depth. The Napa County RCD report (2011) notes that the existing culvert is the only anthropogenic barrier to fish passage on Campbell Creek. Replacing the existing culvert with a bottomless arch bridge precast culvert and grading the stream banks to a more natural floodplain would benefit hydrologic function, improve and extend available aquatic habitat to the approximate natural end of anadromy on Campbell Creek, and have long-term beneficial impacts to the movement of native resident or migratory fish and other aquatic species.

However, during Project construction, activities such as dewatering and diversion of flow in Campbell Creek have the potential to result in temporary disturbance to the movement of native resident or migratory fish species including steelhead, Chinook salmon, and lamprey. With implementation of the identified standard construction BMPs and **Mitigation Measures BIO-01 through BIO-09**, the Project is not anticipated to interfere substantially with the movement of any native resident or migratory fish or wildlife species and 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?

Impact Determination. Less-Than-Significant Impact with Mitigation Incorporated

The General Plan requires projects to address impacts on wildlife habitat and avoid impacts on fisheries and habitat supporting special-status species, to the extent feasible, through the following Conservation Sections:

- Policy CON-13 requires projects (including residential, commercial, and industrial) to address impacts on wildlife habitats and avoid impacts on fisheries and habitat supporting special-status species, to the extent feasible. Where impacts on wildlife and special-status species cannot be avoided, projects must include effective mitigation and management plans (Napa County 2008).
- Policy CON-14 requires developers to mitigate for loss of fishery and riparian habitat when avoidance of impacts is determined to not be feasible. Mitigation measures may include replacement habitat either on-site or at an approved off-site location (preference is given to on-site) or paying in-kind funds to an approved fishery and riparian habitat improvement and acquisition fund (Napa County 2008).

Implementation of **Mitigation Measures BIO-01 through BIO-09** will ensure consistency with Policy CON-13 to address and avoid impacts on fisheries and

specials-status species habitat. In addition, because all expected impacts are anticipated to be avoided, minimized, or mitigated through implementation of **Mitigation Measures BIO-01 through BIO-09,** the Project would not conflict with Policy CON-14.

The General Plan also includes several policies that require oak woodland habitat to be maintained and improved through appropriate measures and to comply with the *Oak Woodlands Preservation Act*. Tree removals currently proposed for the Project are as follows:

Species	Number Proposed for Removal	Diameter at Breast Height (inches)
Interior live oak (*Quercus wislizeni)*	1	18
California bay laurel (*Umbellularia californica*)	2	5.5
		12
Oregon ash (*Fraxinus latifolia*)	Approximately 6	3.5
		5.5
		8
		8
		10
		12
Goodding's willow (*Salix gooddingii*)	2	8
		9.5

As indicated above, the Project proposes removal of a single oak tree, an 18-inch DBH interior live oak. Removal of this single oak tree would not constitute an adverse impact on local oak woodlands.

This overall Project is permissible per Napa County Municipal Code 18.108.025 – General provisions—Intermittent/perennial streams, Section E. This section of code specifies uses permitted within stream setbacks. Permissible uses within stream setbacks include maintenance and replacement of existing public works facilities such as pipes, cables, culverts and the like. In addition, Project design plans reflect consideration of the sensitive stream environment and minimize tree removal to the extent possible consistent with Napa County Municipal Code 16.04.750 pertaining to vegetation removal in riparian zones. Further, as a primarily structural project (replacement of the culvert) that also provides hydrologic and aquatic benefits, the Project may not be required to comply (at Napa County's discretion) with some of the Napa County Conservation Regulations that otherwise specify precise ratios of canopy cover to be replaced. Rather, this Project demonstrates a long-term benefit to the creek and associated ecosystem, does not adversely impact threatened or

endangered plants or animal habitats, minimizes disturbances to the watercourse, and includes a restoration and revegetation plan developed by a qualified biologist that specifies vegetation of appropriate size, quality and quantity to mitigate adverse environmental effects. Overall, the design of the Project, combined with compliance with Napa County code requirements (assured through **Mitigation Measure BIO-09**), and with application of the construction BMPs identified in Section 2.5.5, would minimize impacts on riparian and oak woodland communities to the greatest extent feasible and therefore ensure consistency with the General Plan and Municipal Code. Therefore, this impact is less than significant.

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?

Impact Determination. No Impact

The Project site is not located within the boundaries of a local or regional conservation plan such as a Habitat Conservation Plan or Natural Community Conservation Plan. Therefore, the Project would not conflict with the provisions of an adopted local, regional, or state Habitat Conservation Plan or Natural Community Conservation Plan.

Mitigation Measures

Mitigation Measure: BIO-01 Worker Environmental Awareness Training

Prior to construction, a qualified biologist shall conduct one worker environmental awareness training (WEAT) for construction personnel. The WEAT shall be given to construction personnel to brief them on how to recognize special-status plant species, wildlife species, sensitive habitats, and appropriate avoidance measures that could occur in the proposed Project site (e.g., special-status plant identification, amphibian identification, nesting bird identification and habitat, riparian habitats, relevant BMPs, mitigation, and regulations). WEAT reference pamphlets shall also be provided to keep on-site for use by the trained site representative or foreperson to train new Project personnel in the absence of the biologist. If special-status species are encountered in the work area, construction shall cease and a qualified biologist shall be notified for guidance before any construction activities are resumed.

Mitigation Measure: BIO-02 Invasive Species Prevention

To prevent the spread of non-native, invasive plant or wildlife species that may result in adverse impacts to native plant or wildlife species or habitats, the following measures will be implemented:

- All imported or planted vegetation will be native and sourced from a local nursery, within 50 miles if possible.
- All imported materials used for the Project will be from weed-free sources, and the source of the material will be provided in writing for Napa County review and approve prior to implementation.
- All vehicles, tools, and mechanical and personal equipment shall be cleaned prior to arrival on the Project site. The contractor shall be required to use the California Invasive Plant Council's BMP checklist for cleaning vehicles, tools, and equipment (California Invasive Plant Council 2012).

Mitigation Measure: BIO-03 Nesting Birds

Trimming and removal of vegetation and trees shall be minimized and performed outside of the nesting bird season (February 1–August 31), to the extent feasible. If this season cannot be avoided and vegetation removal or construction activities are planned between February 1 and August 31, a qualified biologist will conduct a pre-construction survey within the Project site and identify a 200-foot buffer for nesting birds within 5 days prior to the start of construction activities.

- If no active nests are identified during the surveys, no work buffers and/or further Project modifications are required.
- Surveys shall be repeated if vegetation activities are suspended for 5 or more days.
- If active nests are identified during the surveys, the qualified biologist shall establish an appropriate avoidance buffer around the nest in which no work will be allowed until the young have successfully fledged or the nest has been abandoned. Buffers shall be a minimum of 250 feet for non-listed bird species and 500 feet for non-listed raptors. The size of the avoidance buffer shall be determined by a qualified biologist and shall depend on the status of the species present, the level of noise or construction disturbance, line of sight between the nest and the disturbance, ambient levels of noise, and other disturbances. Buffers may be increased or decreased at the discretion of the biologist, as appropriate, to ensure that the Project does not cause nest disturbance.
- If these minimum non-disturbance buffers are not feasible, then construction activities may proceed only with continuous monitoring by a qualified biologist. In this situation, the biologist will conduct a pre-Project survey to establish a nest behavioral baseline and then continuously monitor nest(s) to detect behavioral changes resulting from the Project. If behavioral changes occur, the work causing that change will be immediately ceased.

Mitigation Measure: BIO-04 Special-Status Fish

Project activities are anticipated to require the dewatering of a portion of Campbell Creek. A diversion and dewatering plan and a fish rescue and relocation plan shall be prepared for the Project in consultation with appropriate agencies including the National Marine Fisheries Service (NMFS), CDFW, USFWS, and RWQCB. The plans will include measures that detail procedures for dewatering activities and for fish rescue and relocation to avoid and minimize the number of steelhead, Chinook, and lamprey that could be stranded during dewatering.

The diversion and dewatering plan and/or the fish rescue and relocation plan shall specify, among other requirements, the following:

- That all work is to be scheduled between July 1 and October 31. This time period is a season when there is naturally minimal flow in Dry Creek and Campbell Creek, and it is outside of the season when adult migrating steelhead would be expected to enter the Napa River watershed.
- Fish rescue will be conducted by a qualified biologist or team of biologists prior to the initiation of dewatering efforts.
- Captured fish will be relocated to a pre-determined location in appropriate habitat outside of the Project site. Holding time (in water in buckets or coolers with aerators) and handling of fish will be minimized to the greatest extent feasible.
- Once dewatering is initiated, a qualified biologist or fish rescue team will remain on-site to observe the process and remove additional fish using established rescue procedures until dewatering is complete.
- Dewatering pump intakes will be screened to prevent entrainment of fish in accordance with NMFS screening criteria for salmonid fry (NMFS 1997).
- There will be limits to ensure that the time period for which any area is dewatered is as short as is feasible.

Mitigation Measure: BIO-05 Special-Status Amphibians

A qualified biologist will conduct a pre-construction survey within 48 hours prior to the start of work for FYLF, CRLF, and California giant salamander following available protocols, including USFWS's *Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog* (USFWS 2005), and *Visual Encounter Survey Protocol for Rana Boylii in Lotic Environments* (Peek et al. 2017). The qualified biologist shall provide a survey methodology to CDFW for review and approval a minimum of two weeks prior to start of Project construction.

If pre-construction survey results are positive, the appropriate agencies will be notified (CDFW and/or USFWS) and a qualified biological monitor shall be on-site during all construction activities, including mobilization. Additional protective measures may be implemented, including, but not limited to, establishing an avoidance buffer around observed individuals; placing Environmentally Sensitive Area protective fencing; or locally relocating individuals by a qualified biologist or biological monitor.

If pre-construction survey results are negative, a full-time biological monitor is not required and the following measures will be implemented:

- A biological monitor will be on-site during any vegetation trimming or removal activities within riparian or aquatic habitats and during dewatering activities.
- During work, crews will inspect the work space for wildlife to make sure there are no animals in holes and trenches, construction material, and equipment. Any potential FYLF, CRLF, or salamander individuals discovered during Project activities shall be first allowed to move out of the Project site of their own volition. Project activities within 25 feet of the individual will cease and a qualified biologist will be contacted, and the appropriate resource agencies will be notified (CDFW and/or USFWS) within 24 hours where appropriate. If the individual does not move or does not leave the Project site, a qualified biologist will work with the appropriate resource agencies to capture and relocate the individual to the nearest suitable habitat at least 100 feet from the Project site where it was found. Work may resume when the qualified biologist has relocated the individual outside of the impacted work area or determined that the individual has left the work area of its own accord.
- If any individuals are observed or moved, the details shall be included in the post-construction report.

Mitigation Measure: BIO-06 Special-Status Reptiles

A qualified biologist will conduct a pre-construction survey for western pond turtle individuals in suitable aquatic habitat within 48 hours prior to the start of work. If pre-construction survey results are positive, the appropriate agencies will be notified and a biological monitor shall be on-site during all construction activities. Additional protective measures may be implemented, including, but not limited to, establishing an avoidance buffer around observed individuals; placing Environmentally Sensitive Area protective fencing; or locally relocating individuals by a qualified biologist or biological monitor.

If work will be conducted during pond turtle nesting season (typically April to August), areas that present suitable nesting habitat within 200 feet of the Project site and potential area of impact (Map 2) will be searched for nests. If a potential nest is identified, the nest location shall be flagged and a biological monitor will be present

throughout all ground-disturbing activities/use of heavy equipment to minimize the potential for impacts to the nest.

During work, crews will inspect the workspace for wildlife to make sure there are no animals in holes and trenches, construction material, and equipment. Any potential pond turtles discovered during Project activities shall be allowed to move out of the Project site of their own volition. Project activities within 25 feet of the individual will cease, and a qualified biologist will be contacted. The appropriate resource agencies (CDFW and/or USFWS) will be notified within 24 hours where appropriate. If the individual does not move or does not leave the Project site, it shall be hand captured by a qualified biologist and relocated to the nearest available suitable habitat 100 feet outside the designated Project disturbance and staging/parking areas.

Work may resume when the qualified biologist has relocated the individual outside of the impacted work area or determined that the individual has left the work area of its own accord.

If any individuals are observed or moved, the details shall be included in the post-construction report.

Mitigation Measure: BIO-07 Special-Status Bats

At least 30 days prior to construction, but no more than 60 days from the start of construction, a bat roosting habitat assessment shall be conducted of all trees and structures to be removed or otherwise impacted during construction. If suitable roosting habitat is identified, visual surveys shall be conducted to determine the presence or absence of roosting bats. If presence is confirmed, appropriate agencies such as CDFW will be consulted and a plan will be implemented to assess species, type of colony, and usage, and appropriate avoidance and mitigation measures will be developed.

Mitigation Measure: BIO-08 Northern Spotted Owl

No Project activities within 0.25 miles of northern spotted owl nesting habitat shall occur from March 15 to August 31, unless modified one-year call-back northern spotted owl surveys have been completed by a qualified biologist with reference to the *USFWS Protocol for Surveying Proposed Management Activities That May Impact Northern Spotted Owls, dated (revised) January 9, 2012* and accepted by CDFW in writing. If an active nest site is detected during surveys, a 0.25-mile no-disturbance buffer zone shall be implemented around the nest. Unless otherwise approved in writing by CDFW, no Project activities shall occur within the buffer zone until the end of breeding season, or until a qualified biologist determines that the nest is no longer active. Alternate buffer zones may be proposed by a qualified biologist after conducting an auditory and visual disturbance analysis following the USFWS. If no active spotted owl nests are identified

during the call back surveys, no work buffers and/or further Project modifications are required.

Mitigation Measure: BIO-09 Adherence to Applicable Napa County Code Requirements and Regulatory Permit Conditions

All relevant measures of the Napa County Code of Ordinances shall be adhered to. These measures include multiple requirements that support minimization and avoidance of unnecessary impacts to species and wildlife habitat. Specifically, Chapter 16.04.750 - Riparian zones—Restricted activities, specifies the following with respect to removal of vegetation in the riparian zone:

A. The proposed activity will not, with regard to the riparian zones along a channel, remove more than the following:
    1. A native tree eighteen inches DBH per one hundred linear feet of riparian zone on each side of the floodplain, or
    2. Three native trees twelve inches DBH per one hundred linear feet of riparian zone on each side of the floodplain, or
    3. Six native trees six inches DBH per one hundred linear feet of riparian zone on each side of the floodplain, or
    4. Five hundred square feet of vegetation in riparian zones beyond ten feet from the top of the bank, or
    5. The temporary removal of a portion of riparian vegetation not more than fifteen feet wide beyond ten feet from the top of the bank, where replanting of such strip is a part of the project; and
B. The proposed activity will not involve the locating of any facility or structure within ten feet from the top of the bank; and
C. Will not result in a cut or fill slope that would remain unprotected by slope reseeding and bank stabilization replanting at the end of the project, thereby making the slope susceptible to erosion.

In addition, Napa County Municipal Code Chapter 18.108.070 – Erosion hazard areas, Use requirements; and Chapter 18.108.100 – Erosion hazard areas—Vegetation preservation and replacement; specify compliance with various vegetation and erosion hazard measures specific to erosion hazard areas. These are applicable to the Project, at the discretion of Napa County, and include:

- Compliance with the requirements of Napa County's NPDES Program
- Submission of an erosion control plan

- Protection of new plantings
- County approval for removal of trees 6-inches DBH or larger
- Protection of trees to be retained within the work area

Beyond these Napa County requirements, the Project shall adhere to all the permitting conditions included in the anticipated Clean Water Act (CWA) Section 401 Water Quality Certification from the San Francisco Bay RWQCB, CWA Section 404 permit from the USACE, and Streambed Alteration Agreement in compliance with Section 1600 of the California Fish and Game Code from the CDFW. More information about these permit requirements and compliance expectations is described in Section 3.8.

3.4 Cultural Resources

Would the project:

Environmental Issues	Impact Determination
a. Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	Less-Than-Significant Impact with Mitigation Incorporated
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	Less-Than-Significant Impact with Mitigation Incorporated
c. Disturb any human remains, including those interred outside of dedicated cemeteries?	No Impact

3.4.1 Setting

To identify historical resources at the Project site, a desktop cultural resources constraints assessment (cultural study) was completed by Cardno, now Stantec and results provided to Napa County in the form of a technical memorandum. The study consisted of a background and literature search to identify previously conducted cultural resource inventories and recorded cultural resources within a 0.5-mile (0.8-kilometer) study area surrounding the Project site. Specifically, the study consisted of a records search of the Northwest Information Center of the California Historical Resources Information System; a review of General Land Office cadastral survey and USGS topographic quadrangle maps; and a review of secondary sources to determine the extent of previous inventories, previously recorded cultural resources, and historic-period activity in or near the Project site. In addition, the study involved a review of historical maps and aerial photography. The study also involved outreach to the Native American Heritage Commission requesting a search of the Sacred Lands File in April of 2022. The Sacred Lands File records sites of traditional, cultural, or religious value to the Native American community in California.

Results

The cultural study found that three previous cultural resource investigations have been conducted within a 0.5-mile search radius of the Area of Project Effect. No previous cultural resource investigations have been conducted within the Area of Project Effect, and there are no previously recorded cultural resources within the Area of Project Effect, nor within a 0.5-mile radius of the Project. The cultural study did note that the historic Oakville Grade Road crossed over Campbell Creek approximately 175 feet upstream of the current Dry Creek Road Culvert crossing. The bridge used for the crossing, the Oakville Grade Bridge, is abandoned but still visible and is potentially eligible for listing on the California Register of Historic Resources (CRHR). The results of the Sacred Lands File search conducted by the Native American Heritage Commission were positive.

3.4.2 Discussion

a. Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

Impact Determination: Less-Than-Significant Impact with Mitigation Incorporated

According to CEQA, lead agencies are required to identify historical resources that may be affected by any undertaking that triggers CEQA environmental review. Historical resources can include precontact (i.e., Native American) archaeological deposits, historic-period archaeological deposits, historic buildings, historic districts, and areas of traditional cultural significance to tribal groups. The significance of such resources must be evaluated using the criteria for listing on the CRHR (Public Resources Code Section 5024.1). Generally, a resource is considered to be historically significant if it has integrity and meets the criteria for listing in the CRHR. Resources already listed or determined eligible for the National Register of Historic Places are by definition eligible for the CRHR. Integrity is defined as the authenticity of a historical resource's physical identity, evidenced by the survival of characteristics that existed during the resource's period of significance. CRHR regulations specify that integrity is a quality that applies to historical resources in seven ways: location, design, setting, materials, workmanship, feeling, and association. In addition, for a resource to be eligible for the CRHR, it must satisfy three standards.

- A property must be significant at the local, state, or national level, under one or more of the following criteria:
  - It is associated with events or patterns of events that have made a significant contribution to the broad patterns of the history and cultural heritage of California and the United States.
  - It is associated with the lives of persons important to the nation or California's past.
  - It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
  - It has yielded, or may be likely to yield, information important to the prehistory or history of the state or the nation.
- A resource must retain enough of its historic character or appearance to be recognizable as a historic property and to convey the reasons for its significance.
- It must be 50 years old or older (except for rare cases of structures of exceptional significance).

The potential for the Project to impact historic resources is directly related to the likelihood that such resources are present in or around the Project site and on whether they would be encountered during construction. Though the Oakville Grade Bridge is a potentially historic resource, the engineering drawings include this bridge as a feature and note that the limits of the construction area do not extend upstream to the bridge and that the bridge is to be protected in place. Therefore, the Project would not have any impact to the abandoned Oakville Grade Bridge.

While there are no known cultural or archaeological resources within the area of identified disturbance, no previous cultural resource studies have been conducted within the Area of Project Effect, and therefore, though unlikely, there is the potential that ground-disturbing activities could uncover intact buried historical resources that might be eligible for listing within the CRHR. To avoid impacts to historic resources within the Project site, **Mitigation Measures CUL-1** and **CUL-2** would be implemented. With implementation of these mitigation measures, any impacts to historical resources, including to any previously unidentified resources discovered as a result of earthmoving activities, would be reduced to less than significant.

b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Impact Determination. Less-Than-Significant Impact with Mitigation Incorporated

According to the CEQA Guidelines, “When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource” (CEQA Guidelines Section 15064.5(c)(1)). Those archaeological sites that do not qualify as historical resources shall be assessed to determine if these qualify as “unique archaeological resources” (California Public Resources Code Section 21083.2). Public Resource Code Section 21082.2(g) states: *… a ‘unique archaeological resource’ means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:*

- *Contains information needed to answer important scientific research questions and that there is demonstrable public interest in that information.*
- *Has a special and particular quality such as being the oldest of its type or the best available example of its type.*
- *Is directly associated with a scientifically recognized important prehistoric or historic event or person.*

A resource that merely adds to the current body of knowledge without meeting one of the above criteria is considered a non-unique archaeological or paleontological resource.

As discussed above in response (a), there are no known cultural or archaeological resources within the area of identified disturbance. A large portion of the Project site includes the existing road (Dry Creek Road) and culvert, and therefore there has been previous ground disturbance within the Project site. Overall, construction would result in a relatively small amount of new ground disturbance, and there would be a low potential to encounter previously unidentified archaeological deposits. Therefore, the potential for the Project to adversely affect unknown potentially intact buried archaeological deposits is low. However, ground disturbance could unearth currently unidentified but potentially significant archaeological resources. If previously unidentified resources are uncovered, **Mitigation Measures CUL-1** and **CUL-2** would be implemented. With implementation of these mitigation measures, any impacts to unique archaeological resources, including to any previously unidentified resources discovered as a result of earthmoving activities, would be reduced to less than significant.

c. Disturb any human remains, including those interred outside of dedicated cemeteries?

Impact Determination. No Impact

Prior archaeological studies in the vicinity of the Project site have not identified any burial sites or ceremonial grounds, and no human remains are known to be buried within the Project site or surrounding area. However, encountering human remains, including Native American human remains, during ground disturbance, while extremely unlikely, cannot be discounted. If human remains are identified during Project construction, these remains would be treated in accordance with Section 7050.5 of the California Health and Safety Code and Section 5097.98 of the Public Resources Code, as appropriate.

Section 7050.5 of the California Health and Safety Code states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined whether the remains are subject to the coroner's authority. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Native American Most Likely Descendent to inspect the site, and the Most Likely Descendent shall recommend the proper treatment of the remains and associated grave goods.

Section 5097.98 of the Public Resources Code states that the Native American Heritage Commission, upon notification of the discovery of Native American human

remains pursuant to Health and Safety Code Section 7050.5, shall immediately notify those persons (i.e., the Most Likely Descendent) it believes to be descended from the deceased. With permission of the landowner or a designated representative, the Most Likely Descendent may inspect the remains and any associated cultural materials and make recommendations for treatment or disposition of the remains and associated grave goods. The Most Likely Descendent shall provide recommendations or preferences for treatment of the remains and associated cultural materials within 48 hours of being granted access to the site.

With these regulations in place, no impact on human remains is anticipated, and no additional mitigation is necessary.

3.4.3 Mitigation Measures

Mitigation Measure: CUL-1 Undocumented Cultural Resources

If archaeological resources (prehistoric or historic), fossils, or human remains are encountered during construction, work shall be stopped until a qualified archaeologist can assess the findings. Per Archaeological Resources Protection Act, 43 Code of Federal Regulations § 7.4, *Prohibited Acts and Criminal Penalties*:

> *Under section 6(a) of the Act, no person may excavate, remove, damage, or otherwise alter or deface, or attempt to excavate, remove, damage, or otherwise alter or deface any archaeological resource located on public lands or Indian lands unless such activity is pursuant to a permit issued under § 7.8 or exempted by § 7.5(b) of this part.*

In all cases, the retained archaeologist shall adhere to professional standards regarding the evaluation and treatment of all previously identified or newly identified resources including assessing the potential for Project impacts and prioritizing avoidance of the resource with implementation of protective measures (e.g., exclusion fencing or flagging) as needed. In instances where the resource cannot be avoided, the resource shall be evaluated to determine its historical, archaeological, or tribal significance. If the resource is not found significant, construction may proceed. If the evaluation determines significance, mitigation measures shall be devised by the archaeologist for approval by the county before construction may proceed.

Mitigation Measure: CUL-2 Resource Awareness Training

All construction personnel responsible for overseeing and operating ground-disturbing equipment shall be trained regarding the recognition of cultural and heritage resources and informed of what to do in the event they encounter subsurface prehistoric or historical cultural resources and/or human remains. At a minimum the heritage and cultural resources to cover with personnel include:

- Types of heritage and cultural resources expected in the Project site;
- Types of evidence that indicate heritage or cultural resources might be present (e.g., ceramic shards, trash scatters, lithic scatters);
- Importance of avoiding areas flagged or otherwise identified as sensitive;
- Protocol to be followed if a cultural or tribal cultural resource or human remains are encountered; and
- Penalties for removing or intentionally disturbing heritage and cultural resources.
- Pamphlets covering the laws and regulations pertaining to protection of cultural resources and what to do in the event of a find shall be left with the construction foreman and other key construction employees. The pamphlets shall remain on site for the duration of Project construction.

3.5 Geology and Soils

Would the project:

Environmental Issues	Impact Determination
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	No Impact
ii. Strong seismic ground shaking?	Less-Than-Significant Impact
iii. Seismic-related ground failure, including liquefaction?	No Impact
iv. Landslides?	No Impact
b. Result in substantial soil erosion or the loss of topsoil?	Less-Than-Significant Impact
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	No Impact
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	No Impact
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	No Impact
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	No Impact

3.5.1 Setting

California is divided into 11 geomorphic provinces, which are naturally defined geologic regions that display a distinct landscape or landform. The Project site is located within the northern portion of the Coast Ranges Geomorphic Province, which is a series of low mountain ranges and northwest-trending valleys that run nearly parallel to the San Andreas Fault (CGS 2002). The Project site is predominantly underlain by Holocene-age alluvium consisting of poorly sorted sand, silt, clay, and gravel. The hillside slopes to the north and south of the Project location are mapped as Great Valley Sequence deposits, which consist of Early Cretaceous to Late Jurassic aged sandstone, pebble conglomerate, siltstone, and shale.

Based on a review of the United States Department of Agriculture Web Soil Survey, the area around the Project site is primarily underlain by Bressa-Dibble complex (5 to 15 percent slopes) (Natural Resources Conservation Service 2022). The Bressa and Dibble soil series are both moderately deep, well-drained soils that form over weathered sandstone. The typical profile of the Bressa-Dibble complex consists of silt loam from zero to 10 inches, silty clay loam from 10 to 33 inches, and weathered bedrock from 33 to 59 inches. The soil erodibility factor K indicates the erodibility of whole soil. K factor estimates are based primarily on the percentage of silt, sand, and organic matter, as well as soil structure and saturated hydraulic conductivity. The K factor within the Project site is 0.32, which falls within the moderate erodibility range (Natural Resources Conservation Service 2022).

The Project is located within the San Francisco Bay region, which is seismically active. Earthquakes could potentially occur on any of the several active faults within the region. The nearest known fault is the West Napa Fault; possible traces of the fault are located east of the Project location (Miller Pacific Engineering Group 2022). The Project is not located within an Alquist-Priolo earthquake fault zone, which is defined as areas with surfaces traces of active faults that have ruptured in the last 11,000 years (CGS 2019). The Project is located within an area of moderate earthquake shaking potential per the CGS's analysis of Earthquake Shaking Potential for California (CGS 2016). No other known seismic hazards, including landslides and liquefaction, are located within the Project vicinity (CGS 2019).

3.5.2 Discussion

a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Impact Determination. No Impact

The Project is not located within an Alquist-Priolo earthquake fault zone. There are no known active faults within the vicinity of the Project site. As such, the Project would not expose people or structures to risk of injury or death from rupture of an active fault; therefore, there would be no impact.

ii. Strong seismic ground shaking?

Impact Determination. Less-Than-Significant Impact

As described in Section 3.5.1, the Project site may experience moderate intensity of ground shaking and damage from anticipated future earthquakes. Napa County has historically experienced earthquakes of sufficient magnitude to damage structures and bridges that did not meet current seismic safety standards. However, the Project is designed to meet current seismic safety standards (Miller Pacific Engineering Group 2022). While the presence of construction crews in the Project area may expose workers to moderate seismic ground shaking in the event of an earthquake, this exposure would be limited in duration. In addition, the rural nature of the Project site and absence of any mapped hazards related to landslides and/or liquefaction would mean that any seismic shaking that does occur would not necessarily be hazardous to construction crews. Therefore, the impact would be less than significant.

iii. Seismic-related ground failure, including liquefaction?

Impact Determination. No Impact

The Project is not located in an area where liquefaction is known to occur, nor would the replacement of the existing culvert or restoration of the stream channel contribute to increased risks of liquefaction. Therefore, the Project would have no impact.

iv. Landslides?

Impact Determination. No Impact

The Project is not located in an area where landslides are known to occur. Construction activities, such as grading and tree removal, have the potential to cause soil instability on steep slopes, which can lead to landslides. However, construction is primarily limited to the channel and banks of Campbell Creek. Therefore, the Project would have no impact.

b. Result in substantial soil erosion or the loss of topsoil?

Impact Determination. Less-Than-Significant Impact

While ground-disturbing construction activities, such as grading, trenching, and tree removal can cause soil erosion, the total ground disturbance associated with the Project is minimal and would not result in substantial soil erosion or the loss of topsoil. The Project will implement construction BMPs as described in Section 2.5.5 in order to minimize any potential soil erosion or topsoil loss. These practices include maintaining perimeter control, installing stabilized construction entrances to prevent off-site tracking, covering stockpiles, minimizing vegetation impacts outside of the construction limits, and restoring disturbed areas following the completion of construction. In addition, the permits that will be obtained for the Project include conditions that require the implementation of erosion and sediment controls (permit

details are described in Section 3.8). The Napa County Code of Ordinances also includes requirements for the implementation of erosion and sediment control measures (discussed further in Section 3.8). Therefore, the impact would be less than significant.

c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Impact Determination. No Impact

As discussed in response (a)(iii) above, the Project site is not located within or near a liquefaction or landslide zone. Therefore, there would be no impact.

d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Impact Determination. No Impact

Expansive soils are prone to large volume changes (swelling and shrinking) that are directly related to changes in water content; with higher moisture levels, the soils swell, and with lower moisture levels, the soils shrink. According to the USGS's *Swelling Clays Map of the Conterminous United States,* the Project vicinity generally comprises less than 50 percent clays that have either high swelling potential or slight to moderate swelling potential (Olive et al. 1989). However, a geotechnical investigation conducted in March 2022 did not identify the presence of expansive soils (Miller Pacific Engineering Group 2022). Therefore, there would be no impact.

e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

Impact Determination. No Impact

The Project does not involve modifications to existing wastewater disposal systems, nor are new wastewater disposal systems proposed. Therefore, there would be no impact.

f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Impact Determination. No Impact

Geological features within the Project vicinity consist of hills, canyons, and valleys, which are typical of the San Francisco Bay Area region. No unique rock formations, such as cliffs, peaks, escarpments, or tors, are located within or near the Project site. Minor ground disturbance associated with replacement of the existing culvert and restoration of the stream channel is not anticipated to destroy any

paleontological resources and would not impact any unique geological features. Therefore, the Project would have no impact.

3.6 Greenhouse Gas Emissions

Would the project:

Environmental Issues	Impact Determination
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Less-Than-Significant Impact
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	No Impact

3.6.1 Setting

Greenhouse gases are compounds, such as carbon dioxide (CO_2) and methane (CH_4), that have varying global warming potential and atmospheric lifetimes. Increased concentrations of GHGs in the atmosphere contribute to global temperature increases and climate change.

California has developed several regulations and goals to reduce GHG emissions within the state. These include:

- Executive Order S-03-05 was signed on June 1, 2005, and established the following GHG emission reduction targets: (1) reduce emissions to 1990 levels by 2020, and (2) reduce emissions to 80 percent below 1990 levels by 2050.
- Assembly Bill 32, the Global Warming Solutions Act, was signed August 31, 2006, and requires the state to reduce its GHG emissions to 1990 levels by 2020 as directed by EO S-03-05. Assembly Bill 32 includes requirements to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions and directs the California Air Resources Board to develop a plan showing how the reductions were going to be achieved. To meet this requirement, California Air Resources Board developed the Climate Change Scoping Plan, which must be updated every five years. The Climate Change Scoping Plan presents key GHG reduction strategies and measures, such as increased generation of renewable electricity, needed to reach the GHG emissions reductions targets.
- Executive Order B-30-15 was signed April 29, 2015, and established the intermediate GHG emission reduction target of 40 percent of 1990 levels by 2030, which was mandated into law with the signing of Senate Bill 32 in 2016. This executive order also directed California Air Resources Board to update the Climate Change Scoping Plan and quantify the state's 2030 GHG reduction goal.
- Executive order B-55-18, signed in September 2018, requires that California achieve carbon neutrality by 2045.

Napa County has local plans, such as the Napa County General Plan, that support the above listed state regulations. The Napa County Planning Commission has developed a Climate Action Plan, but the plan has not yet been adopted. Because Napa County is largely rural, GHG emissions are relatively small compared to other counties in the Bay Area. Sources of GHGs in Napa County include energy and transportation, with transportation emissions being the largest contributor (Napa County 2008).

3.6.2 Discussion

a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Impact Determination. Less-Than-Significant Impact

Once the culvert has been replaced, there will be no operational activities associated with the Project, and therefore the Project contributes no operational GHG emissions. The Project would generate short-term, temporary GHG emissions during the 3- to 4-month construction period. During construction, fossil fuel powered construction equipment, such as an excavator, backhoe, and various trucks, would produce CO_2 emissions. Additionally, there would be passenger vehicle trips during construction from workers and equipment accessing the site, that would generate CO_2 emissions. While the fossil fuel powered equipment and vehicles used to replace the existing Dry Creek Road Culvert would contribute CO_2 emissions, these emissions would be negligible and would not have a significant impact on the environment. This analysis is consistent with the Air District's interpretation of whether and how construction-related emissions contribute significantly to GHG emissions (Air District 2022):

> *There is no proposed construction-related climate impact threshold at this time. Greenhouse gas emissions from construction represent a very small portion of a project's lifetime GHG emissions. The proposed thresholds for land use projects are designed to address operational GHG emissions which represent the vast majority of project GHG emissions.*

Once the culvert has been replaced, there will be no operational activities associated with the Project. This impact would be less than significant.

b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Impact Determination. No Impact

As discussed above in response (a), operation of the Project will not increase GHG emissions, and construction of the Project would contribute to minimal increases in

GHG emissions. The Project would not conflict with any local or state targets for GHG emissions reduction. Therefore, there would be no impact.

3.7 Hazards and Hazardous Materials

Would the project:

Environmental Issues	Impact Determination
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Less-Than-Significant Impact with Mitigation
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Less-Than-Significant Impact with Mitigation
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	No Impact
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	No Impact
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	No Impact
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Less-Than-Significant Impact
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	Less-Than-Significant Impact with Mitigation Incorporated

3.7.1 Setting

The Project is located within a largely undeveloped and rural area with limited proximity to industrial land uses that may be sources of hazardous materials. Based on a review of the California Department of Toxic Substance Control database, EnviroStor, there are no active hazardous waste sites within the vicinity of the Project (Department of Toxic Substances Control 2020). In addition, according to the SWRCB's GeoTracker database, there are no hazardous waste clean-up sites within a 0.5-mile radius of the Project site (SWRCB 2020). Potential hazards within the Project vicinity are primarily limited to seismic activity (discussed further in Section 3.5), flooding (discussed further in Section 3.8), and wildfire (discussed further in Section 3.13).

Two public use airports are located in Napa County: the Napa County Airport, located south of the City of Napa (approximately 15 miles from the Project site), and Angwin-Parrett Field, located in Angwin east of St. Helena (approximately 11 miles from the Project site).

Adopted plans pertaining to safety hazards and emergency response for the Project site include the Napa County General Plan (Napa County 2008), the Napa County Multi-Jurisdictional Hazard Mitigation Plan (Napa County 2020), the Napa County Health and Human Services Agency Concept of Operations Base Plan (Napa County n.d.), and the California Department of Forestry and Fire Protection (CALFIRE) 2017 Strategic Fire Plan for the Sonoma-Lake-Napa Unit (CALFIRE 2017). These plans are designed to assess and mitigate potential hazards and risks and to develop procedures for preparation and response to emergencies.

In addition, federal and state laws include provisions for the safe handling of hazardous substances. The federal Occupational Safety and Health Administration (OSHA) administers requirements to ensure worker safety. Construction activity must also be in compliance with the California OSHA regulations (Occupational Safety and Health Act of 1970).

3.7.2 Discussion

a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Impact Determination for (a) and (b): Less-Than-Significant Impact with Mitigation

Construction activities would involve the routine transport, use, and disposal of hazardous materials and substances, such as asphalt debris, and fuels, lubricants and other solvents for vehicles and equipment, and for resurfacing of Dry Creek Road. The use and storage of these materials could potentially expose and adversely affect workers, the public, or the environment as a result of improper handling or use, accident, or environmentally unsound disposal methods.

The Project has incorporated construction BMPs to prevent and respond to spills and would comply with applicable state and federal laws (including federal and California OSHA) to minimize risk and exposure. In addition, construction debris would be disposed of off-site in accordance with local, state and federal disposal regulations. However, there is still the potential for accidents that could release hazardous materials into the environment, especially given the proximity of waterbodies to the work and staging areas. **Mitigation Measure HAZ-1**, Spill Prevention and Response clarifies measures to avoid spills, reduce the potential for adverse impacts should a spill occur, and ensures all potential risks associated with the release of hazardous materials into the environment are reduced to the greatest extent possible. Compliance

with construction BMPs and applicable state and federal laws, combined with implementation of HAZ-1 would reduce risks associated with a release of hazardous materials during construction to a less than significant level. With this mitigation this potential risk would be reduced to less than significant for questions (a) and (b).

c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Impact Determination. No Impact

No existing or proposed schools are located within a 0.25-mile radius of the Project site. Therefore, the Project would have no impact.

d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Impact Determination: No Impact

Government Code Section 65962.5 mandates that the California Department of Toxic Substance Control maintain a yearly up-to-date list of hazardous waste sites, which are cataloged in EnviroStor. There are no wells or hazardous waste sites within or near the Project site (Department of Toxic Substances Control 2020). Additionally, there is no record of a leaking underground storage tank cleanup site within or near the Project site (SWRCB 2020). Because the Project is not located on a hazardous materials site, no impact would occur.

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

Impact Determination: No Impact

The Project site is not located within an adopted airport land use plan, nor are there any airports located within a 2-mile radius. Therefore, the Project would have no impact.

f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Impact Determination: Less-Than-Significant Impact

Because Dry Creek Road is a designated evacuation route, road closures associated with construction would potentially impact the ability of nearby residents to evacuate in the event of an emergency. Two-way traffic will be maintained throughout Project construction and the traffic control plan will minimize slowdowns

and delays associated with construction during the period of construction that would limit Dry Creek Road to one lane. With implementation of the planned traffic control plan, the Project would not impair or physically interfere with emergency response or evacuation.

g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Impact Determination. Less-Than-Significant Impact with Mitigation Incorporated

Replacement of the existing Campbell Creek culvert will not exacerbate wildfire risks. A project that would increase the severity of existing fire risk due to natural factors could include, for example, a housing development project placed on a slope with prevailing uphill winds in a fire-prone area. Such placement could increase the amount of fuels that could feed a wildfire, which would exacerbate the existing risk of wind-driven wildfires and expose the occupants of the project to that very risk. Potential wildland fires could be caused during construction by malfunction of vehicles or equipment that may expose construction workers to fire hazards. **Mitigation Measure HAZ-2**, Wildfire Prevention, identifies measures to avoid the potential ignition of a fire on the jobsite and reduce the potential for adverse impacts should a fire occur. Implementation of **Mitigation Measure HAZ-2** would reduce risks associated with significant risks of wildland fire during construction to a less-than-significant level.

3.7.3 Mitigation Measures

Mitigation Measure: HAZ-1 Spill Prevention and Response

Napa County shall require the contractor to prepare a Spill Prevention and Response Plan (SPRP) to provide protection to on-site workers, the public, and the environment from accidental leaks or spills of vehicle fluids or other potential contaminants. The SPRP shall contain BMPs for spill prevention and include an emergency response program to address quick and safe cleanup of accidental spills. The emergency response program shall include reporting requirements and directions consistent with the Comprehensive Environmental Response, Compensations, and Liability Act (CERCLA), Emergency Planning and Community Right-to-Know Act (EPCRA), and California law. In addition, the contractor shall immediately notify the county in the event of any spill or release of any chemical during construction. The SPRP shall include (but not be limited to):

- Requirement that staff have appropriate training in compliance with 29 Code of Federal Regulations Section 1910.120.

- Requirement that equipment shall be regularly inspected as well as cleaned and repaired (other than emergency repairs) outside of the Project site boundaries and that all contaminated spill residue, or other hazardous compounds shall be contained and disposed of outside of outside the boundaries of the site at a lawfully permitted or authorized designation.
- A map that delineates construction staging areas, where refueling, lubrication, and emergency repair of equipment would occur.
- Areas designated for refueling, lubrication, and emergency repair of equipment shall be at least 50 feet from any waterbody (including Campbell Creek and Dry Creek)
- A list of items required in a spill kit on-site that would be maintained throughout the life of the Project. Each vehicle would be equipped with a spill containment kit sufficient to mitigate spills associated with a ruptured hydraulic line or fuel tank.
- Procedures for the proper storage, use, and disposal of any solvents or other chemicals used in the restoration process.
- Requirement that the contractor shall, prior to the start of on-site construction activities, inspect all equipment for leaks and regularly inspect the equipment thereafter until equipment is removed from the Project site.
- Requirement that all contaminated water, sludge, spill residue, or other hazardous compounds shall be contained and disposed of outside the boundaries of the site, at a lawfully permitted or authorized destination.

Mitigation Measure: HAZ-2 Wildfire Prevention

Napa County shall require the contractor and all crews on-site to adhere to the following wildfire prevention measures:

- Train supervisors and employees on both the causes and control measures for wildfires, including trade-specific ignition sources (like welding sparks) and Project-specific fire control plans.
- Crews should check the forecast regularly and employ heightened wildfire awareness during Red Flag Warnings, which are issued when warm temperatures, low humidity, and strong winds are expected to combine to heighten the risk of wildfire danger.
- Ensure that appropriate fire suppression equipment is available for onsite crews. Equipment should be ready when work is started, and all crews should be trained in the proper use of equipment.

- Develop and use “Stop Work” guidelines, that include weather monitoring, work type, and work locations. These should be easily communicated to work crews, clients, and owners’ groups.
- Keep construction equipment and materials on-site as little as possible in fire-prone areas. Do not park equipment on dry grass. This will reduce loss if the construction storage area is affected by nearby fire. This includes removing equipment during weekends or off work hours.
- Smoking shall be prohibited on the job site.

3.8 Hydrology and Water Quality

Would the project:

Environmental Issues	Impact Determination
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	Less-Than-Significant Impact
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	Less-Than-Significant Impact
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	Less-Than-Significant Impact
i. result in a substantial erosion or siltation on- or off-site;	
ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	No Impact
iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	Less-Than-Significant Impact
iv. impede or redirect flood flows?	Less-Than-Significant Impact with Mitigation Incorporated
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	Less-Than-Significant Impact
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	No Impact

3.8.1 Setting

According to the USGS National Hydrography Dataset, the Project site is located within the HUC 10 Napa River Watershed, which covers approximately 133,467 acres, and the HUC 12 Dry Creek Subwatershed, which covers approximately 18,471 acres (USGS 2019). However, the Napa County Watershed Information & Conservation Council uses different parameters than the USGS to define the watersheds within the County and only delineates three watersheds within Napa County: Napa River, Putah Creek, and Suisun Creek. The Napa County Watershed Information & Conservation Council delineates the Napa River watershed as being bounded by Mount Saint Helena to the north, the Mayacamas Mountains to the west, Howell Mountain, Altas Peak, and Mount George to the east, and the Napa-Sonoma Marsh to the south. The Napa River runs through the center of the watershed, draining numerous tributaries including Dry Creek from the headwaters of Mount Saint Helena to the San Pablo Bay. The 55-mile-long river traverses forested mountain slopes, vineyards, urban areas, open pasture,

grasslands, industrial zones, and marshes (Watershed Information & Conservation Council 2018).

Aquatic Resources

Campbell Creek is a perennial stream and a tributary to Dry Creek. The channel morphology of Campbell Creek has been modified over time due to anthropogenic changes within the area. The 1951 USGS 15-minute quadrangle map shows the former location of Oakville Grade Road, which crossed Campbell Creek via a small concrete bridge approximately 175 feet upstream of the existing Dry Creek Road Culvert. The 1951 topographic map also shows where Dry Creek Road crossed over Campbell Creek with a small concrete bridge approximately 75 feet east of the current crossing location; remnants of this bridge can still be seen on the left bank of Campbell Creek. Fill material placed during construction of the historic Oakville Grade Road, its intersection with Dry Creek Road, and likely former quarry operations near where the fire station now resides constrained the former Campbell Creek floodplain, resulting in increased channel incision within both Dry Creek and Campbell Creek.

The existing Dry Creek Road culvert conveys flow from Campbell Creek through a 72-inch-diameter by 100-foot-long corrugated metal pipe, which has caused flood flow restriction and sediment deposition upstream of Dry Creek Road due to the culvert's inadequate capacity. The channel of Campbell Creek within the Project site meanders slightly within the constricted former flood terrace. Based on a representative riffle cross section, the channel is moderately entrenched (entrenchment ratio of 1.6) with a bankfull width of 12.0 feet, average bankfull depth of 0.66 feet, and moderate width-to-depth ratio of 18.2 (Cardno, now Stantec 2022). Campbell Creek flows into Dry Creek approximately 50 feet downstream of the existing culvert outlet. Dry Creek has perennial flows that drain northwest to southeast toward the Napa River, which flows into the San Pablo Bay. Dry Creek is a natural, lined waterway with a rocky to cobbly substrate and a complex stream habitat. Campbell Creek and Dry Creek are both under the jurisdiction of the USACE, RWQCB, and CDFW.

The classification system for groundwater was developed by the California Department of Water Resources (DWR) and divides groundwater into hydrologic regions, basins, and sub-basins. The Project site is within the San Francisco Bay Hydrologic Region, which covers approximately 2.88 million acres and includes San Francisco as well as portions of Marin, Sonoma, Napa, Solano, San Mateo, Santa Clara, Contra Costa, and Alameda counties (DWR 2003). Groundwater at the Project location was encountered at 9.5 feet below ground surface during a geotechnical investigation conducted in March 2022 (Miller Pacific Engineering Group 2022). Groundwater levels fluctuate, with higher levels typically occurring during the winter and spring or shortly after periods of heavy rainfall.

3.8.2 Discussion

a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Impact Determination. Less-Than-Significant Impact

Construction activities, such as excavation, grading, tree removal, paving, and equipment/materials storage and staging, have the potential to introduce pollutants to surface or ground water quality. However, as described in Section 2.5.5, construction BMPs designed to prevent or control stormwater runoff and the discharge of pollutants are required to be implemented as a part of the Project. These BMPs include implementing good site management "housekeeping" measures such as proper material/waste handling and storage, non-storm water management, erosion and sediment controls, run-on and runoff controls, and the inspection, maintenance, and repair of all equipment, including structural BMPs such as silt fence or fiber rolls.

In addition to construction BMPs, the Project will be required to obtain a CWA Section 404 dredge and fill permit, a CWA Section 401 water quality certification, and a CDFW Section 1600 Lake and Streambed Alteration Agreement, all of which include permit conditions prohibiting violations to water quality standards or waste discharge requirements. The specific regulatory standards and associated permit requirements addressing potential impacts to water quality include.

- Section 401 of the CWA requires a Section 401 water quality certification from the applicable RWQCB (in this case San Francisco Bay RWQCB) for any project that involves dredging, filling, or otherwise impacting, either temporarily or permanently, waters of the U.S. (activities for which a CWA Section 404 permit is also required). The RWQCB also regulates discharge of waste to waters of the state under the Porter-Cologne Water Quality Control Act. In accordance with Section 401 of the CWA and with the Waste Discharge Requirements (WDRs) of the Porter-Cologne Water Quality Control Act, the project applicant (Napa County) cannot initiate construction without Regional Board approval of a project application describing how the proposed project complies with State water quality standards and will not result in adverse impacts to waters of the State, including Waters of the U.S. Water quality standards and Regional Board policies for protecting waters of the State are defined in the Water Quality Control Plan for the San Francisco Bay Region (Basin Plan).
- Section 404 of the CWA requires a Section 404 permit before any point source discharge of dredged or fill material into waters of the U.S. (Waters of the U.S. includes wetlands). Discharge of fill material includes structures such as the proposed bottomless culvert and any fill required to accomplish stream

restoration activities. Discharge of dredged material includes the redeposit of dredged material, other than incidental fall back, into Waters of the U.S. The USACE issues 404 permits, and the Project would likely fall within issuance of a verification letter from USACE for coverage under an existing Nationwide Permit (NWP). USACE also requires compliance with general and regional conditions that require protection of waters of the U.S.

- Section 1600 of the California Fish and Game code regulates alteration of streambeds through issuance of Lake or Streambed Alteration Agreements. If a project (1) diverts or obstruct the natural flow of any river, stream, or lake, (2) changes the bed, channel, or bank of any river, stream, or lake (3) uses material from any river, stream, or lake, or (4), deposits or disposes of material into any river, stream, or lake, the project applicant must notify CDFW by submitting a permit application. After the notification is complete, CDFW may issue an agreement describing the fish and wildlife resources that the department has determined the activity may substantially adversely affect and include site-specific measures to protect those resources. To ensure fish and wildlife resources are not adversely impacted, the project applicant is required to comply with the resource protection measures established in the agreement.

In addition to state permits, Chapter 18.108 of the Napa County Zoning Code describes its National Pollution Discharge Elimination System (NPDES) program. This program requires the county to ensure that stormwater and erosion control measures are provided for applicable structural (i.e., nonagricultural) projects (Napa County 2022). As such, the Project will be required to comply with applicable erosion control policies detailed in the Napa County Code of Ordinances including Section 18.108.075 pertaining to submission of evidence of erosion control measures. Further, the banks of Campbell Creek would meet the county's definition of an "erosion hazard area," which is defined as a portion of land having slopes over 5 percent. Section 18.108.070 of the Napa County Code of Ordinances specifies additional erosion control requirements for erosion hazard areas, which would be applicable to the Project (Napa County 2022).

Once construction has been completed, the new culvert will result in increased water quality by reducing the channel incision and sediment deposition associated with the existing culvert. The combination of the Project schedule and design combined with the required existing regulatory standards and permit requirements would ensure the Project does not violate any water quality standard or waste discharge requirement. Therefore, the Project will have a less-than-significant impact on surface and ground water quality.

b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Impact Determination. Less-than-Significant Impact

Construction activities may result in the discharge of groundwater if activities such as excavation, trenching, or boring occur below the water table. As described in Section 3.8.1, the depth to groundwater at the Project location is approximately 9.5 feet during the spring, which well exceeds the maximum depth of excavation anticipated for construction. In addition, construction is scheduled occur during late summer/early fall, which is typically when the lowest groundwater levels occur. Groundwater recharge may also be negatively impacted by increases in impervious surfaces within a watershed. Replacement of the existing Dry Creek Road Culvert will not create new impervious surfaces. Conversely, reconnection of the incised creek channel with the historical floodplain will likely increase infiltration within the Project site. Therefore, the Project would have a less-than-significant impact.

c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i. result in a substantial erosion or siltation on- or off-site;

Impact Determination. Less-Than-Significant Impact

As discussed in response (a) above, construction activities have the potential to introduce pollutants to surface or ground water quality, which includes sediment caused by ground-disturbing activities. Section 2.5.5 describes construction BMPs that will be implemented during the Project to avoid erosion and sedimentation. In addition, USACE, RWQCB, and CDFW permits required for the Project all include conditions that require the permittee to implement stormwater controls to avoid erosion and sedimentation. Erosion may also occur when impervious surfaces are increased, resulting in increased runoff; however, no impervious surfaces will be created because of the Project. Rather, the proposed bottomless arch culvert design will increase the amount of pervious ground cover below the Dry Creek Road crossing. Further, the increased capacity of the proposed culvert and reconnection of the upstream portion of the Project reach with the original floodplain will reduce the passage of sediment through the watershed. Therefore, the impact would be less than significant.

ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;

Impact Determination. No Impact

The Project does not include any new impervious surfaces. As discussed in response I(i) above, the proposed bottomless arch culvert will increase the amount of pervious ground compared to existing conditions. By increasing the capacity of the Dry Creek Road culvert to accommodate flood flows and restoring the natural floodplain and meandering flow within the stream channel, localized flooding within the area will be reduced. Therefore, there would be no impact.

iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

Impact Determination. Less-Than-Significant Impact

The Project does not include any new impervious surfaces. Therefore, the volume of stormwater runoff within the area of the Project site will not increase. As discussed in response (a) above, construction activities have the potential to introduce pollutants to stormwater runoff. However, construction BMPs described in Section 2.5.5 and required permit conditions will be implemented to avoid the introduction of pollutants to stormwater runoff. Therefore, the impact would be less than significant.

iv. impede or redirect flood flows?

Impact Determination. Less-Than-Significant Impact

Campbell Creek will be diverted during construction to allow for dry work conditions within the stream channel, which will redirect flow and could potentially impede flow during a heavy rainfall event. However, construction would take place during the late summer and fall, a season when water levels are low and storms infrequentDiversion will be temporary, and flow within Campbell Creek will be restored following the completion of construction. Following construction, the increased capacity of the proposed bottomless arch culvert and restored stream channel will reduce flooding within the Project site. Should a substantial storm occur that may pose a flooding risk within the Project site, **Mitigation Measure HYD-1** would require the preparation of a diversion and dewatering plan that includes a contingency plan for storm events during installation, operation, and decommissioning of the diversion. Implementation of **Mitigation Measure HYD-1** will reduce impacts associated with flood flows to a less-than-significant level.

d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Impact Determination. Less-Than-Significant Impact

The Project is located inland and outside of the proximity of any lakes or reservoirs and is therefore located outside of a tsunami or seiche zone. Localized flooding

along Dry Creek and Campbell Creek may occur during periods of heavy rainfall; however, the Project is not located within a Federal Emergency Management Agency Special Flood Hazard Area (Napa County GIS Online Public Map n.d.; Napa County Municipal Code 16.04.510.). Should localized flooding occur, construction BMPs described in Section 2.5.5 as well as USACE/RWQCB/CDFW permit requirements will ensure that materials are stored properly and that areas of disturbed soil are stabilized prior to forecasted rain events. Therefore, the impact would be less than significant.

e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Impact Determination. No Impact

The Project site is subject to the Basin Plan, which designates beneficial uses and water quality objectives for waters of the state, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives. As discussed in response (a) above, the Project will obtain all required waters permits, which is consistent with the implementation strategy set forth in the Basin Plan. Violations to the water quality objectives established in the Basin Plan will be avoided through implementation of construction BMPs described in Section 2.5.5 as well as USACE/RWQCB/CDFW permit conditions that prohibit the degradation of surface or ground water quality. In addition, as discussed in response (b), Project activities will not utilize or decrease groundwater supplies, nor will the proposed bottomless arch culvert and stream channel restoration have any impact on groundwater supply. Therefore, there would be no impact.

3.8.3 Mitigation Measures

Mitigation Measure: HYD-1 Diversion and Dewatering Plan

Napa County shall require that the Diversion and Dewatering Plan for the Project include the following:

- Water diversion will be implemented by the contractor to maintain the work site as water-free as possible for the duration of in-channel work.
- All dewatering and diversion methods will be installed such that natural flow is maintained upstream and downstream of the Project site.
- Diversion pipe sizing shall conform to Caltrans' *Field Guide to Construction Site Dewatering* (2014).

3.9 Noise

Would the project:

Environmental Issues	Impact Determination
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Less-Than-Significant Impact
b. Generation of excessive groundborne vibration or groundborne noise levels?	Less-Than-Significant Impact
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	No Impact

3.9.1 Setting

The Project site and surrounding area is largely undeveloped and rural with a sparse population of residential properties accessible from Dry Creek Road. The closest residence to the Project site is located approximately 1,000 feet to its east. The noise environment reflects the rural setting. Traffic along Dry Creek contributes the greatest anthropogenic noise to a setting that is otherwise dominated by the noises of an agricultural countryside such as wind, birdsong, and running water.

3.9.2 Discussion

a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

b. Generation of excessive groundborne vibration or groundborne noise levels?

Impact Determination for (a) and (b). Less-Than-Significant Impact

The only noise or vibrations associated with the Project are those associated with the 3- to 4-month period of construction. The Project would not generate any noise once completed. During the period of construction, construction noise impacts may intermittently dominate the noise environment in the immediate area of the Project site. These noise impacts would be associated with the use of large equipment for demolition of the road across the existing culvert and use of construction machinery, equipment, and vehicles to replace the culvert, repair the road, and improve the channel hydrology of the upstream reach. Based on calculations from the U.S. Department of Transportation, the construction equipment identified for this Project can be expected to generate noise levels ranging from approximately 70 A-weighted

decibels (dBA) to 95 dBA maximum sound level at a distance of 50 feet. Actual noise levels will vary depending on various factors, including the type and number of pieces of equipment used, and duration of use.

Acceptable noise levels in unincorporated areas of Napa County are established in Title 8 of the Napa County Code of Ordinances. Specifically, Napa County sets maximum permissible sound levels by receiving land use in Section 8.16.070, Exterior Noise Limits. Within unincorporated residential areas, exterior noise levels at receiving properties are not to exceed 50 dBA for more than 30 minutes in any hour during daylight hours (7 a.m. to 10 p.m.). While operation of the equipment associated with the construction activity is expected to exceed the 50 dBA threshold at a distance of 50 feet for a duration that may last longer than 30 minutes, the nearest permanent receptor to the Project is associated with the residential structure more than 1,000 feet away. At 1,000 feet from the Project site and considering the vegetation and topography between the Project site and the residence, noise levels at the receiving land use (the residential property) are likely to be approximately half of the dBA at the Project site, and therefore the receptor would not experience noise levels in exceedance of the limits specified by the Code of Ordinances. In addition, Section 8.16.090 of the Napa County Code of Ordinances, specifies exemptions to noise regulations, including to the exterior noise limits established in Section 8.16.070. Construction and demolition are exempt activities and therefore the specified noise limitations do not apply to this activity. In addition, use of construction equipment could result in intermittent minor ground-borne vibration associated with removal of the road and grading of the streambanks. Like noise impacts, these ground-borne vibrations would be intermittent and temporary and would not generate excessive ground-borne vibration or ground-borne noise levels. Impacts associated with noise and vibrations during the period of Project construction are less than significant.

c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Impact Determination. No Impact

There is no airport, private airstrip, or airport land use plan within the vicinity of the Project. There is no impact.

3.10 Transportation

Would the Project

Environmental Issues	Impact Determination
a. Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities.	No Impact
b. Would the conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b).	Less-Than-Significant Impact
c. Substantially increase hazards due to a geometric design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	No Impact
d. Result in inadequate emergency access?	Less-Than-Significant Impact

3.10.1 Setting

The roadway system in Napa County is generally rural in nature, consisting primarily of two-lane roads. Dry Creek Road is a two-lane rural collector road, which is defined as a roadway designed primarily to link locally important activity centers and provide a collection system for the local roads (Napa County 2019a). Rural collectors are typically designed for slower travel speeds than arterials, and may incorporate sharper curves, narrower shoulders, and other features consistent with slower vehicle speeds. Other roadway types in the area around the Project site include local roadways, which are defined as roadways that provide direct access to individual homes and businesses. There are no arterial roads or highways within the vicinity of the Project. According to the Napa County Community Wildfire Protection Plan, Dry Creek Road is a secondary evacuation route that serves over 1,000 residents of west Napa County (Napa Communities Firewise Foundation 2021).

3.10.2 Discussion

a. Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities.

Impact Determination. No Impact

Adopted plans addressing the circulation system within Napa County include the Napa County General Plan Circulation Element and the Napa Valley Countywide Transportation Plan. Replacement of the existing Dry Creek Road Culvert would not entail any modifications that may conflict with these plans, such as altering the number of lanes along Dry Creek Road. The Project would not modify Dry Creek Road beyond replacement of the existing culvert. Therefore, there would be no impact.

b. Would the conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b).

Impact Determination. Less-Than-Significant Impact

Section 15064.3(b) of the CEQA Guidelines establishes criteria for analyzing transportation impacts. Consistent with CEQA guidelines and recent case law, vehicle miles traveled is generally the most appropriate measure of transportation impacts. The only vehicles associated with the Project would be those used by construction personnel to travel to the site during the construction period. With an estimated maximum of 12 construction personnel on site at any time during the three-month construction period, it is reasonable to assume that 6-8 construction vehicles may travel to the site from a geographically proximate location per day during the construction period. This would not constitute any increase in regional or local vehicle miles traveled compared to existing conditions (estimated as annual daily trips of 774 cars along Dry Creek Road [GPA Consulting 2021]). Therefore, the Project would have a less-than-significant impact.

c. Substantially increase hazards due to a geometric design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Impact Determination. No Impact

The proposed Project does not include any modifications to the curvature of the existing roadway. Replacement of the existing Dry Creek Road Culvert would involve any geometric design features, nor would it result in a change to current roadway uses. Therefore, there would be no impact.

d. Result in inadequate emergency access.

Impact Determination. Less-Than-Significant Impact

Because Dry Creek Road is a designated evacuation route, road closures associated with construction would potentially impact the ability of nearby residents to evacuate in the event of an emergency. To avoid impacts to traffic through the area and/or to ingress and egress during the event of an emergency, the Project will implement a traffic control plan. The traffic control plan will include active traffic management throughout the construction period to ensure two-way traffic along Dry Creek Road is maintained during the period when the road is limited to one lane (during replacement of the culvert). With implementation of the planned traffic control plan, the Project would have a less-than-significant impact on emergency access.

3.11 Tribal Cultural Resources

Environmental Issues	Impact Determination
a. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	Less-Than-Significant Impact
v. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	
vi. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	Less-Than-Significant Impact

3.11.1 Setting

The cultural study prepared for this Project describes the regional ethnography of the area. As indicated in that study, the Project lies within the ethnographically-recorded territory of the Patwin and the Wappo. Patwin is the southernmost of a group of Native American ethnolinguistic groups (i.e., Wintu, Nomlaki, and Patwin) that speak related languages. The Patwin are members of the California Penutian linguistic stock. They occupied the southwest portion of the Sacramento Valley, from the lower hills of the eastern North Coast Ranges to the Sacramento River and from Princeton south to San Pablo and Suisun Bays. The Wappo included two divisions by dialect, along the south edge of Clear Lake, and from just above Napa and Sonoma in the south to Cloverdale and Middletown to the north (Sawyer 1978). Wappo is a dialect of the Yukian language.

Napa County has completed Native American consultation pursuant to CEQA guidelines and mandates under California Assembly Bill 52 (PRC 21080.3.1). Native American consultation included a request for a Sacred Lands File search from the Native American Heritage Commission (NAHC) followed by formal outreach to tribes the NAHC identified as potentially traditionally and culturally affiliated with the geographic area of the Project. The NAHC indicated that the Sacred Lands File search for the general geography of the Project area were positive and recommended contacting the Mishewal-Wappo Tribe of Alexander Valley for information. The NAHC also provided a list of Native American tribes who may have knowledge of cultural resources in the Project area and recommended Napa County contact all the tribes listed.

On September 29, 2022, as recommended by the NAHC, Cardno consultants (on behalf of Napa County), sent tribal consultation notices to 10 tribal contacts representing seven Native American tribes. Tribes contacted were: Cortina Rancheria – Kletsel Dehe Band of Wintun Indians, Guidivill Indian Rancheria, Middletown Rancheria, Middletown Rancheria of Pomo Indians, Mishewal-Wappo Tribe of Alexander Valley, Pinoleville Pomo Nation, Yocha Dehe Wintun Nation. No tribes responded with a request for consultation or more information.

3.11.2 Discussion

a. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or

ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Impact Determination. Less-Than-Significant Impact

Due to the nature of previous ground disturbances within the Project area associated with the construction of Dry Creek Road and Oakville Grade Road, and the relatively small amount of new horizontal ground disturbances, there remains a low potential to adversely affect unknown, potentially intact buried archaeological deposits that might be eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k). However, there is still the potential for resources to be present. Potential impacts to archaeological resources (which may include potential Native American historical resources) are addressed in Section 3.4, Cultural Resources. The measures taken to engage the tribes (none of whom have requested further consultation) reduce the potential of the Project to result in a substantial adverse change in the significance of a tribal cultural resource to a less-than-significant level.

3.12 Utilities and Service Systems

Would the project:

Environmental Issues	Impact Determination
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	No Impact
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	No Impact
c. Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	No Impact
d. Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	Less-Than-Significant Impact
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	No Impact

3.12.1 Setting

The Project is located within a largely undeveloped and rural area. As a result, utilities and service systems within the Project site are limited. One existing overhead electrical utility line is located approximately 150 north of Dry Creek Road, which runs parallel to the road. No wastewater lines and/or septic tank systems are located within the Project vicinity. The Lokoya Fire Station has one fire hydrant on-site; the water line supplying the hydrant does not intersect with the Project site. Stormwater infrastructure within the Project site is limited to roadside ditches along the northern side of Dry Creek Road.

Napa County is served by five solid waste service providers and two joint power agencies/authorities (Napa County 2008). Solid waste generated by the project would likely be taken to the Devlin Road Recycling and Transfer Facility (approximately 17 miles away from the Project), where most of the County's solid waste is sorted and routed for disposal elsewhere. The Devlin Road facility receives an average of 560 tons of waste a day but has the capacity to handle up to 1,440 tons of daily waste (Napa County 2008). Items brought to the Devlin Road Facility are first assessed for recycling, reuse, or composting before being sent to the Keller Canyon Landfill for disposal (Napa County 2008). Keller Canyon Landfill, located in Pittsburg, California, accepts solid waste, non-liquid industrial waste, contaminated soils, ash, grit, and sludges. The landfill is permitted to accept up to 3,500 tons of waste per day. Current daily disposal volumes

average 2,500 tons (Napa County 2008). A survey of landfill capacity conducted in 2006 indicated that the facility had 64.8 million cubic yards of remaining capacity and an estimated closure date of 2030 (Napa County 2008).

In accordance with the California Integrated Waste Management Act of 1989, Napa County maintains an Integrated Waste Management Plan. Under the Integrated Waste Management Act, every city and county in California is required to divert 50 percent of all solid waste through source reduction, recycling, and composting activities and assure maintenance of at least a 15-year landfill capacity for solid wastes that are generated in the county and cannot be reduced or recycled.

3.12.2 Discussion

a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Impact Determination. No Impact

The Project entails the replacement of an existing culvert along Campbell Creek in order to improve drainage, reduce sediment loading within the Napa River watershed, and promote fish passage. No utilities related to water, wastewater, electric power, natural gas, or telecommunications facilities are located within the work area. The Dry Creek Road Culvert is a conveyance for Campbell Creek and is not intended to function as a stormwater conveyance. Therefore, infrastructure related to stormwater drainage will not be impacted. The Project would have no impact.

b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Impact Determination. No Impact

Replacement of the existing culvert and associated habitat improvements will have no impact on future water demand. Water supplies required for construction are limited to those needed for dust suppression, which is anticipated to be minimal. Therefore, the Project would have no impact.

c. Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Impact Determination. No Impact

Replacement of the existing culvert and associated habitat improvements will not result in any modifications to existing wastewater treatment operations within the vicinity of the Project. Therefore, the Project would have no impact.

d. Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Impact Determination. Less-Than-Significant Impact

Solid waste that would be generated during construction is primarily be associated with the demolition and removal of the existing culvert and portions of Dry Creek Road. Asphalt, soil and aggregate fill excavated from the Project site will be sorted and either reused as fill (whenever possible) or disposed of in accordance with local and state regulations at an appropriate off-site facility. The total area that would be excavated is no more than approximately 1,200 square feet, from which no more than approximately 300 cubic yards of material would be removed. Off-site disposal facilities have adequate capacity for Project disposal needs. The Project would not generate solid waste in excess of state or local standards, exceed the capacity of local infrastructure, substantially increase the waste stream to local landfills, or otherwise impair the attainment of solid waste reduction goals, including those contained in the Napa Countywide Integrated Waste Management Plan. Therefore, the impact would be less than significant.

e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Impact Determination. No Impact

The Project would not result in the long-term generation, or disposal, of solid waste during operation. The disposal of solid waste during construction would be short-term, and would be conducted in compliance with federal, state, and local statues and regulations related to solid waste. Therefore, the Project would have no impact.

3.13 Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

Environmental Issues	Impact Determination
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	Less-Than-Significant Impact with Mitigation Incorporated
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	Less-Than-Significant Impact with Mitigation Incorporated
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	Less-Than-Significant Impact
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	No Impact

3.13.1 Setting

The Project is located within a “Very High” fire hazard severity zone as defined by CALFIRE (CALFIRE 2007). The Project site lies within the State Responsibility Area (SRA), which area areas recognized by the Board of Forestry and Fire Protection in which CALFIRE is the primary emergency response agency responsible for fire suppression and prevention. Additional emergency response may be provided by volunteer firefighters at the Lokoya Fire Station, located adjacent to the Project site. The topography in the area is hilly, and vegetation consists of riparian communities within Campbell Creek and Dry Creek and forested habitat in the surrounding upland areas. There is open shrub habitat to the northwest and northeast, with mixed hardwood and riparian vegetation present along Campbell Creek north of the Project site. Surrounding lands comprise rural residential, undeveloped forested lands, and agricultural areas (vineyard).

Adopted plans pertaining to safety hazards and emergency response for the Project site include the Napa County General Plan, the Napa County Multi-Jurisdictional Hazard Mitigation Plan, the Napa County Health and Human Services Agency Concept of Operations Base Plan, and the CALFIRE 2017 Strategic Fire Plan for the Sonoma-Lake-Napa Unit. These plans are designed to assess and mitigate potential hazards and risks and to develop procedures for preparation and response to emergencies.

Additional plans related to fire safety include the Napa County Community Wildfire Protection Plan, which comprises community-based fire safety councils. The Project is

located in the jurisdiction of the Mt. Veeder Fire Safety Council, which helps to undertake fuels reduction projects and promote fire preparedness within the Mt. Veeder community. The Napa County Community Wildfire Protection Plan defines Dry Creek Road as a secondary evacuation route, serving over 1,000 residents in the western part of Napa County (Napa Communities Firewise Foundation 2021).

3.13.2 Discussion

a. Substantially impair an adopted emergency response plan or emergency evacuation plan?

Impact Determination. Less-Than-Significant Impact with Mitigation Incorporated

Because Dry Creek Road is a designated evacuation route, road closures associated with construction would potentially impact the ability of nearby residents to evacuate in the event of an emergency. To avoid impacts to traffic through the area including impacts to ingress and egress during an emergency, the Project will implement a traffic control plan to maintain two-way traffic during the period when Dry Creek Road would be limited to one lane (during replacement of the culvert). With implementation of the planned traffic control plan, the Project would have a less than significant impact on emergency access.

b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Impact Determination. Less-Than-Significant Impact with Mitigation Incorporated

Replacement of the existing Campbell Creek culvert will not exacerbate wildfire risks. A project that would increase the severity of existing fire risk due to natural factors could include, for example, a housing development project placed on a slope with prevailing uphill winds in a fire-prone area. Such placement could increase the amount of fuels that could feed a wildfire, which would exacerbate the existing risk of wind-driven wildfires and expose the occupants of the project to that very risk. Potential wildland fires could be caused during construction by malfunction of vehicles or equipment. **Mitigation Measure HAZ-2**, Wildfire Prevention, (see Section 3.7) identifies measures to avoid the potential ignition of a fire on the jobsite and reduce the potential for adverse impacts should a fire occur. Implementation of HAZ-2 would reduce risks associated with significant risks of wildland fire during construction to a less than significant level.

c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities)

that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Impact Determination. Less-Than-Significant Impact

Replacement of the existing Campbell Creek culvert will not require any modifications to existing roads, fuel breaks, emergency water sources, power lines, or other utilities. Dry Creek Road, which is a secondary evacuation route, will be impacted during construction in order to remove the existing culvert and construct the new bottomless culvert. However, two-way travel will be maintained, ensuring emergency evacuation travel is not interrupted. Therefore, the impact would be less than significant.

d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Impact Determination. No Impact

The Project would improve the hydrologic function of Campbell Creek with installation of a bottomless bridge culvert sized to accommodate 50 and 100-year flood stage flows. In addition, the Project addresses and restores the incised channel upstream of the culvert, laying back the banks in the Project reach so that the creek may access its original floodplain. These activities support the resiliency of the Campbell Creek watershed and its ability to accommodate flood stage flows caused by upstream runoff or landslides. The Project would not result in any new or increased downstream risks. There would be no impact.

3.14 Mandatory Findings of Significance

Environmental Issues	Impact Determination
a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	Less-Than-Significant Impact with Mitigation Incorporated
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	Less-Than-Significant Impact
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	No Impact

3.14.1 Discussion

a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Impact Determination. Less-Than-Significant Impact with Mitigation Incorporated

The goal of the Project is to improve the hydrologic and aquatic habitat function of Campbell Creek where Campbell Creek crosses underneath Dry Creek Road, and to, specifically, reduce sediment loading into the Dry Creek and to promote fish passage into Campbell Creek, including for spawning Central California Coast steelhead (*Oncorhynchus mykiss*), a federally threatened species under the Endangered Species Act (ESA). The only adverse impacts identified to biological resources are those associated with the 3- to 4- month construction period. As discussed in Section 3.3, Biological Resources, the Project, with mitigation incorporated, would not substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or substantially reduce the number or restrict the range of a rare or endangered plant or animal. Further, as discussed in Section 3.4, Cumulative

Resources, the Project would not eliminate important examples of the major period of California history prehistory. The one potentially historic resource identified in the Project vicinity, the Oakville Grade Bridge, is upstream of the work area and would be protected in place. Other mitigation measures identified in Section 3.4 would ensure avoidance and protection of any other cultural resources uncovered as a result of ground disturbance.

b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Impact Determination. Less-Than-Significant Impact

As an aquatic restoration and flood control improvement project, the long-term effects of the Project are anticipated to be beneficial to wildlife, and to the hydrology of Campbell Creek. The only adverse effects of the Project are associated with the period of Project construction. These potentially adverse effects have been analyzed in this environmental document and none were found to be potentially significant after incorporation of identified mitigation measures. Napa County has not identified any other recent past or future projects along Campbell Creek or along Dry Creek Road that would contribute additional construction impacts. Because there are no potential impacts associated with this Project that will not be avoided or significantly minimized by the application of construction BMPs and/or mitigation measures (as identified in this document) and because there are no other similar projects that would contribute to similar impacts along this section of Dry Creek Road or Campbell Creek, this Project would not contribute to any cumulatively considerable impacts.

Impact Determination. No Impact

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