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SANTA ROSA CREEK FISH PASSAGE IMPROVEMENTS PROJECT

DRAFT INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION OF ENVIRONMENTAL IMPACT

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American Disabilities Act Compliance

This Initial Study and Mitigated Negative Declaration of Environmental Impact for the Santa Rosa Creek Fish Passage Improvements Project was prepared in compliance with requirements under the Americans with Disabilities Act (ADA). The ADA mandates that reasonable accommodations be made to reduce “discrimination on the basis of disability.” As such, the Sonoma County Water Agency is committed to ensuring that documents we make publicly available online are accessible to potential users with disabilities, particularly blind or visually impaired users who make use of screen reading technology.

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1.0 Introduction

The Sonoma County Water Agency (Sonoma Water) is the project proponent and lead agency in accordance with the California Environmental Quality Act (CEQA) for the proposed Santa Rosa Creek Fish Passage Improvements Project (Proposed Project), which is a fish passage improvement project. Anchor QEA, LLC, has prepared this Initial Study and Mitigated Negative Declaration of Environmental Impact (IS/MND) on behalf of Sonoma Water to provide decision makers, the public, responsible agencies, and trustee agencies with information about the potential environmental impacts associated with the construction, maintenance, and operation of the Proposed Project. This IS/MND was prepared pursuant to the requirements of CEQA (California Public Resources Code Sections 21000 et seq.), State CEQA Guidelines (Code of Regulations, Title 14, Division 6, Chapter 3), and Sonoma Water's Procedures for the Implementation of CEQA. After completion of the public review period for the Proposed Project, this IS/MND, along with a summary of comments submitted and response, will be brought before Sonoma Water's Board of Directors for their consideration.

The Proposed Project would improve fish passage at two locations in Santa Rosa Creek: at the E Street Bridge Fishway Extension and at the Melita Road Dam. At the E Street Bridge Fishway Extension site, the Proposed Project includes bank enhancement, creation of an access road, and fishway extension and trash rack replacement and improvement. At the Melita Road Dam site, the Proposed Project includes construction of non-grouted rock weir step pools.

1.1 Initial Study Review

Sonoma Water is circulating this IS/MND for a 30-day public and agency review period. Agencies and interested members of the public are invited to review and comment on the IS/MND. All comments received prior to 5:00 p.m. on the date identified for closure of the public comment period in the Notice of Availability/Intent to Adopt (Appendix A) will be considered. Please include a name, address, and telephone number of a contact person for all future correspondence on this subject.

Please send comments to:
David Cook, Senior Environmental Specialist
Sonoma Water
404 Aviation Boulevard
Santa Rosa, CA 95403

Or email comments to:
David.Cook@scwa.ca.gov

1.2 Summary of Findings

The IS/MND describes the Proposed Project and its environmental setting, including the Proposed Project site's existing conditions and applicable regulatory requirements. This IS/MND also evaluates potential environmental impacts from the Proposed Project to the following resources:

- Aesthetics
- Agriculture and 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 Cultural Resources
- Utilities and Service Systems
- Wildfire
- Mandatory Findings of Significance

Potentially significant effects were identified for biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, transportation, Tribal cultural resources, utilities and service systems, and wildfire. The Proposed Project incorporates mitigation measures that would reduce all impacts to a less-than-significant level.

2.0 Project Location and Description

2.1 Project Background

Sonoma Water was created in 1949 by the California Legislature as a special district to provide flood protection and water supply services within Sonoma County (County). The

members of the Sonoma County Board of Supervisors are Sonoma Water's Board of Directors; however, Sonoma Water is a separate legal entity from the County and has specific purposes and powers. Sonoma Water's powers and duties authorized by the California Legislature include the production and supply of surface water and groundwater for beneficial uses, control of flood waters, generation of electricity, provision of recreational facilities (in connection with Sonoma Water's facilities), and the treatment and disposal of wastewater.

In the late 1950s, Sonoma Water (at that time known as the Sonoma County Flood Control and Water Conservation District) and the United States Department of Agriculture (USDA) Natural Resources Conservation Service (at that time known as the USDA Soil Conservation Service) developed the Central Sonoma Watershed Work Plan to combat recurring flood damage in Sonoma County. Among other elements of the Central Sonoma Watershed Work Plan, the Central Sonoma Watershed Project focused on mitigating flooding in the Santa Rosa Creek subwatershed through an integrated network of channels, detention reservoirs, and diversion structures (flood facilities) that were completed between 1962 and 1988.

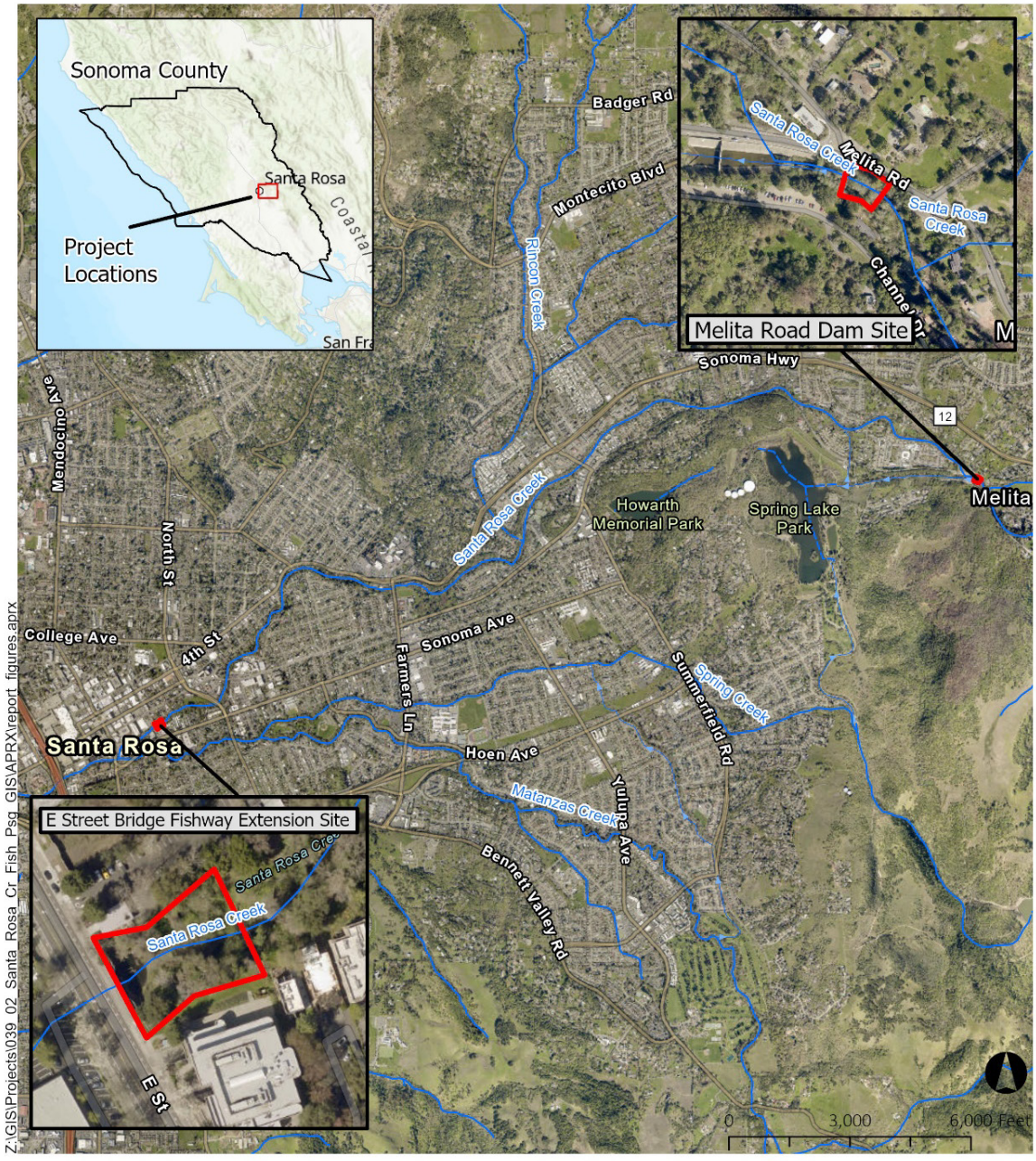
While focusing on critical flood protection, fish passage elements were also included throughout the flood infrastructure network to allow for fish movement, such as steelhead (*Oncorhynchus mykiss*), Chinook salmon (*O. tshawytscha*), and Pacific lamprey (*Entosphenus tridentatus*).

Sonoma Water maintains fish passage structures at the Central Sonoma Watershed Project flood control facilities through its Stream Maintenance Programs, including, but not limited to, sediment removal and vegetation management activities (Sonoma Water 2020a). Over time, debris and sediment occasionally collect within portions of Santa Rosa Creek and impede fish movement in some locations, including at the E Street Bridge Fishway Extension. The E Street Bridge Fishway Extension is a 29-foot, 5-inch-long by 4-foot-wide by 7-foot, 7-inch-high structure with concrete side walls and flow regulating weirs extending upstream of the adjacent E Street Bridge Fishway into Santa Rosa Creek. The E Street Bridge Fishway is a long, underground fish passage structure alongside a large double culvert that runs beneath downtown Santa Rosa. Preventing large debris from blocking the E Street Bridge Fishway Extension is a challenge at flows that overtop the elevation of the existing trash rack. Steep streambank slopes prevent maintenance equipment and machinery access to remove the debris. The challenging access conditions at this site have resulted in large debris blockages and sediment accumulation, decreasing channel capacity, and effects on fish passage.

The City of Santa Rosa constructed structures to divert water from Santa Rosa Creek at the Melita Road Dam. The Melita Road Dam is an abandoned concrete diversion dam that was constructed in 1948, located approximately 300 feet upstream of the Santa Rosa Creek Diversion Structure site, and was constructed to divert water to Lake Ralphine

(Figure 2.1-1). The Melita Road Dam structure is owned by the City of Santa Rosa, and the land underlying it is owned by Sonoma Water. The City of Santa Rosa possesses an easement over the dam. Sonoma Water has issued a revocable license to Pacific Gas and Electric (PG&E) for a gas line located on the downstream side of the dam, on Sonoma Water-owned land. The Melita Road Dam is a barrier to fish passage at low flows due to its height and the lack of sufficient depth in the jump pool downstream.

Figure 2.1-1. Santa Rosa Creek Fish Passage Improvements Project Vicinity Map.



FlowWest

Legend

Project Site Locations

Santa Rosa Creek Fish Passage Improvements Project

Figure 1: Project Location

Source: FlowWest 2022

2.2 Project Setting and Existing Conditions

The Proposed Project is located on two sites within the City of Santa Rosa and on lands owned by Sonoma Water. The City is located approximately 50 miles north of San Francisco and approximately 65 miles west of Sacramento and is bisected by Santa Rosa Creek. The 22-mile-long Santa Rosa Creek begins as a tributary to the Laguna de Santa Rosa that flows to Mark West Creek located in the Russian River Watershed. The headwaters of Santa Rosa Creek are located on Hood Mountain in steep terrain on the western slopes of the Southern Mayacama Mountains, at an elevation of approximately 1,940 feet. Santa Rosa Creek's gradient becomes more moderate as it descends toward the valley floor, known as the Santa Rosa Plain. The Proposed Project is located in a moderate gradient section of Santa Rosa Creek between Hood Mountain and the Santa Rosa Plain where Santa Rosa Creek flows north along Melita Road near the Melita Road Dam site and west through Santa Rosa and the culvert located at E Street. The surrounding area is urbanized, characterized by a mix of roadways, residences, and concrete flood control infrastructure.

The Proposed Project would occur at two locations within Santa Rosa Creek (Figure 2.1-1):

- The E Street Bridge Fishway Extension site is located on property owned by Sonoma Water within Santa Rosa Creek, near the intersection of E Street between Sonoma Avenue and Second Street within a developed commercial and residential area. This site is bordered by commercial development on both sides of Santa Rosa Creek and E Street to the west where the creek flows in an underground culvert through downtown Santa Rosa.
- The Melita Road Dam site is on property owned by Sonoma Water, generally bordered by Montgomery Drive to the north, the Vortex Tube (a concrete culvert beneath Montgomery Drive) approximately 285 feet downstream of the site and to its west, Channel Drive to the south, and Melita Road 200 feet to the east. Predominant land uses in the vicinity of this site are suburban and include public parks; rural and medium density residential, commercial, and agriculture; and access to Trione-Annadel State Park.

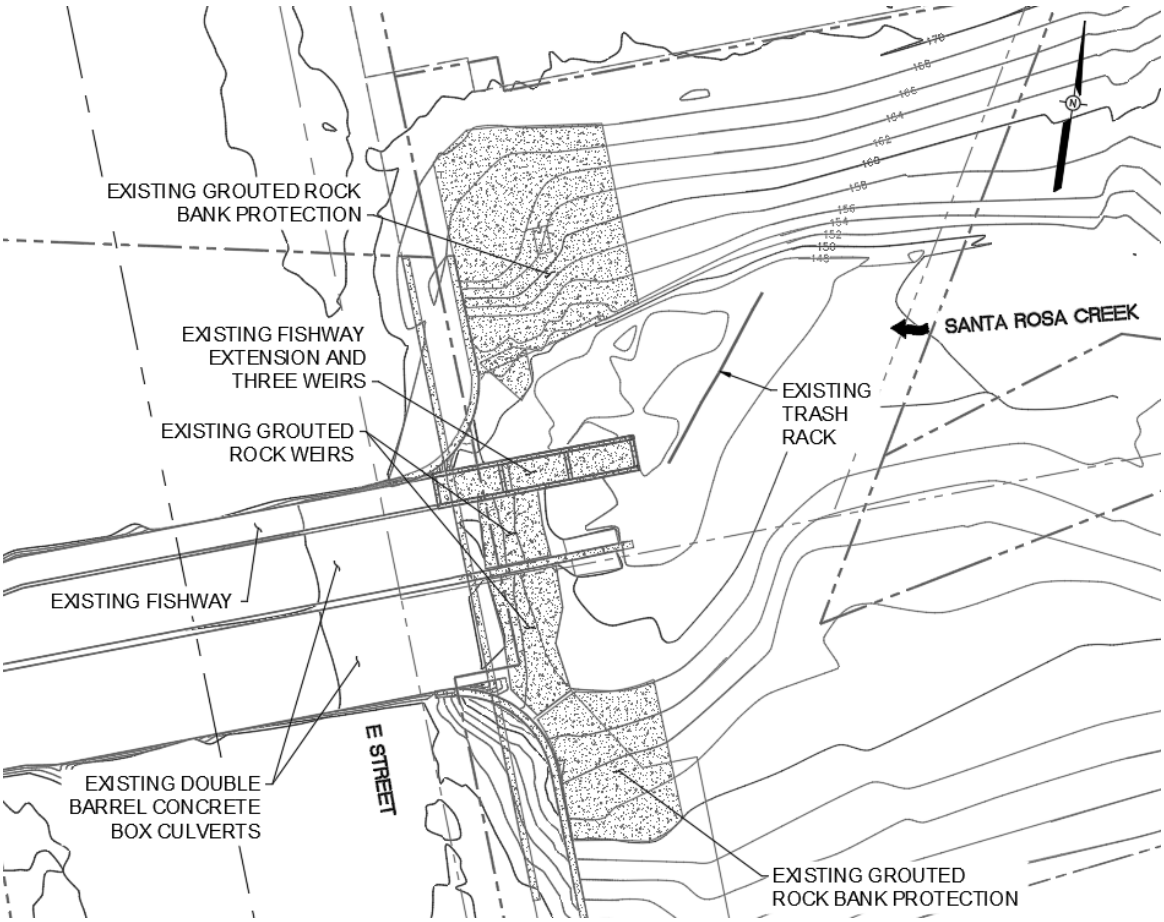
2.2.1 E Street Bridge Fishway Extension Existing Conditions

The E Street Bridge Fishway Extension is a 29-foot, 5-inch-long by 4-foot-wide by 7-foot, 7-inch-high structure with concrete side walls and flow regulating weirs extending upstream of the adjacent E Street Bridge Fishway into Santa Rosa Creek. The E Street Bridge Fishway Extension infrastructure was built in 1962, as part of the Central Sonoma Watershed Protection and Flood Prevention Project—Santa Rosa Creek Channel Improvement (Sonoma Water 1960). The E Street Bridge Fishway Extension infrastructure includes the fishway extension and weirs within the fishway extension,

grouted rock weirs, two grouted rock banks, and a trash rack (Figure 2.2-1; Photographs 2.2-1 and 2.2-2).

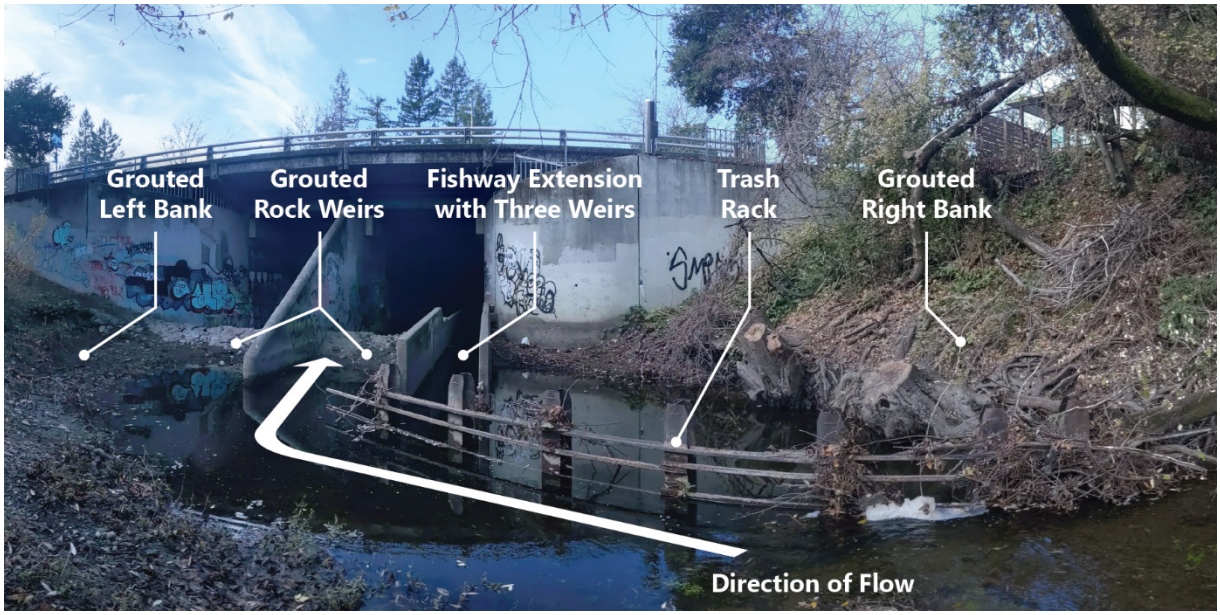
The E Street Bridge Fishway Extension infrastructure is currently not functioning as designed because of settlement at the upstream end and several design and structural issues associated with the fishway extension and grouted rock weirs, the trash rack, and ongoing erosion on the right bank.

Figure 2.2-1. E Street Bridge Fishway Extension Site – Existing Features.



Source: FlowWest 2022

Photograph 2.2-1. E Street Bridge Fishway Extension Site – Existing Features, Looking West.



Source: FlowWest 2021 and Anchor QEA 2022

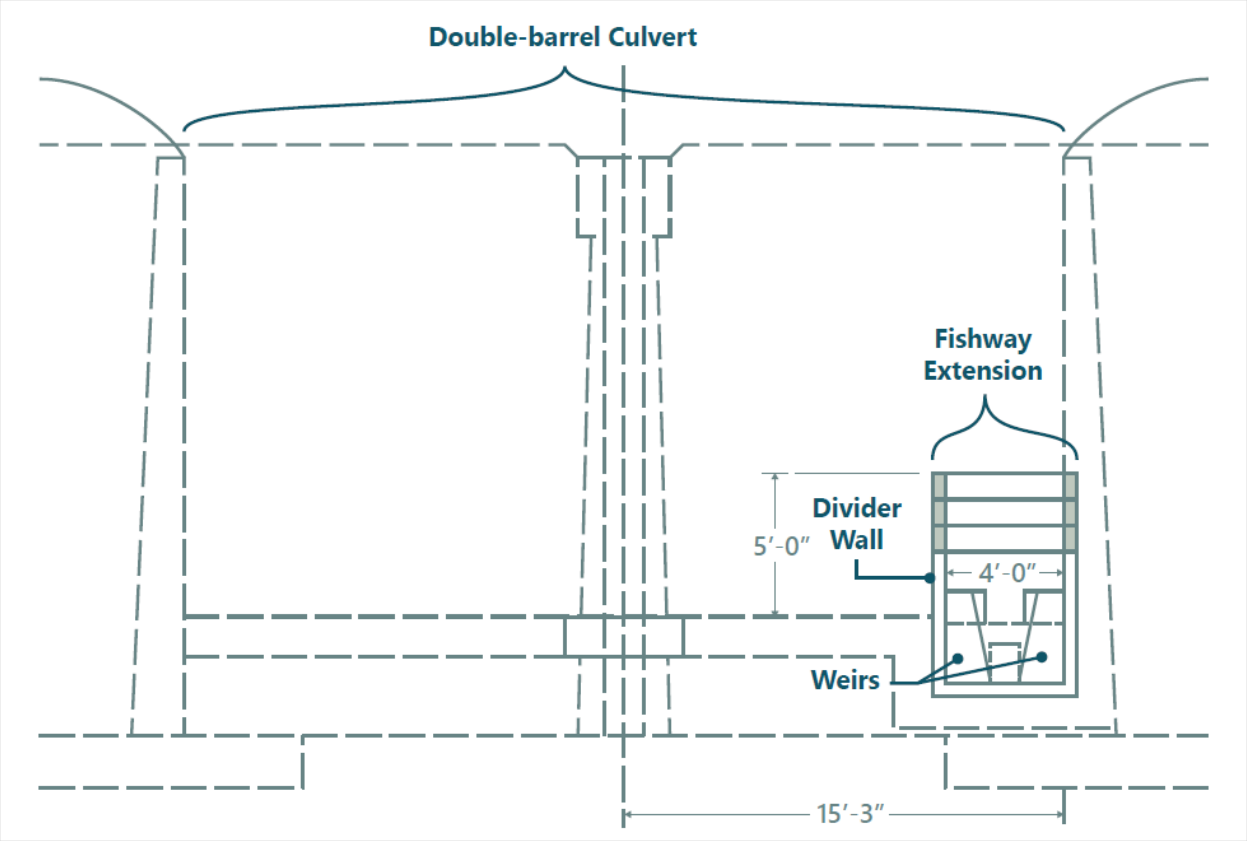
Photograph 2.2-2. Aerial View of E Street Bridge Fishway Extension Site.

Source: FlowWest 2021

Santa Rosa Creek flows east to west, as depicted in Photograph 2.2-1, through a double-barrel culvert that runs between E Street and Santa Rosa Avenue, approximately 2,440 feet to the west. Within the culvert, the existing fishway is separated from the main bore by a divider wall approximately 3 feet in height. The divider wall transitions to a 5-foot-tall wall as it becomes the fishway extension wall. Figure 2.2-2 shows a cross section of the different components within the culvert. The fishway extension was constructed to decrease the elevation difference between the fishway and channel inverts.

The fishway extension is not structurally attached to the fishway and extends approximately 30 feet upstream into the Santa Rosa Creek channel. The fishway extension has settled at the upstream end and risen approximately 5 inches where it meets the face of the culvert. Within the fishway extension, there are three different weir configurations, which are spaced between 10 and 15 feet apart from each other (Photograph 2.2-3).

Figure 2.2-2. Cross Section of E Street Bridge Fishway Extension and Weirs Looking Downstream.



Source: Anchor QEA 2022

Photograph 2.2-3. Weirs Within E Street Bridge Fishway Extension, Looking Upstream.

Source: FlowWest 2022

Adjacent to the fishway extension, there are two grouted rock weirs approximately 2.5 feet in height that span the width of the culvert's main bores. The grouted rock weirs direct low flows through the fishway extension and the fishway before higher flows overtop the weirs and inundate the main bores. The grouted rock weirs are higher in relation to the fishway extension; therefore, this structure forces flows to be conveyed mostly through the fishway extension (Photograph 2.2-4).

Photograph 2.2-4. Grouted Rock Weir, Looking Upstream.

Source: FlowWest 2022

The existing fishway extension and grouted rock weirs are not supported by fixed footings, and the fishway extension is not structurally connected to the fishway itself. The grouted rock weirs have been undercut and risk significant damage because they are not adequately supported. Additionally, the fishway extension does not support fish passage at a wide range of flows. The depths and velocities in the fishway extension may not be sufficient for fish passage at low flows, and high flows result in excessive velocities. The existing weirs within the fishway extension are spaced too close together and do not allow for full energy dissipation of the flows, resulting in potentially excessively turbulent conditions for fish passage. The fishway extension also has decreased functionally compared to its original design during higher flows because the flashboards that are manually placed at the top of the upstream edge of the fishway extension face are no longer in use.

The site includes an approximately 28-foot-long metal trash rack that intersects the channel at an angle and forces large debris over to the main bore (Photograph 2.2-5). While the trash rack is effective at deflecting debris away from the fishway extension at lower flows, it is essentially ineffective at higher flows as water overtops the rack. At higher flows, debris gets caught in the fishway extension and fishway, which decreases the effectiveness of the fishway extension and acts as a fish barrier in instances when debris blocks or severely restricts flows into the fishway extension.

Photograph 2.2-5. Existing E Street Bridge Fishway Extension Trash Rack.

Source: FlowWest 2021

The right bank adjacent to the fishway extension experiences erosive forces due to a combination of factors. It experiences higher velocities because it is located on the outer bend of the channel. A growing bar of sediment deposits on the left bank has shifted the channel thalweg (the line of lowest elevation within the channel) even more toward the right bank. The bank has a steep slope of approximately 1H:1.5V and has been reinforced with grouted rock. A portion of the grouted rock near the toe has fallen into the channel and exposed the underlying soil, leading to additional scour. The mature riparian canopy in this area has been cut down to prevent the trees near the toe from falling into the channel and plugging the fishway and fishway extension as part of maintenance activities undertaken by Sonoma Water (Photograph 2.2-6). The flows conveyed along the right bank then interface with the wall of the existing fishway extension. This may cause eddying forces in the area between the right bank and the fishway extension, further contributing to scour of the right bank.

Photograph 2.2-6. Scour at Right Bank (Looking Downstream) at E Street Bridge Fishway Extension.

Source: Anchor QEA 2021

There is currently no method for maintenance vehicles to access the channel at this site. The two existing access paths down to the channel are steep and only allow for access on foot. The inability for large equipment to access the channel means that sediment cannot be easily removed, resulting in sediment accumulation along the left bank, and clearing the debris from the fishway and fishway extension is difficult.

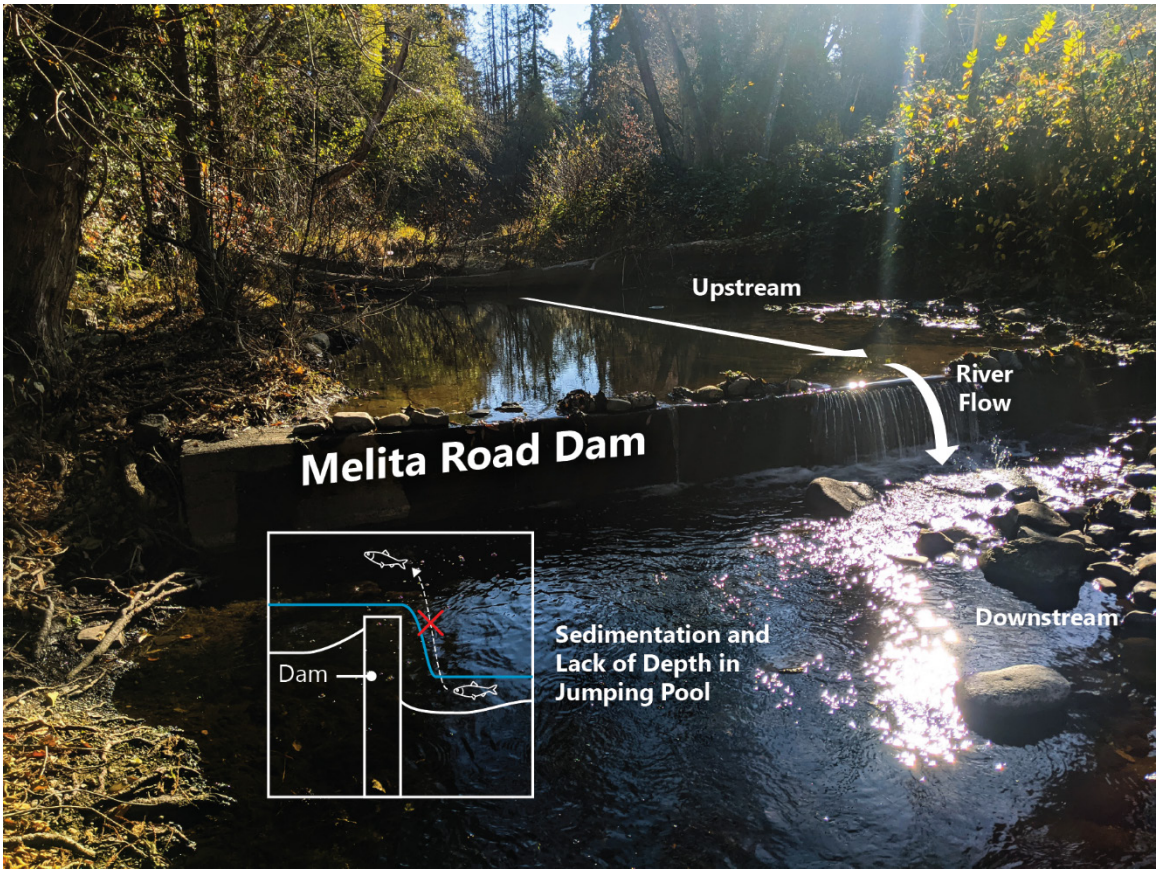
2.2.2 Melita Road Dam Existing Conditions

The Melita Road Dam is approximately 70 feet long, extending the width of the entire Santa Rosa Creek channel bank to bank. The abandoned dam has a trapezoidal cross section, is at least 3 feet tall with a top width of approximately 2 feet, and has a bottom width of approximately 9 feet. Its original purpose was to divert City of Santa Rosa water supply to Lake Ralphine. A 2-inch gas line owned by PG&E, currently under a revocable license between PG&E and Sonoma Water, is located at the toe of the face of Melita Road Dam.

The height of Melita Road Dam and the lack of sufficient depth in the jumping pool serve as a barrier to fish passage at low passage flows (Photographs 2.2-7 and 2.2-8). The

calculated low passage flows at this site are 1, 2, and 3 cubic feet per second (cfs) for juvenile, adult non-anadromous, and anadromous salmonids, respectively. Jumping pools require at least 2 feet of depth. Due to these constraints, steelhead passage at low passage flows is difficult.

Photograph 2.2-7. Melita Road Dam Site, Looking East.



Source: FlowWest 2021 and Anchor QEA 2022

Photograph 2.2-8. Melita Road Dam Site, Looking West.

Source: FlowWest 2021 and Anchor QEA 2022

2.3 Project Purpose and Need

As discussed in Section 2.2, there are periodically barriers to fish passage at the E Street Bridge Fishway Extension and the Melita Road Dam sites. Barriers at the E Street Bridge Fishway Extension are typically due to design and structural issues associated with the existing structures, sedimentation, debris capture, and erosion. Additionally, the site conditions limit regular maintenance within the E Street Bridge Fishway Extension, preventing debris and other barriers to fish passage from being removed in a timely manner. Obstruction of fish passage at the Melita Road Dam site occurs due to excessive jump distance and inadequate pool depth at lower flows.

The purpose of the Proposed Project is to:

- Improve fish passage for juvenile and adult steelhead and Pacific lamprey over a broader range of flows at the E Street Bridge Fishway Extension and Melita Road Dam sites.
- Address ongoing erosion to the right and left banks at the E Street Bridge Fishway Extension site.
- Replace the E Street Bridge Fishway Extension and associated structures, which have settled and are exhibiting wear or becoming structurally impaired.
- Improve access for and reduce the frequency and extent of channel maintenance needs to maintain fish passage through the E Street Bridge Fishway Extension site.

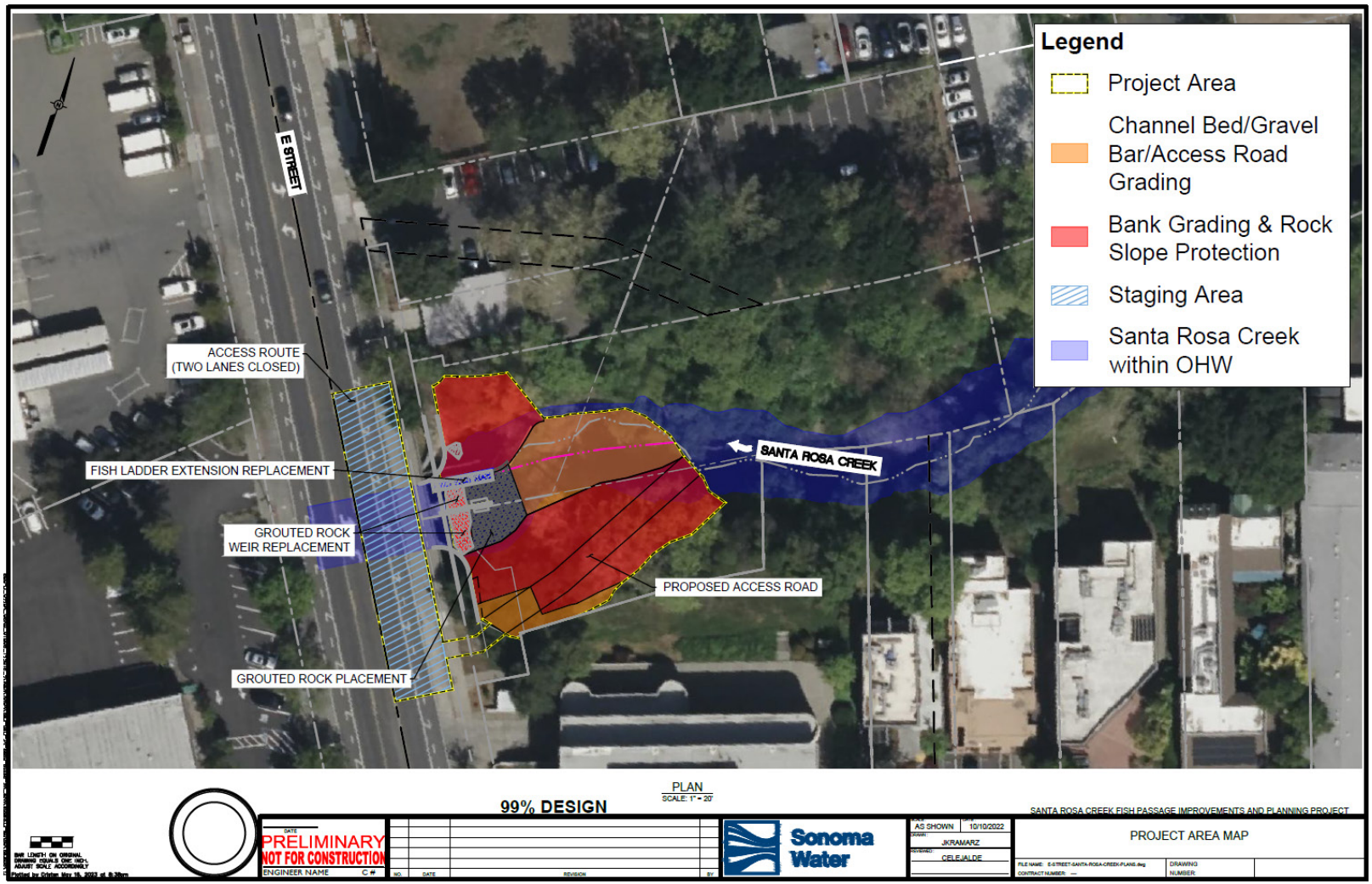
2.4 Project Description

The Proposed Project would include replacing and building instream structures, addressing bank erosion, and constructing access roads. These elements, all intended to improve fish passage directly or indirectly, are further detailed in the following subsections.

2.4.1 E Street Bridge Fishway Extension Construction Elements

The proposed construction activities at the E Street Bridge Fishway Extension site would occur over a total area of approximately 0.25 acre below the top of bank on Santa Rosa Creek and include fishway extension and trash rack replacement and improvement, right bank enhancement, grouted rock installation, and creation of an access road on the left bank. The total footprint of the Proposed Project at this site including access and staging is 0.44 acre, with staging located on E Street. This Proposed Project element would occur approximately 156 linear feet upstream of the E Street Bridge. An overview of the proposed design features at this site is shown in Figure 2.4-1.

Figure 2.4-1. E Street Bridge Fishway Extension Site – Proposed Design Features Overview.



Source: FlowWest 2022
Note:
OHW: ordinary high water

The anticipated construction sequencing of the Proposed Project at the E Street Bridge Fishway Extension site is as follows:

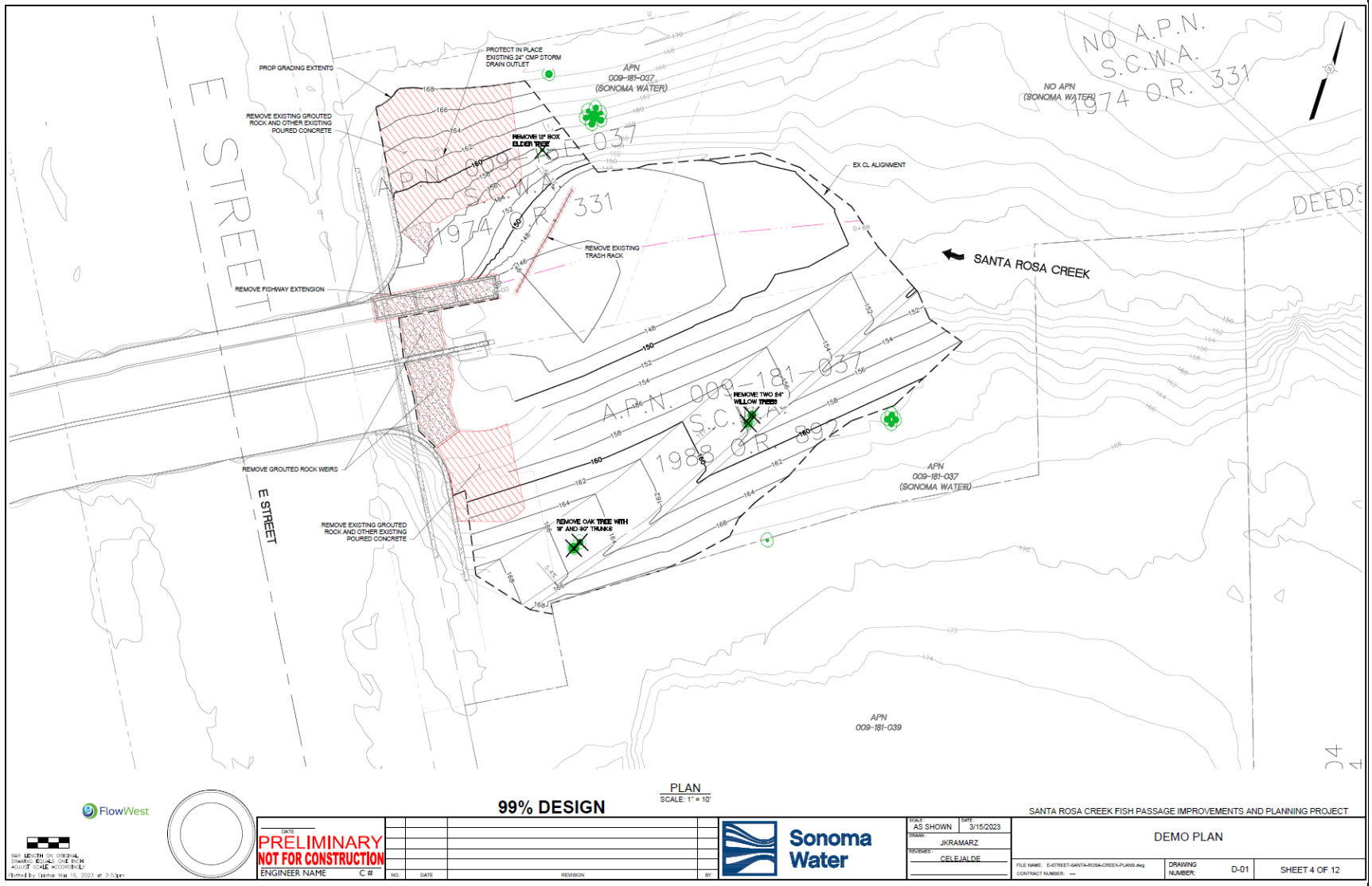
1. A road along the creek bank would be constructed using a bulldozer to access the Fishway Extension.
2. Prior to construction, exclusionary fencing and netting would be installed across the creek above and below the work area to isolate the area from aquatic species. One or more cofferdams would be placed within the exclusionary fencing to dewater the work area. Cofferdams would be constructed of sandbags or similar material, or a water-filled plastic flood barrier would be stacked on plastic sheeting. Water would be diverted around the site using a gravity-fed bypass if possible. If a gravity-fed bypass is not possible because of inadequate elevation difference between the water surface above and below the site or construction phasing does not allow for the use of the gravity-fed bypass, pumps with screened intakes would be used to dewater the construction area. The pumps would be used upstream of the upstream cofferdam, to divert any present flows, and within the construction area to remove groundwater from excavating operations. The pump used within the construction area would be moved around the site as necessary to support dewatering operations. Bypass piping for the upstream dewatering operations would be installed along the creek edge and terminate within the right bore culvert downstream of the downstream cofferdam. Piping for the dewatering operations within the construction area would be installed within and terminate downstream of the left bore culvert downstream of the downstream cofferdam. Water would be filtered before it is returned to the creek, using dewatering bags attached to the bypass piping outlets, sand bags, or other filtration methods.
3. The site would be cleared and grubbed, as needed, using an excavator. Vegetation removal would include mostly brush and shrubs with five[1] larger trees being removed for access purposes, along the tops of the banks, including:
    - One 12-inch diameter at breast height (DBH) box elder tree
    - Two 24-inch DBH willow trees
    - One multi-trunk oak tree with 18- and 30-inch DBH trunks

    The location of trees to be removed as well as tree types are shown in Figure 2.4-2.
4. The cobble bar along the left bank would be graded to a lower elevation.
5. The grouted right bank, trash rack, and fishway extension would be removed using an excavator with a vibratory hammer attachment. Debris would be loaded onto dump trucks and disposed appropriately off site.

1 For mitigation purposes, each trunk counts as one tree.

6. The replacement fishway extension and grouted rock weirs footings/foundation would be constructed by prepping the surface underneath with shovels, installing formwork for the fishway extension and footings/foundation, and pouring concrete using a hose attachment connected to a concrete truck parked on the E Street Bridge.
7. To replace the existing trash rack, large debris deflection bollards footings/foundation would be constructed by excavating 8-foot-deep holes, constructing formwork for the footings/foundation, and pouring concrete using a hose attachment connected to a concrete truck parked on E Street, just west of the E Street Bridge Fishway Extension site.
8. The right bank would be stabilized by excavating the toe using an excavator and large rocks would be installed up the slope of the right bank.
9. Disturbed areas outside of the channel, but below the top of the banks, would be revegetated. Any revegetation would include seeding with a mix of native grasses, sedge, and/or forb species and would occur during the fall and prior to the first significant rainfall (prior to October 15, with a possible extension to October 31 if weather conditions permit).

Figure 2.4-2. E Street Bridge Fishway Extension Site – Tree Removal Plan.



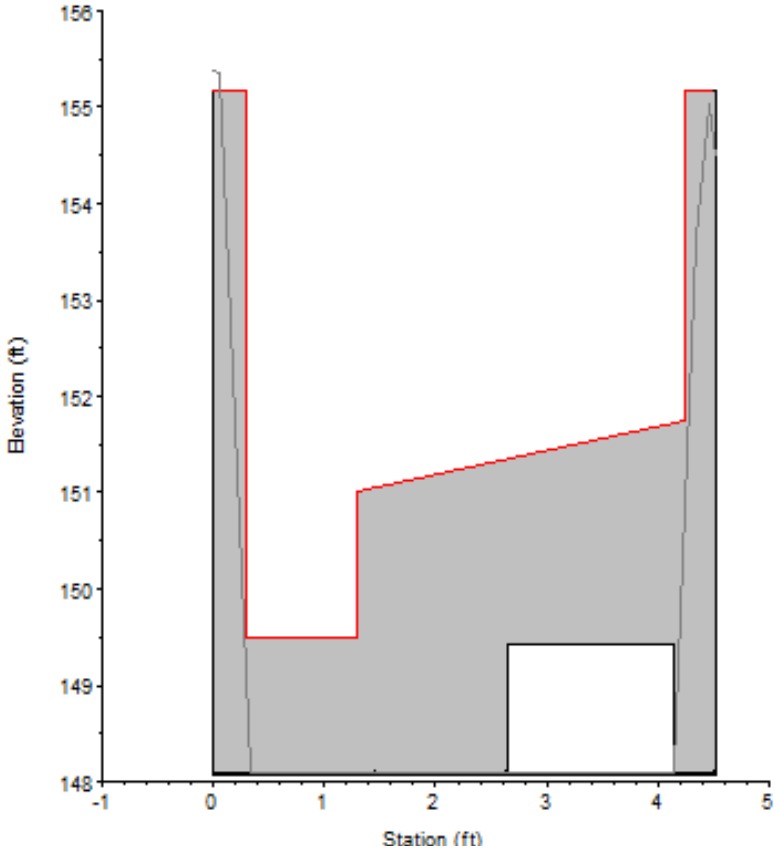
Source: FlowWest 2023

Fishway Extension Replacement and Improvements. To support fish passage under a wide range of flows, the existing and failing fishway extension would be removed and replaced. The debris generated would be recycled or disposed of at an appropriate facility. A total of approximately 90 cubic yards (cy) of concrete, rocks, and potentially soil would be excavated, and 90 cy of concrete over an area of 0.004 acre would be placed to support this Proposed Project element. The existing grouted rock weirs would be demolished and rebuilt to the original design specifications.

A total of approximately 155 cy of grouted rock would be installed at the upstream ends of the grouted rock weirs and fishway extension to address the effects of scour at the upstream sides of the weirs and fishway extension inlet. The grouted rock would be 4 feet thick and run the length of the existing weirs over a total area of 0.024 acre. The footing for the fishway extension would be 4 feet deep and 9 feet, 2 inches wide over a total area of 0.0009 acre. The fishway extension base and walls would be rebuilt to the original design specifications and be constructed such that the 0.4% fishway extension slope is seamlessly maintained through the fishway extension.

The weirs within the fishway extension would be modified half pool-and-chute type weirs with an orifice located at the bottom of the weirs to allow passage for steelhead that prefer not to jump as well as Pacific lamprey (NMFS 2022; Figure 2.4-3).

Figure 2.4-3. Typical Weir Configuration, E Street Bridge Fishway Extension Site.



Source: FlowWest 2022

Trash Rack Replacement and Improvements. The Proposed Project design includes two types of trash racks: 1) large deflector bollards that would be installed upstream to prevent large debris from entering the fishway extension and right culvert (Figure 2.4-4); and 2) a coarse trash rack grate would be installed over the fishway extension to prevent smaller debris from blocking the weirs and orifices in the fishway extension (Figure 2.4-5).

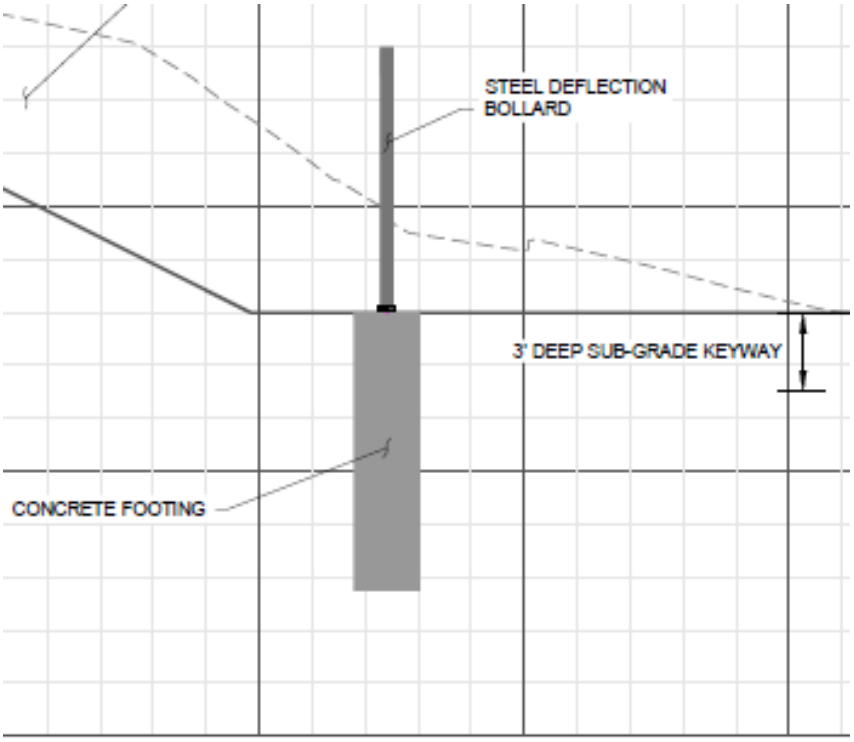
Steel bollards, estimated to be made from 6-inch-diameter standard wall pipe, would be installed in an arched pattern toward the right bank of Santa Rosa Creek to deflect large, neutrally-buoyant, or floating debris away from the fishway extension and fishway and toward the southernmost main culvert bore. The bollards would be embedded an estimated 10 feet, 6 inches into the channel bed, protrude an estimated 12 feet from the channel bed, and be designed to deflect large debris up to the maximum flow that the culverts can convey (approximately the 5-year flow). The bollards would be filled with concrete to provide structural integrity to resist the impact forces from large debris, the loading from high flows, and would also include an estimated 30-inch-diameter by 10-foot,

6-inch-deep concrete footing to counteract the impact forces from large debris. Poured concrete would be allowed to cure before making contact with flowing creek water.

A fine trash rack grate would also be installed over the fishway extension. The steel grate would consist of vertical bars spaced at least 10 inches apart and lateral bars spaced at least 24 inches apart to maintain fish passage though the upstream end. These would be removable for ease of maintenance.

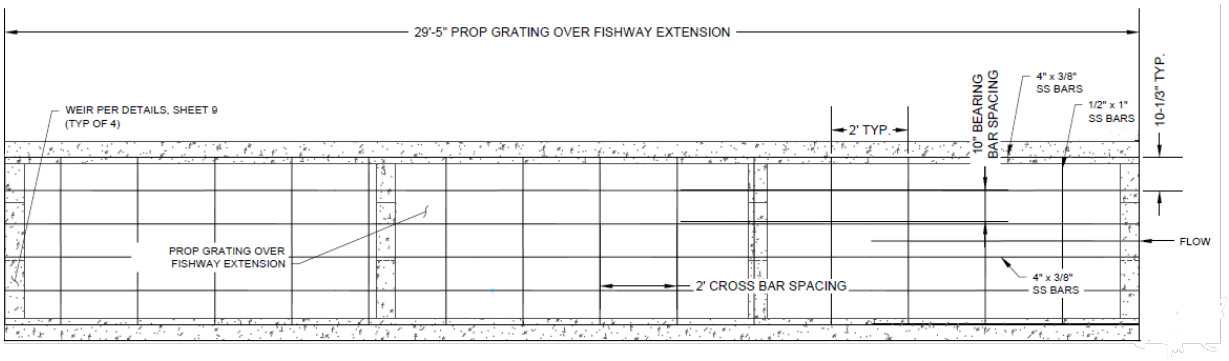
A total of approximately 14 cy of soil and potentially concrete and rock would be excavated and 14 cy of concrete would be placed to support this project element. The large deflector bollards would total an area of approximately 0.0008 acre. The coarse trash rack grate area is included as part of the fishway extension area as it would overlay the same area as the fishway extension.

Figure 2.4-4. Typical Deflection Bollard.



Source: FlowWest 2023

Figure 2.4-5. Trash Rack Grate.

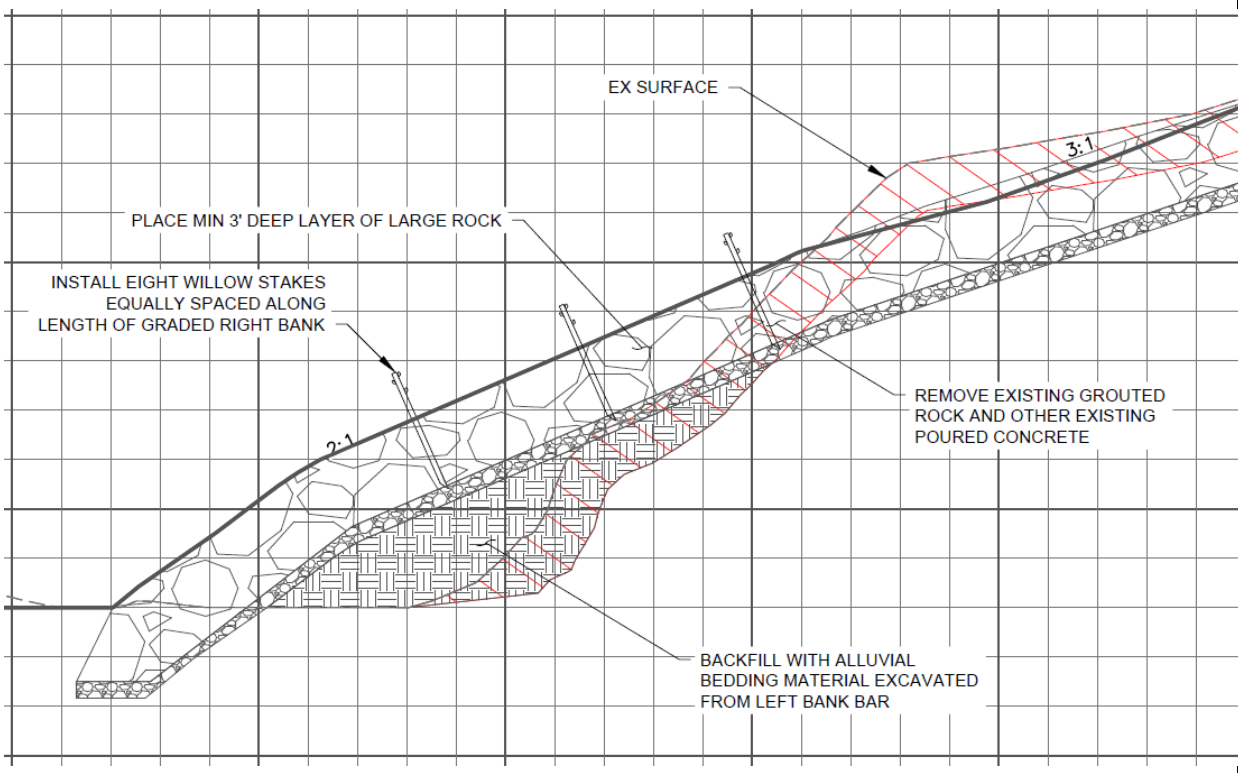


Source: FlowWest 2023

Right Bank Enhancement. The proposed right bank enhancement activities would address ongoing erosion on the right bank by recontouring the bank and providing slope stabilization (Figure 2.4-6). Regrading and enhancing the right bank would help to reduce major future maintenance efforts at the site by preventing further structural damage associated with undermining the grouted rock bank and by strengthening the bank. The proposed right bank enhancement would include 70 cy of soil and grouted rock excavation and 370 cy of fill (soil, rocks, etc.) over an area of 0.04 acre and includes the following activities:

- Removal of the existing grouted concrete and rock on the right bank.
- Filling, recontouring, and reinforcement of the right bank at a slope no steeper than 2H:1V slope (50%) to prevent further scour due to the geometry of the bank and its proximity to the fishway extension.
- Placement of a layer of large rocks up the slope of the right bank. Large rocks are proposed due to the erosive and turbulent conditions at the site. Erosion of this bank could result in damage or failure of the double-barrel culvert that extends beneath downtown Santa Rosa.
- Lightly vegetating the rock slope protection with native grass seeding underneath biodegradable erosion control fabric and a few widely spaced willow stakes along the bank toe. This light vegetation would help to maintain flood conveyance capacity and to provide additional armoring and shady, riparian habitat at the toe within 3 to 5 years after construction as the live willow stakes mature and create a matrix with their roots, the underlying rock, and soil. Establishing dense vegetation on the shaded slope would be difficult and is not desirable because it could add resistance to the flow entering the culvert and possibly reduce the culvert capacity.

Figure 2.4-6. Right Bank Enhancement, E Street Bridge Fishway Extension Site.

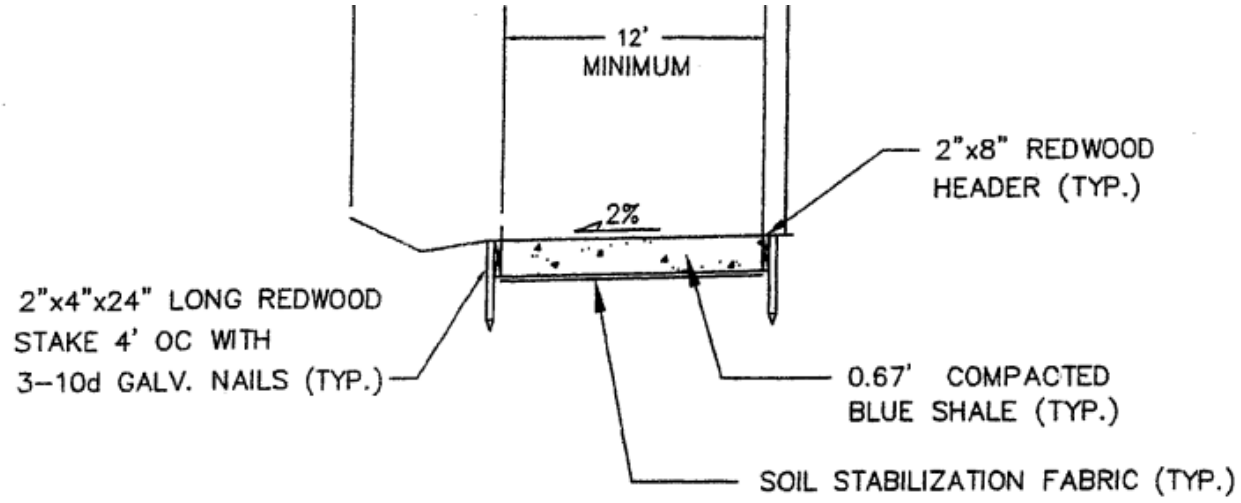


Source: FlowWest 2023

Access Road Construction. To ensure that maintenance vehicles can access the channel at the E Street Bridge Fishway Extension site, a 12-foot-wide and 126-foot-long access road would be constructed on the left bank. Approximately 275 cy of soil and concrete-grouted rock would be excavated from the left bank, and 65 cy of suitable fill material (soil and gravel) would be placed in an area of approximately 0.12 acre. Large rock would be placed along the left bank access road embankment to armor it. Soil, native grass seeding, and biodegradable erosion control fabric will be placed on top of the large rock. The left bank is slightly shallower in slope than the right bank, allowing for a longer and less steep access road, and it is owned by Sonoma Water. Due to the physical site constraints, the access road would slope down and face the upstream direction. The access road would have a maximum longitudinal slope of 15% and a cross slope of 2%, sloping toward the bank to a drainage ditch located between the edge of the access road and the bank. The embankment slope on the channel side would be a maximum of 2H:1V maximum and constructed using suitable fill material from excavation activities within the access road footprint. The access road would be excavated at a minimum depth of 0.67 foot. Soil stabilization fabric would be placed at the bottom, and a 0.67-foot layer of compacted blue shale would be constructed on top of the fabric. The access road would comply with Santa

Rosa Public Storm Drain Standards and Santa Rosa Standard 216 – Utility Access Road (Figure 2.4-7).

Figure 2.4-7. Access Road Details, E Street Bridge Fishway Extension Site.



Source: City of Santa Rosa Standard 216 – Utility Access Road

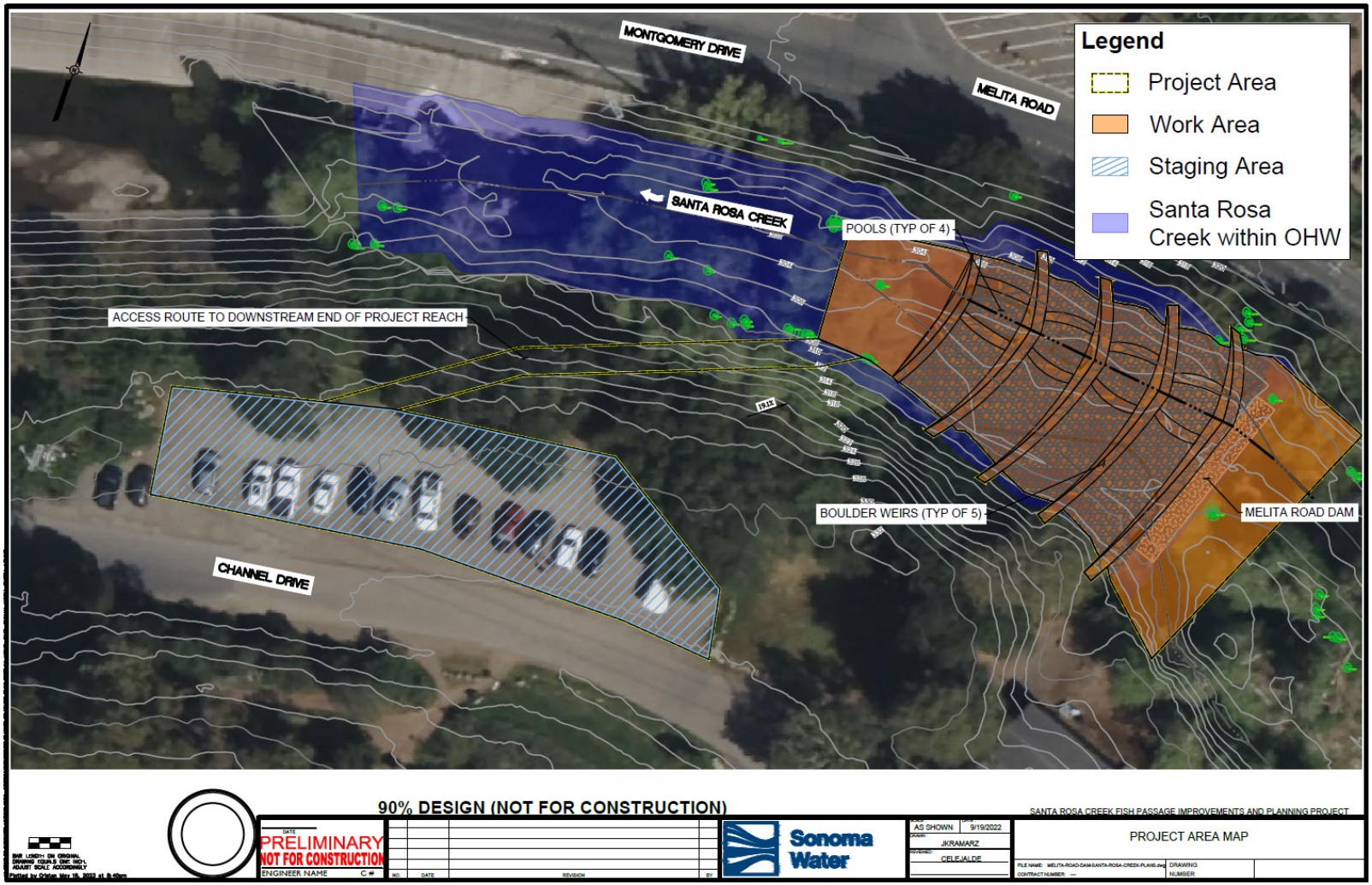
2.4.2 Melita Road Dam Construction Elements

The proposed construction activities at the Melita Road Dam site would occur over a total area of approximately 0.35 acre below the top of bank on Santa Rosa Creek. The total footprint of the Proposed Project at this site including access and staging is 0.56 acre. The proposed construction activities would include creating a series of rock weir step pools, grading in stream, creating a temporary access road, and staging in an existing gravel parking area on Channel Drive. Grading would be conducted downstream of the dam to improve upstream fish passage for juvenile and adult steelhead at this site by increasing depths at areas where there are low passage design flows and decreasing velocities at areas of high passage design flows (Figures 2.4-8 and 2.4-9).

The proposed design includes grading down the left bank sediment bar immediately downstream of the dam to slope toward the step pools. A series of four non-grouted rock weir step pools would be constructed to clear the vertical distance of 4 feet to the top of the dam. The rock weir step pools would be spaced approximately 25 feet apart, crest to crest. The pools would be 2 feet deep, have a bottom width of 6 feet, and length of 8 feet. The rock weirs would be constructed of approximately 4-foot diameter rock and keyed 2 boulder lengths (8 feet) into the left and right banks. The channel bed would be over excavated by 4 feet so that the area can be backfilled with engineered streambed material. Engineered streambed material is a specific gradation of rock designed based on the site velocities that is placed along the channel bottom. The banks would be over-

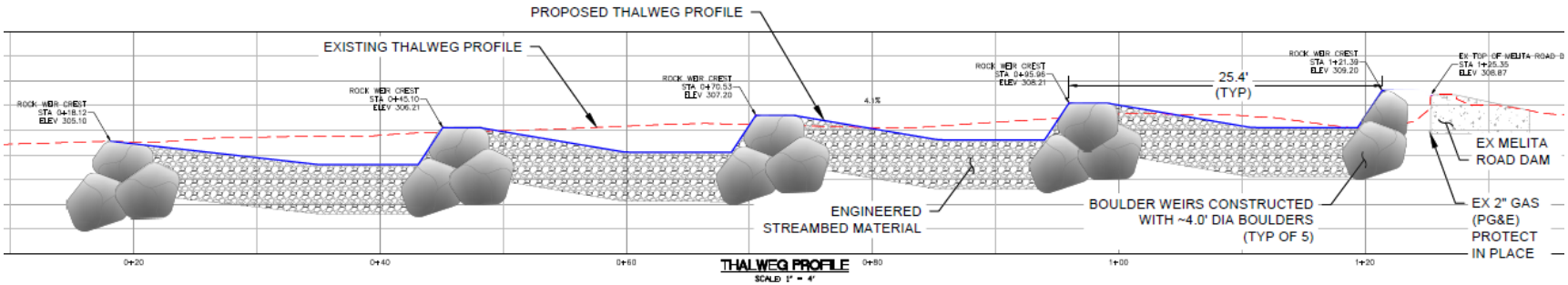
excavated by 6 feet to place the boulders and then backfilled and compacted to reconstruct the banks. Construction of the step pools would shift the thalweg away from the right bank. Live willow fascines will be installed at the toe of the slope on both banks along the project extents. A total of approximately 1,674 cy of soil would be excavated from within Santa Rosa Creek, above and below the ordinary high water mark (OHWM). Approximately 320 cy of the total excavated soil can be utilized for fill within the site, and the remaining 1,354 cy of the material will be hauled to a landfill. Approximately 1,624 cy of large rock and engineered streambed material would be placed in an area of approximately 0.2 acre to support this Proposed Project element. This Proposed Project element would occur approximately 125 linear feet downstream of the Melita Road Dam.

Figure 2.4-8. Melita Road Dam – Proposed Design Features Overview.



Source: FlowWest 2022

Figure 2.4-9. Melita Road Dam – Weir and Pool Profile.



Source: FlowWest 2022

The anticipated construction sequencing of the Proposed Project at the Melita Road Dam site is as follows:

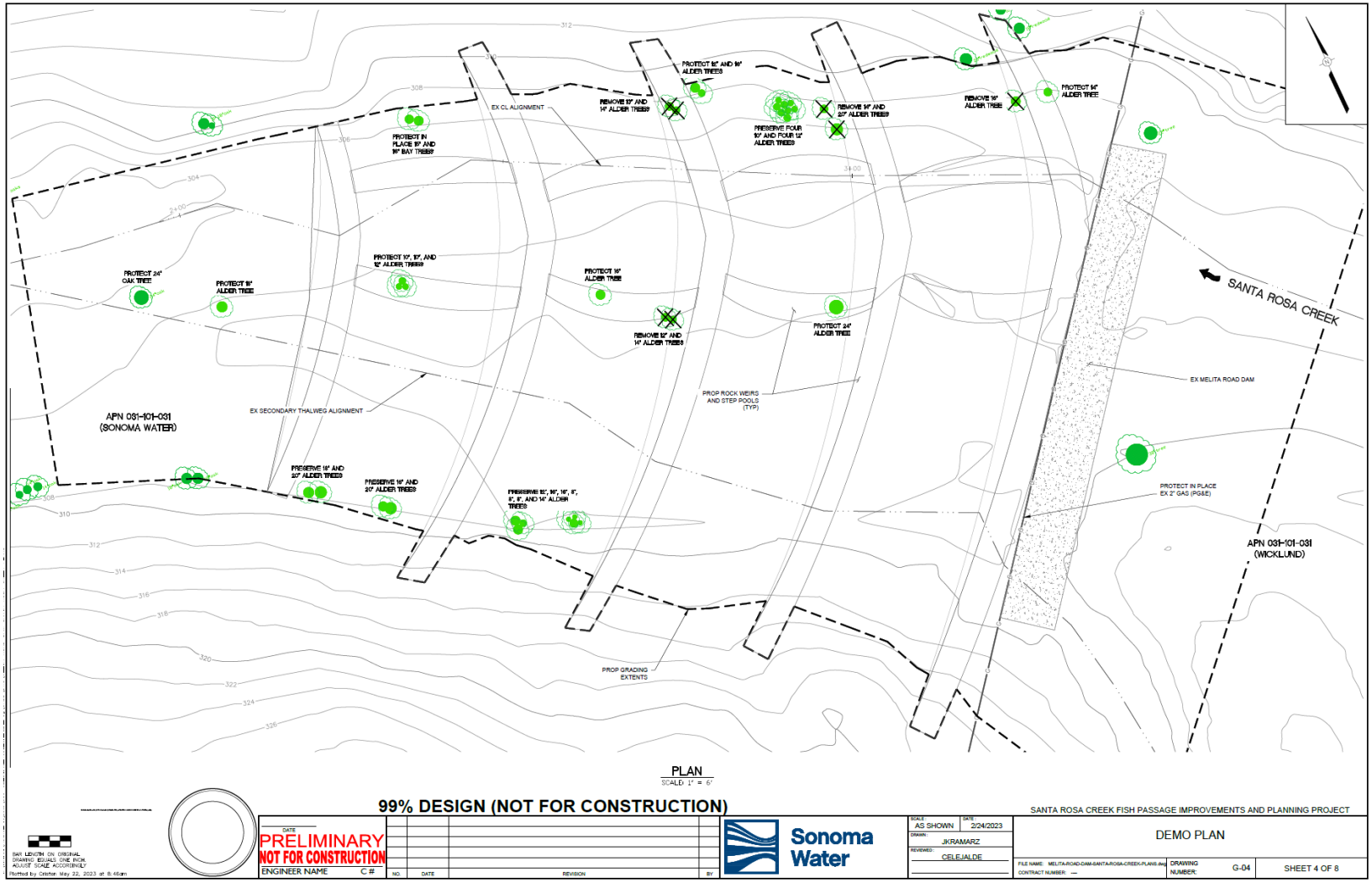
1. Prior to construction, exclusionary fencing and netting would be installed across the creek above and below the work areas to isolate the areas from aquatic species. One or more cofferdams would be placed within the exclusionary fencing to dewater the work areas. Cofferdams would be constructed of sandbags or similar material, or a water-filled plastic flood barrier would be stacked on plastic sheeting. Water would be diverted around the site using a gravity-fed bypass if possible. If a gravity-fed bypass is not possible because of inadequate elevation difference between the water surface above and below the site or construction phasing does not allow for the use of the gravity-fed bypass, pumps with screened intakes would be used to dewater the construction area. The pumps would be used upstream of the upstream cofferdam, but downstream of the exclusionary fencing, to divert any present flows and within the construction area to remove groundwater from excavating operations. The pumps used within the construction area would be moved around the site as necessary to support dewatering operations. Bypass piping for the upstream dewatering operations would be installed along the creek edge. Water would be filtered before it is returned to the creek, using dewatering bags attached to the bypass piping outlets, sand bags, or other filtration methods.
2. The site would be cleared and grubbed, as needed, using an excavator. Vegetation removal would include mostly brush and shrubs, as well as seven alder trees along the lower banks and within the channel for construction of the step pools, including:

    - One 12-inch DBH tree
    - One 13-inch DBH tree
    - Three 14-inch DBH trees
    - One 16-inch DBH tree
    - One 20-inch DBH tree

    The location of trees to be removed, as well as tree types, are shown in Figure 2.4-10.
3. A temporary access ramp would be constructed through a riparian area using a bulldozer; however, no trees would be removed during construction of the temporary access ramp. The left bank sediment bar downstream of the dam would be graded using an excavator.
4. An excavator would be used to construct the rock weir step pools, excavate the toe banks, and install the rock weirs and engineered streambed material.
5. Disturbed areas outside of the channel would be revegetated. Any revegetation would include seeding with a mix of native grasses, shrubs, sedge, and/or forb

species and would occur during the fall and prior to the first significant rainfall (prior to October 15, with a possible extension to October 31 if weather conditions permit).

Figure 2.4-10. Melita Road Dam – Tree Removal Plan.



Source: FlowWest 2023

2.4.3 Construction Staging and Equipment

Staging of equipment and materials would occur at the two locations shown in Figures 2.4-1 and 2.4-8. The proposed staging area for the E Street Bridge Fishway Extension site is located on E Street, just west of the E Street Bridge, in the eastern traffic, bike, and pedestrian lanes. The E Street Bridge Fishway Extension site would be accessed by traveling on E Street and down the proposed access road that would be constructed. The staging area for the Melita Road Dam site is located along Channel Drive and consists of a gravel parking area on Channel Drive owned by Sonoma Water that is often used by the public for parking at Trione-Annadel State Park. The Melita Road Dam site would be accessed via a temporary access ramp constructed from the top of the bank down to the channel near the Melita Road Dam. Maintenance and staff vehicles would park at the E Street and Channel Drive staging areas or along public roads including Montgomery Drive and Melita Road.

The Proposed Project's construction specifications would incorporate the Bay Area Air Quality Management District's Basic Construction Measures to reduce dust emissions and minimize equipment idling times to avoid or minimize air pollutants from being generated from construction (BAAQMD 2017a).

Table 2.4-1 identifies the types of heavy equipment that would be used during construction of the Proposed Project. Hand tools and other miscellaneous machinery may also be required. In total, construction activities would require 112 one-way truck trips for the E Street Bridge Fishway Extension site and 310 one-way truck trips for the Melita Road Dam site.[2]

Table 2.4-1. Proposed Construction Schedule and Equipment.

Phase	Construction Phase	Duration	Construction Equipment	Quantity
1	E Street Bridge Fishway Extension Site	80 days	Long-reach excavator	1
			Excavator	1
			Bulldozer	1
			Crane	1
			Dump truck	1
			Concrete mixer truck	1
2		60 days	Excavator	1

2 For the purposes of analysis, it is assumed that trucks would not be dual purpose (i.e., an empty truck would enter the Proposed Project site and be filled with an off-haul load only).

Phase	Construction Phase	Duration	Construction Equipment	Quantity
	Melita Road Dam Site		Bulldozer	1
			Dump truck	1

2.4.4 Summer Rainfall Contingency Plan

In the unlikely event that summer rains occur during construction of the Proposed Project, creek flows are not anticipated to increase significantly given the ability for soils to infiltrate and absorb most of the rain that might fall. If creek flows were to increase during construction activities, the cofferdam could be adjusted to allow for flows to pass. If creek flows were to increase during construction activities, the bypass piping would likely be able to accommodate any incremental increase in summer flows caused by rains. Creek summer flows are typically 5 to 10 cfs, and the bypass piping can accommodate 30 cfs. If capacity of the bypass piping were to be exceeded, screened pumps could be employed to redirect flows to the E Street Bridge culverts downstream.

2.4.5 Project Schedule, Monitoring, and Reporting

Proposed Project construction is anticipated to take approximately 80 days (4 months) at the E Street Bridge Fishway Extension site and 60 days (3 months) at the Melita Road Dam site, for a total of approximately 7 months. All in-water work would occur during the dry, low-flow season between June 15 and October 15. Construction activities would take place during daytime hours from 7:00 a.m. and 7:00 p.m., Monday through Friday, and 8:00 a.m. to 6:00 p.m. on Saturdays. The ground-disturbing work period may be extended during dry weather with approval from regulatory agencies that have jurisdiction over the Proposed Project area (Section 2.7 [Other Public Agencies Whose Approval Is Required]). Revegetation activities would be completed during the late fall after construction is complete and monitoring would be conducted for 5 years (see Section 3.4).

2.4.6 Proposed Project Operations

Once the Proposed Project is fully constructed, no operational needs are anticipated aside from regular maintenance activities undertaken by Sonoma Water. At the E Street Bridge Fishway Extension site, it is expected that Sonoma Water's need for regular maintenance would be similar to existing maintenance needs as a result of the Proposed Project. At the Melita Road Dam site, there would also be a need for maintenance (e.g., debris and soil removal from the step pools).

2.5 Project Alternatives

The No Project alternative would mean that the Proposed Project's repair activities would not be implemented and fish passage barriers at the two sites would continue. At the E Street Bridge Fishway Extension site, another alternative was evaluated by Sonoma Water (FlowWest 2022). This alternative involved protecting the fishway extension in place, non-structurally joining the fishway extension to the existing fishway within the culvert, constructing a new footing and toe wall for the fishway extension and the grouted rock weir, removing the existing trash rack and installing a new trash rack, and regrading and reinforcing the right bank with rock slope protection to prevent flanking between the fishway extension and the right bank. However, this alternative would result in increased construction time and could result in unknown issues under the existing fishway extension due to protecting it in place as opposed to replacing it. Therefore, because it would result in a longer period of environmental impact, this alternative was rejected. At the Melita Road Dam site, two other alternatives were considered: 1) removing half of Melita Road Dam visible within the channel; and 2) removing all of the Melita Road Dam. However, these alternatives were rejected as the dam structure is not owned by Sonoma Water, which would result in increased potential for costs and environmental impacts.

2.6 Conformance with the General Plan and General Plan Designation

The City of Santa Rosa General Plan 2035 Land Use Classifications are Core Mixed Use at the E Street Bridge Fishway Extension site and Rural Residential at the Melita Road Dam site. Core Mixed Use areas are designated for business, government, retail, and entertainment uses, while Rural Residential areas are designated for low-density residential development (Santa Rosa 2020a). The Proposed Project appears to be consistent with applicable general plans and policies and would not limit or restrict any existing activities that occur in the Proposed Project area.

2.7 Other Public Agencies Whose Approval Is Required

The following are public entities and agencies that may require review or approval of the Proposed Project or that may have jurisdiction over the Proposed Project area:

- U.S. Army Corps of Engineers (USACE)
- National Marine Fisheries Service (NMFS)
- U.S. Fish and Wildlife Service (USFWS)
- California Department of Fish and Wildlife (CDFW)
- North Coast Regional Water Quality Control Board (NCRWQCB)
- City of Santa Rosa

3.0 Environmental Checklist

The Proposed Project's environmental impacts were assessed based on the environmental checklist provided in Appendix G to the CEQA Guidelines. The checklist provides a summary of potential impacts that may result from implementation of the Proposed Project. In addition, each section below includes a discussion of the rationale used to determine the significance level of the Proposed Project's environmental impact for each checklist question. A list of environmental factors and summary of findings are below. The findings of each environmental analysis are included in Sections 3.1 through 3.21.

With regard to the checklist, a "No Impact" response indicates that the analysis concludes that the Proposed Project would not have the impact described. A "Less-than-Significant Impact" response indicates that the Proposed Project would not cause a substantial adverse change to the environment and mitigation is not required. A "Less than Significant with Mitigation Incorporated" response indicates that the Proposed Project may cause a substantial adverse change to the environment but mitigation measure(s) have been identified that would reduce the impact to a less-than-significant level. A "Potentially Significant Impact" response indicates that the Proposed Project may cause a substantial adverse change to the environment and the impact cannot be reduced to a less-than-significant level by incorporating mitigation measures. An environmental impact report must be prepared.

Each response is discussed at a level of detail commensurate with the potential for adverse environmental effect. Each question was answered by evaluating the Proposed Project as proposed, that is, without considering the effect of any added mitigation measures. The Initial Study includes a discussion of the potential impacts and identifies mitigation measures to substantially reduce those impacts to a level of insignificance where feasible. All references and sources used in the Initial Study are listed in Section 6 (References).

Environmental Checklist and Summary of Potential Impacts

Environmental Factor	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Aesthetics	☐	☐	☒	☐
Agriculture and 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	☐	☒	☐	☐

3.1 Aesthetics

Except as provided in Public Resources Code Section 21099, would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a. 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?	☐	☐	☐	☒
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?	☐	☐	☒	☐
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

Aesthetics Setting

The Proposed Project is located at two separate sites within Santa Rosa Creek in urbanized areas of Santa Rosa. Visual elements of the Proposed Project would be temporary and occur during construction, which is anticipated to take approximately 80 days (4 months) at the E Street Bridge Fishway Extension site and 60 days (3 months) at the Melita Road Dam site. Construction activities at the two project sites may not occur concurrently in the same year.

E Street Bridge Fishway Extension Site. The E Street Bridge Fishway Extension site is located next to E Street between Sonoma Avenue and Second Street within a developed commercial and residential area. The site is bounded by buildings, streets, a

parking lot, and Santa Rosa Creek. The E Street Bridge Fishway Extension infrastructure, which includes the fishway extension, grouted rock weir, trash racks, and two grouted rock banks, is the primary visible feature within the Proposed Project area, as seen in Photographs 1 through 6. The E Street Bridge Fishway Extension site is located at the base of a box culvert/bridge and is not easily visible from any road or building. The site is visible looking downward to the east from E Street Bridge, although views of this site are partially obstructed by existing vegetation.

Melita Road Dam Site. The Melita Road Dam site is located in a suburban area amongst public parks and residences. The site is bounded by residential streets. The major visible structure at this site is the Melita Road Dam, which is shown in Photographs 7 and 8. The Melita Road Dam site is partially visible looking downward from Montgomery Drive, although views from roadways and other vantage points are largely obstructed by existing vegetation.

The City of Santa Rosa General Plan 2035 (Santa Rosa 2020a) includes goals and policies related to Urban Design and Aesthetics.

- UD-A: Preserve and enhance Santa Rosa's scenic character, including its natural waterways, hillsides, and distinctive districts.
- UD-A-7: Continue the City's program of utility undergrounding.
- UD-C: Enhance and strengthen the visual quality of major entry routes into the City, as well as major corridors that link neighborhoods with downtown.

Discussion of Potential Impacts

In accordance with CEQA, the Proposed Project could result in potentially significant impacts to Aesthetic Resources if it would:

a. Have a substantial adverse effect on a scenic vista? – *No Impact.*

Scenic vistas are generally designated as areas that have scenic or community values or high levels of viewer sensitivity. The Proposed Project area is not located within a scenic vista and therefore would not have substantial adverse effects on a scenic vista. There would be no impact.

b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? – *No Impact.*

The closest scenic highway to the E Street Bridge Fishway Extension site is State Route 101, located approximately 0.5 mile to the west of the E Street Bridge Fishway Extension site. The nearest State Scenic Highway to the Melita Road Dam site is Highway 12 South from Danielli Avenue to London Way, approximately 1.1 miles east of the Melita Road Dam site. The Proposed Project would not be located within or adjacent to a state scenic

highway and would not be visible from these roadways. There would be no impact to scenic vistas or scenic resources from the Proposed Project.

c. In non-urbanized 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? – *Less than Significant.*

Visual elements of the Proposed Project at the E Street Bridge Fishway Extension site would include the following:

- Enhancements at the right bank including the removal of concrete, placement of large rocks, and revegetation of the rock slope protection with live willow stakes and seedlings
- Construction of a new access road on the left bank
- Removal of the existing grouted rock weirs and fishway extension, construction of concrete cutoff walls, and placement of grouted rock at the upstream ends of the weirs and fishway extension
- Replacement of the existing trash rack with two new trash racks including 6-inch-diameter deflector bollards installed upstream and a trash rack grate installed over the fishway extension

These visible elements would be similar to the existing infrastructure within the Proposed Project area and not significantly contrast with or substantially degrade the existing visual character or quality of public views.

Visual elements of the Proposed Project at the Melita Road Dam site include grading of the left bank and construction of four rock weir step pools. The proposed changes would be similar to the existing infrastructure within the Proposed Project area and would not significantly contrast with or substantially degrade the surrounding visual character or quality of public views.

The Proposed Project sites may be visible from nearby roads, residences, and businesses, but because the Proposed Project activities would mostly take place within Santa Rosa Creek, they would be below the grade of the roadways and would be largely shielded by existing vegetation.

The Proposed Project would not conflict with applicable zoning or other regulations governing scenic quality. The Proposed Project area is within the City of Santa Rosa Urban Boundary and on property mostly owned by Sonoma Water. The City of Santa Rosa General Plan 2035 Land Use Classifications are Core Mixed Use and Rural Residential (Santa Rosa 2020a).

Because the visual elements of the Proposed Project, once completed, would be only minimally visible to the public, would be similar to the existing infrastructure within the Proposed Project area, would not significantly contrast with or substantially degrade the surrounding visual character or quality of public views, and would not conflict with applicable zoning or other regulations governing scenic quality, the Proposed Project impacts to the visual character or quality would be less than significant. No mitigation is required.

d. Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area? – *No Impact*.

The Proposed Project construction and maintenance activities would be conducted during daylight hours only, thus no nighttime lighting would be needed. The Proposed Project would not involve construction of new facilities or modifications to existing facilities that would result in new reflective surfaces (sources of glare) or installation of lighting. Therefore, there would be no lighting or glare impacts from the Proposed Project.

3.2 Agriculture and Forestry Resources

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Agriculture and Forestry Resources Setting

This analysis of potential agricultural resource and forestry impacts is based on review of the following resources: California Important Farmland Maps produced by the California Department of Conservation (CDOC 2022); Sonoma County Williamson Act Land Contacts Map (SCPRMD 2019); and the City of Santa Rosa General Plan (Santa Rosa 2020a).

While there are agricultural and forest lands in the vicinity of the Proposed Project area, there are no farmlands or forest or timber lands in or directly adjacent to the footprint of the Proposed Project.

Discussion of Potential Impacts

In accordance with CEQA, the Proposed Project could result in potentially significant impacts to Agricultural and Forestry Resources if it would:

a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program (FMMP) of the California Resources Agency, to nonagricultural use? – *No Impact.*

The Proposed Project sites are within portions of Santa Rosa Creek that have previously been engineered. No Prime Farmland, Unique Farmland, or Farmland of Statewide Importance; forest lands or timberlands; or lands under a Williamson Act contract would overlap or conflict with or be converted by the Proposed Project (CDOC 2019; SCPRMD 2019). No designated Farmland is found within 1 mile of the E Street Bridge Fishway Extension site. Lands designated as Grazing Land are located approximately 200 feet south of the Melita Road Dam site, and lands designated as Farmland of Local Importance are located approximately 1,000 feet southwest of the Melita Road Dam site. Lands designated as Farmland of Local Importance, Farmland of Statewide Importance, Grazing Land, and Unique Farmland are found within 1 mile to the north and northeast of the Melita Road Dam site. However, the Proposed Project would not conflict with their current uses. There are no commercial forest lands or timberlands in the Proposed Project area. Therefore, designated Farmlands would not be affected by the Proposed Project and there would be no impact.

b. Conflict with existing zoning for agricultural use, or a Williamson Act contract? – *No Impact.*

As discussed in Section 2.2 (Project Setting and Existing Conditions), the Proposed Project sites are not zoned for agricultural uses (Santa Rosa 2020a). The Proposed Project would not conflict with zoning for agricultural use or a Williamson Act contract, and there would be no impact.

c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? – *No Impact.*

There are no commercial forest lands or timberlands in the Proposed Project area. The Proposed Project would not conflict with or cause rezoning of forestlands or timberlands, and there would be no impact.

d. Result in the loss of forest land or conversion of forest land to non-forest use? – *No Impact.*

There are no commercial forest lands or timberlands in the Proposed Project area. The Proposed Project would not result in the loss of forest land or conversion of forest land to non-forest use, and there would be no impact.

e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use? – *No Impact.*

The Proposed Project sites are within portions of Santa Rosa Creek that have previously been engineered. The closest agricultural land (Grazing Land) is approximately 200 feet south of the Proposed Project area and would not be indirectly affected by the Proposed Project. There are no commercial forest lands or timberlands in the Proposed Project area. The Proposed Project would not involve other changes in the existing environment that could result in conversion of farmland to non-agricultural use or conversion of forestland to non-forest use, and there would be no impact.

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

Air Quality Setting

The air quality setting is provided along with relevant regulatory information and guidelines and their applicability to the Proposed Project.

Air quality is a function of both the rate and location of pollutant emissions under the influence of meteorological conditions and topographic features that influence pollutant movement and dispersal. Atmospheric conditions such as wind speed, wind direction, atmospheric stability, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants, which affects air quality.

The Proposed Project is located within the San Francisco Bay Area Air Basin (SFBAAB). The Bay Area Air Quality Management District (BAAQMD) is responsible for attaining and maintaining the National Ambient Air Quality Standards and the California Ambient Air Quality Standards in the SFBAAB. The SFBAAB is currently designated as a non-attainment area for the California and national ambient air quality standards for ozone and particulate matter (PM).

Discussion of Potential Impacts

In accordance with CEQA, the Proposed Project could result in potentially significant impacts to Air Quality if it would:

a. Conflict with or obstruct implementation of the applicable air quality plan? – *Less than Significant.*

Construction of the Proposed Project would involve the temporary use of equipment that emits air emissions. Following construction, the Proposed Project would not include any stationary sources of air emissions. Vehicle trips and equipment use associated with future maintenance activities would be far less than needed for Proposed Project construction and be temporary and intermittent in nature. As such, the Proposed Project would not result in substantial long-term operational emissions of criteria air pollutants.

The BAAQMD Bay Area 2017 Clean Air Plan (2017 CAP) is the most recently adopted regional air quality plan that pertains to the Proposed Project. The BAAQMD *2022 CEQA Air Quality Guidelines* revision identifies a three-step methodology for determining a project's consistency with the current clean air plan (BAAQMD 2023). BAAQMD considers a project consistent with the air quality plan based on the following three criteria:

1. "Does the project support the primary goals of the air quality plan?"

The 2017 CAP identifies the following paramount goals: 1) protect air quality and health at the regional and local scale by attaining all state and national air quality standards and eliminating disparities among Bay Area communities in cancer health risk from toxic air contaminants; and 2) protect the climate by reducing Bay Area GHG emissions 40% below 1990 levels by 2030 and 80% below 1990 levels by 2050 (BAAQMD 2017a). Table 3.3-1 presents the BAAQMD Thresholds of Significance for construction-related air quality impacts (BAAQMD 2023).

Table 3.3-1. BAAQMD Air Quality Thresholds of Significance for Construction-Related Criteria Air Pollutants and Precursors (Project Level, Regional).

Pollutant/Precursor	Daily Average Emissions (lb/day)
ROG	54
NO_X	54

Pollutant/Precursor	Daily Average Emissions (lb/day)
PM_{10}	82 (exhaust)
$PM_{2.5}$	54 (exhaust)
PM_{10}/$PM_{2.5}$ (fugitive dust)	Best management practices*
Local CO	None

*PM10/PM 2.5 (fugitive dust) is also recognized to impact local communities. The Air District strongly recommends implementing all feasible fugitive dust management practices especially when construction projects are located near sensitive communities, including schools, residential areas, or other sensitive land uses. These measures are detailed in Chapter 5, Section 5.2.2 – Construction-Related Criteria Air Pollutant Emissions of BAAQMD 2023.

Notes: ROG = reactive organic gases; NO_X = oxides of nitrogen; PM_{10} = respirable (able to be breathed in) particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; $PM_{2.5}$ = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; CO = carbon monoxide.

Source: BAAQMD 2023

Construction of the Proposed Project would generate short-term regional air pollutant and precursor emissions from equipment exhaust and worker trips to the project sites. Emissions would be temporary in nature and vary considerably from day to day and by the type of equipment and weather. Appendix B provides the daily emission estimates (maximum pounds/day) for criteria air pollutants and precursors estimated using the Road Construction Emissions Model, Version 9.0.0. The daily emission estimates would not exceed the BAAQMD Thresholds of Significance for construction-related air quality impacts (Table 3.3-1). The Proposed Project would not include any operations or maintenance activities that would generate new or increased air emissions and would not conflict with the primary goals of the 2017 CAP.

A project that implements all of the BAAQMD's basic best management practices (BMPs) for construction-related fugitive dust emissions recommended by BAAQMD in its *2022 CEQA Air Quality Guidelines* (BAAQMD 2023) will not have a significant fugitive dust impact. Sonoma Water incorporates the basic and enhanced construction-related BMPs for construction-related fugitive dust emissions into its standard construction contract specifications (Appendix C). These BMPs protect air quality by avoiding or further minimizing potential adverse impacts to air quality thresholds during construction and maintenance activities. Proposed Project construction would not include extensive demolition, simultaneous occurrence of more than two construction phases, or more than one land use. The Proposed Project would not involve extensive site preparation or material transport. It is anticipated that the Proposed Project would import less than 1,400 cy and export less than 1,500 cy of concrete, cobbles, boulders, and soil. The Proposed Project would include BMPs for addressing $PM_{2.5}$ and PM_{10} and fugitive dust control and would not conflict with the primary goals of the 2017 CAP.

2. “Does the project include applicable control measures from the clean air plan?”

The 2017 CAP contains 85 individual control measures in nine economic sectors: stationary (industrial) sources, transportation, energy, buildings, agriculture, natural and working lands, waste management, water, and super-GHG pollutants (BAAQMD 2017b). The control measures are intended to reduce emissions of ozone precursors, PM, and toxic air contaminants. Many of these control measures require action on the part of BAAQMD, the California Air Resources Board, or local communities and are not directly related to the actions undertaken for a fish passage and improvement project, which would have limited operational activities. The Proposed Project would not prevent the BAAQMD from implementing the control measures in the 2017 CAP, and none apply directly to the Proposed Project.

3. “Does the project disrupt or hinder implementation of any control measures from the clean air plan?”

As described above, the Proposed Project would not prevent the BAAQMD from implementing the 2017 CAP control measures, and none apply directly to the Proposed Project. The Proposed Project would not disrupt or hinder implementation of any control measures from the 2017 CAP.

In summary, the Proposed Project would not conflict with or obstruct implementation of the 2017 CAP. As a result, the impact is less than significant.

b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a non-attainment under an applicable federal or state ambient air quality standard? – *Less than Significant.*

According to California and national standards, the SFBAAB is currently designated as a non-attainment area for suspended PM (PM_{10} and $PM_{2.5}$) and ozone. Under national standards, the SFBAAB is currently designated as non-attainment for 8-hour ozone and non-attainment for $PM_{2.5}$. This air basin is in attainment (or unclassified) for all other air pollutants (BAAQMD 2022). Therefore, the non-attainment pollutants of concern for this impact are ozone, PM_{10}, and $PM_{2.5}$. Section 3.3a examined the Proposed Project according to BAAQMD’s screening criteria for construction-related impacts. Appendix D provides the daily emission estimates (maximum pounds/day) for criteria air pollutants and precursors estimated using the Road Construction Emissions Model, Version 9.0.0. The daily emission estimates would not exceed the BAAQMD Thresholds of Significance for construction-related air quality impacts (Table 3.3-1). The Proposed Project would not include any operations or maintenance activities that would generate new or increased air emissions. The examination revealed that the Proposed Project meets all of the screening criteria; therefore, construction of the Proposed Project would result in a less-than-significant impact from criteria air pollutant and precursor emissions.

Furthermore, Sonoma Water incorporates the basic and enhanced construction-related BMPs for construction-related fugitive dust emissions into its standard construction contract specifications (Appendix C). These measures protect air quality by avoiding or further minimizing potential adverse impacts to air quality thresholds during construction and maintenance activities.

Following construction, the Proposed Project would not include any stationary sources of air emissions. Vehicle trips and equipment use associated with future maintenance would be far less than needed for Proposed Project construction and be temporary and intermittent in nature. As such, the Proposed Project would not result in substantial long-term operational emissions of criteria air pollutants. Therefore, the Proposed Project's contribution to a cumulative non-attainment criteria pollutant impact with implementation of mitigation would be less than significant.

c. Expose sensitive receptors to substantial pollutant concentrations? – *Less than Significant.*

For the purposes of air quality and public health and safety, sensitive receptors are generally defined as people who would be particularly susceptible to disturbance from dust and air pollutant concentrations or other disruptions associated with construction and maintenance activities. Sensitive receptors generally include children, the elderly, asthmatics, and the infirmed at schools, day care centers, libraries, hospitals, residential care centers, parks, and churches, as well as others who are more susceptible to respiratory distress and other air quality-related health problems than the general public (California Air Resources Board 2022). Some sensitive receptors are considered to be more sensitive than others due to pre-existing health problems, proximity to emissions sources, or duration of exposure to air pollutants. Residential areas are considered sensitive to poor air quality because people usually stay home for extended periods of time, with associated greater exposure to ambient air quality. Recreational uses are also considered sensitive due to the greater exposure to ambient air quality conditions because vigorous exercise associated with recreation places a high demand on the human respiratory system. Residences, churches, parks, and schools located adjacent to the Proposed Project sites would be considered sensitive receptors.

Certain air pollutants have been classified as toxic air contaminants (TACs) because they are known to increase the risk of cancer and/or other serious health effects, ranging from eye irritation to neurological damage. The nearest residential receptor to the E Street Bridge Fishway Extension site is 300 feet to the north at 810 Second Street. The nearest residential receptor to the Melita Road Dam site is 125 feet to the northwest at 5850 Melita Road. Construction of the Proposed Project would generate diesel particulate matter (DPM) and gasoline fuel combustion emissions, which are considered to be TACs. The

majority of TAC emissions would be generated from the use of heavy-duty off-road equipment.

The Proposed Project would not include the siting of new sensitive receptors or the siting of new sources of air pollution near existing and future sensitive receptors. Construction of the Proposed Project would occur over a period of up to 7 months extending over 2 separate years. Given the phased nature of the Proposed Project, construction activities at both sites would not exceed a 4-month duration per site. Due to the temporary and variable nature of the construction and very limited maintenance activities required after construction, and with Sonoma Water's incorporation of the basic and enhanced construction-related BMPs for construction-related fugitive dust emissions into its standard construction contract specifications (Appendix C), the Proposed Project would not result in the exposure of sensitive receptors to substantial pollutant concentrations. Following construction, maintenance and operation of the Proposed Project would not include any stationary sources of air emissions. Vehicle trips and equipment use associated with project maintenance would be far less than needed for construction and would be temporary and intermittent in nature. Therefore, the impact of the Proposed Project on exposure of sensitive receptors to substantial pollutant concentrations would be less than significant.

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

The Proposed Project would not create other emissions, such as those leading to objectionable odors, affecting a substantial number of people. Equipment used during Proposed Project construction and maintenance activities may emit odors associated with combustion of diesel and gasoline fuels. However, these emissions would be temporary and intermittent in nature. The Proposed Project would not result in other emissions that would adversely affect people. The impact would be less than significant, and no mitigation is required.

3.4 Biological Resources

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
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 CDFW or USFWS?	☐	☒	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS?	☐	☒	☐	☐
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, and coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
f. Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan, or other approved local, regional, or state HCP?	☐	☐	☐	☒

Biological Resources Setting

Vegetation Communities. A survey of the Proposed Project sites was conducted on June 27, 2022, by Anchor QEA biologist Julia King and engineering specialist Marcus D'Avignon. Two sites on Santa Rosa Creek were investigated for this survey: the E Street Bridge Fishway Extension site and the Melita Road Dam site. Vegetation communities were designated using the Manual of California Vegetation, Second Edition (Sawyer et al. 2009). Vegetation communities observed at each site include arroyo willow (*Salix lasiolepis*), shrubland alliance, and arroyo willow thickets at the E Street Bridge Fishway Extension site and white alder (*Alnus rhombifolia*) forest alliance and white alder groves at the Melita Road Dam site. The vegetation communities observed at each site are described in the following sections.

E Street Bridge Fishway Extension Site. At the E Street Bridge Fishway Extension site, the channel substrate is primarily characterized by silt and sand below the OHWM. River rock smaller than 7 inches in diameter is common to abundant on the surface of the southern sandbar, channel edges, and in the low-flow channel. Slope armoring to the top of bank is present beneath the riparian vegetation and is obscured by the growth of the weedy vegetation.

The portions of Santa Rosa Creek within the E Street Bridge Fishway Extension site have steep, concrete-lined banks that limit the amount of vegetation that can establish on the banks. In addition, stream velocities in winter regularly scour the creek banks, which prevents most plants from taking hold along the creek banks. The site is regularly maintained by removing silt, trash, and debris from the culvert and associated infrastructure. At this site, Santa Rosa Creek supports arroyo willow-dominated riparian vegetation. Other tree species that occur in this riparian zone include Fremont's cottonwood (*Populus fremontii*) and box elder (*Acer negundo*). Willow trees and associated species grow from the break in the natural shelving formed at the OHWM. A transition to live oak (*Quercus agrifolia*) dominating the riparian canopy occurs toward the

top of bank. Wild grape (*Vitis californica*) is abundant through the riparian canopy, extending from the water line to the treetops.

The urban influence in the understory of the riparian zone has resulted in the growth of non-native invasive species, including English ivy (*Hedera helix*), periwinkle (*Vinca minor*), French broom (*Genista monspessulana*), Himalayan blackberry (*Rubus armeniacus*), privet (*Ligustrum* spp.), purple false brome (*Brachypodium distachyon*), red brome (*Bromus madritensis*), wild fennel (*Foeniculum vulgare*), and smilo grass (*Stipa miliacea*). These non-native invasive species extend down the bank beneath the live oak trees until reaching the OHWM where a vegetation transition occurs. A few native species persist in the understory such as mugwort (*Artemisia douglasiana*), California bee plant (*Scrophularia californica*), and large leather root (*Hoita macrostachya*).

Below the OHWM, adjacent to the low-flow lines and mid-channel sand bars, the vegetation consists of herbaceous annuals and perennial species such as umbrella sedge (*Cyperus eragrostis*), rabbit's foot grass (*Polypogon monspeliensis*), curly dock (*Rumex crispus*), water speedwell (*Veronica anagallis-aquatica*), watercress (*Nasturtium officinale*), and water smartweed (*Persicaria* spp.). A large patch of water plantain (*Alisma lanceolatum*) is growing from the base of the E Street Bridge along the low water line.

Figure 3.4-1 depicts the various plant communities and wildlife habitats at the E Street Bridge Fishway Extension site. The low-flow channel of Santa Rosa Creek at the E Street Bridge Fishway Extension site is shown as riverine, lower perennial, unconsolidated bottom, permanently flooded (R2UBH) by the National Wetlands Inventory (NWI), while the riparian vegetation has been identified as palustrine, forested, broad-leaved deciduous, temporarily flooded habitat (PFO1A). Soils consisted of a combination of river rock, sands, and silt.

Figure 3.4-1. Plant Communities and Wildlife Habitats at E Street Bridge Fishway Extension Site.

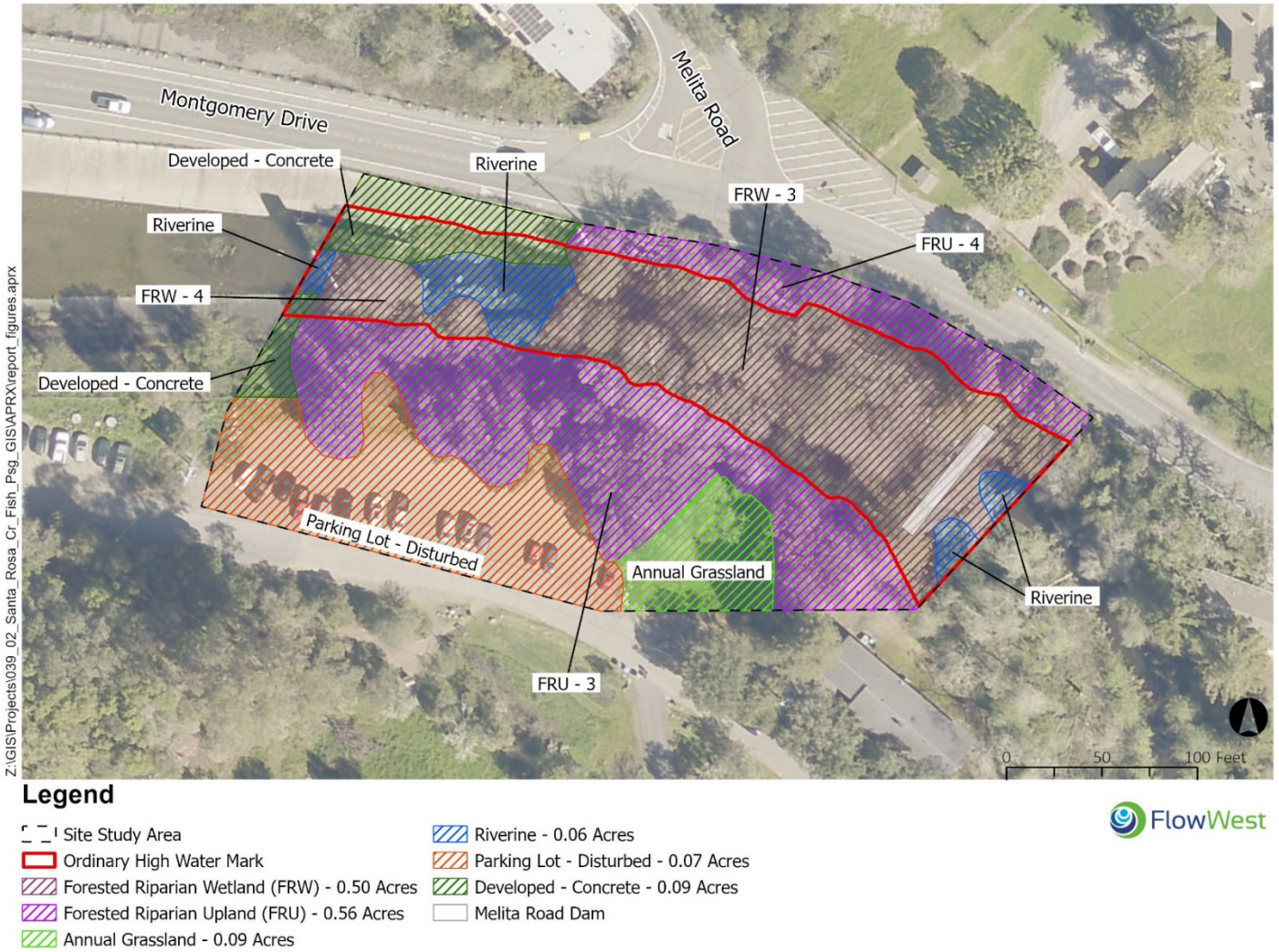
Melita Road Dam Site. At the Melita Road Dam site, the channel substrate is characterized by 12-inch and smaller rock with some finer sands and silts interspersed among the rocks. To the south of the channel in the vicinity of the Melita Road Dam, a sand bar has accumulated with variously sized river rocks on the surface. The bank to the north is armored with large riprap boulders (3-foot diameter and larger) between Melita Road and the north edge of the channel. The southern bank appears to be composed of native earthen substrates but is covered with dense vegetation such that visual surveillance was not possible.

White alder is the dominant riparian tree species in the upstream portion of the Melita Road Dam site study area where the channel resumes a natural configuration. Additionally, California sycamore (*Platanus acemose*), sandbar willow (*Salix exigua*), box elder, California bay (*Umbellularia californica*), and arroyo willow occur in much lower numbers. A few redwood trees (*Sequoia sempervirens*) were observed above the OHWM in this reach. California grape grows throughout the tree canopy in the riparian vegetation. The creek flows through an earthen, cobbled, and/or rock bed in the vicinity of the dam. Armoring exists on the north bank from which riparian trees have grown and cover the slope, forming a closed canopy. A densely shaded low-flow channel with sparse herbaceous growth was noted within Santa Rosa Creek.

On the outer edges of the low-flow channel, intermittent patches of shade tolerant species including sedges, Himalayan blackberry, scouring rushes (*Equisetum* spp.), pennyroyal (*Mentha pulegium*), and stream orchid (*Epipactis gigantea*) were recorded. The understory adjacent to the channel was observed to support the growth of shrubby species such as spice bush (*Calycanthus occidentalis*), buckeye (*Aesculus californica*), and poison oak (*Toxicodendron diversilobum*). California pipeline (*Aristolochia californica*) and mugwort were found in the understory as well.

Figure 3.4-2 depicts the various plant communities and wildlife habitats at the Melita Road Dam site. This site is mapped by the NWI as riverine, intermittent, streambed, seasonally flooded. Soils consisted of a combination of river rock, sands, and silt.

Figure 3.4-2. Plant Communities and Wildlife Habitats at the Melita Road Dam Site.



Source: FlowWest 2023
Note: The riverine polygon is small, as the non-wetland water areas are fully shaded by the riparian canopy and therefore counted as riparian areas.

Special-Status Plant, Fish, and Wildlife Species. A review of special-status species with potential to occur in the Proposed Project area was conducted by checking existing databases. A list of federally endangered and threatened species that may occur in the Proposed Project area was obtained from the USFWS website (USFWS 2022), and the California Natural Diversity Database (CNDDB) and the California Native Plant Society (CNPS) electronic inventory were queried. The CNDDB, CNPS, and the USFWS search results for the Proposed Project are listed in Appendix D. The tables also include information on each species' habitat requirements and the likelihood of them occurring in the Proposed Project area. Relevant literature, knowledge of regional biota, and observations made during the field survey were used to determine the potential occurrence of special-status plant and animal species in the Proposed Project area (i.e., No Potential, Low, Moderate, and High).

Based on a nine-quadrant search of the CNDDB (CDFW 2022), there are 86 special-status plant and animal species identified as potentially occurring in the Proposed Project area and vicinity (Appendix D). Of these, one plant species and seven animal species were determined to have a moderate to high potential to occur in the Proposed Project area based on existing habitat conditions. Species with a high to moderate potential to occur in the Proposed Project area and vicinity include Sonoma alopecurus (*Alopecurus aequalis* var. *sonomensis*), Central California Coast Distinct Population Segment (DPS) of steelhead (*Oncorhynchus mykiss*), California giant salamander (*Dicamptodon ensatus*), foothill yellow-legged frog (*Rana boylii*), red-bellied newt (*Taricha rivularis*), western pond turtle (*Actinemys marmorata*), Cooper's hawk (*Accipiter cooperii*), and white-tailed kite (*Elanus leucurus*). These species are discussed in more detail in the following sections.

Plants. Habitat for rare plants does not occur at the E Street Bridge Fishway Extension site; the dominance of invasive non-native herbaceous species such as English ivy and periwinkle over the ground surfaces removes the potential for occurrence of rare plants at this location.

The Melita Road Dam area contains potential habitat in which Sonoma alopecurus could grow along the edges of the creek channel and on the sandbars. Sonoma alopecurus is a federally endangered and CNPS List 1B.1 wetland plant species. This species is typically found in freshwater marshes and swamps, as well as stream banks with riparian scrub, wet areas, marshes, and riparian banks, with other wetland species. Sonoma alopecurus is a perennial grass that blooms between May and July. Records of Sonoma alopecurus are reported by the Calflora database as located in Trione-Annadel State Park in 2014 and near Kenwood east from the study area in 2019. The closest record is approximately 4 miles south of the Melita Road Dam site at Ledson Marsh (CDFW 2022). However, there are no reports of this species in the Santa Rosa Creek watershed. The

shoreline of Santa Rosa Creek upstream and downstream of the Melita Road Dam site provides only marginally suitable habitat for this species due to prior disturbance of the creek channel, especially in the downstream end of the creek channel.

Fish. Special-status fish species that have potential to occur in the Proposed Project area include the federally threatened Central California Coast DPS of steelhead.

The Central California Coast DPS of steelhead is federally listed as threatened (Appendix D). Adult steelhead migrate from the ocean and spawn in cool, clear, freshwater streams with moderate gradient. Juveniles rear in creeks and estuaries before migrating to the ocean. There are several documented occurrences of steelhead from Santa Rosa Creek (CDFW 2022). Adult steelhead are known to migrate during winter and spring through the Proposed Project area and spawn in upper Santa Rosa Creek. Spawning habitat for steelhead is marginal in the Proposed Project area. Cobble and gravel substrates are largely underlaid by concrete at the E Street Bridge Fishway Extension site and are frequently disturbed from winter flood scour at both sites. At the Melita Road Dam site, the dam prevents subsurface flows of water that are essential to provide aeration for eggs in a redd. This regular disturbance and restricted stream flow degrades the habitat for spawning adult steelhead. Juvenile steelhead have been documented in the stream during routine maintenance. During the summer low-flow season, juvenile steelhead may forage and rear in flatwater areas within the Proposed Project area. The Proposed Project area provides habitat suitable for adult migration, potentially suitable for juvenile rearing, and marginally suitable for spawning for steelhead.

Wildlife. The remaining special-status wildlife species with a moderate to high potential to occur include those that require aquatic habitat for all or a portion of their life cycle and consist of three amphibians and one reptile. The California giant salamander, foothill yellow-legged frog, and red-bellied newt are amphibians that breed in streams and use adjacent wetland habitats for forage and refuge (Appendix D). These amphibians are all California Species of Special Concern (SSC) and have been documented in Santa Rosa Creek near or within 3 miles upstream of the Melita Road Dam site (CDFW 2022). There is suitable habitat at the Melita Road Dam site for the three amphibians and marginal habitat at the E Street Bridge Fishway Extension site. The western pond turtle is a SSC reptile that inhabits several stream and pond habitat types. Western pond turtles have been documented within the portions of Santa Rosa Creek that overlap with the Proposed Project area. The two Proposed Project sites provide suitable habitat for the turtle.

There are two species of birds with moderate potential to occur in the Proposed Project area. The Cooper’s hawk is a raptor that is on the CDFW watch list and typically nests in riparian trees and forages in dense woodlands. There are no known occurrences of this hawk nesting in the vicinity of the Proposed Project area; however, the riparian forest on site provides marginal nesting and foraging habitat due to its lack of tree density. The

State Fully Protected white-tailed kite also has a moderate potential to occur in the Proposed Project area. The kite may be an infrequent visitor to the Proposed Project area as its preferred nesting and foraging habitat is not present on site.

General Wildlife. Aquatic habitat along Santa Rosa Creek provides breeding and foraging habitat and wildlife dispersal corridors for several fish and wildlife species without special federal or state status. Fish species primarily use the Proposed Project area for rearing and migration to other areas of Santa Rosa Creek. Species that likely use the Proposed Project area include native species such as three-spine stickleback (*Gasterosteus aculeatus*), prickly sculpin (*Cottus asper*), and non-native species such as bluegill (*Lepomis macrochirus*), green sunfish (*Lepomis cyanellus*), and small-mouth bass (*Micropterus dolomieu*). Common stream breeding amphibians include Pacific treefrog (*Pseudacris regilla*), western toad (*Anaxyrus boreas*), and newts (*Taricha* spp.). Common garter snake (*Thamnophis sirtalis*) may forage in the aquatic habitats of the Proposed Project area (Sonoma Water 2020b).

Riparian forest and stream channels in the Santa Rosa Creek watershed provide den/nest habitat, food, and cover and may serve as migration corridors for a variety of wildlife species. Common birds found in riparian habitat include red-tailed hawk (*Buteo jamaicensis*), acorn woodpecker (*Melanerpes formicivorus*), wrentit (*Chamaea fasciata*), California towhee (*Pipilo maculatus*), western scrub jay (*Aphelocoma californica*), song sparrow (*Melospiza melodia*), and California quail (*Callipepla californica*). Common amphibians and reptiles that may use riparian habitats include California slender salamander (*Batrachoseps attenuatus*), western fence lizard (*Sceloporus occidentalis*), northern alligator lizard (*Elgaria coerulea*), and gopher snake (*Pituophis catenifer*). Common mammals found in riparian habitats include deer mouse (*Peromyscus maniculatus*), western gray squirrel (*Sciurus griseus*), dusky footed woodrat (*Neotoma fuscipes*), raccoon (*Procyon lotor*), and black-tailed deer (*Odocoileus hemionus columbianus*). Larger predatory mammals, such as bobcat (*Lynx rufus*) and gray fox (*Urocyon cinereoargenteus*), may hunt in riparian areas. In addition, several bat species may forage for insects over riparian stream habitat and may roost in tree cavities (Sonoma Water 2020b).

Discussion of Potential Impacts

In accordance with CEQA, the Proposed Project could result in potentially significant impacts to Biological Resources if it would:

a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS? – *Less than Significant with Mitigation Incorporated.*

Plants

Sonoma alopecurus is unlikely to be present at the Proposed Project sites. There are no known occurrences on site, in the Proposed Project vicinity, or within the Santa Rosa Creek watershed. Habitat conditions are degraded due to past channelization and instream concrete structures. No Sonoma alopecurus plants were found during botanical surveys conducted by Sonoma Water for this or other adjacent projects. As such, no impacts to Sonoma alopecurus are anticipated.

Fish, Amphibians, and Reptiles

Construction of the Proposed Project has the potential to adversely impact aquatic habitats for special-status species, including Central California Coast DPS of steelhead, California giant salamander, foothill yellow-legged frog, red-bellied newt, and western pond turtle. Temporary disturbance of aquatic habitat would occur during dewatering activities along the perennial Santa Rosa Creek. During construction, there would be no access to habitat within the Proposed Project footprint. Habitat within the Proposed Project footprint would also be altered by replaced infrastructure, new bollards, an enhanced bank, and new step pools.

At the E Street Bridge Fishway Extension site, the substrate within the area of the new fishway extension and new bollard areas would be impacted by the Proposed Project. However, the Proposed Project benefits of improving passage through the fishway extension, improving right bank conditions to minimize erosion, and revegetating along the improved right bank would offset any temporary impacts during construction to the substrate.

At the Melita Road Dam, new step pools would be constructed by altering the grade and placing large cobbles/boulders that would impact the substrate within the Proposed Project footprint. However, the impact would be short-term, the disturbed substrate is expected to recover within a year, and the large cobbles and boulders are similar to the existing substrate so there would be no change in substrate type. Although the existing substrate would be disturbed during construction of the step pools, it is expected that the Proposed Project benefits of improving fish passage above the dam would offset any short-term impacts to the substrate.

The Proposed Project could temporarily impact Central California Coast DPS of steelhead, should individuals be present during construction. To reduce the potential for impacts on steelhead, Sonoma Water would implement Mitigation Measure BIO-1 (Construction Work Windows), which limits construction of the Proposed Project to between June 15 and October 15, which is outside the adult winter migration period. Temporary impacts to steelhead habitat would occur, and possible impacts to juvenile rearing fish could occur from the dewatering of Santa Rosa Creek during Proposed

Project construction. However, these potential impacts to steelhead would be offset by improving fish passage conditions within the creek, which will improve steelhead access to preferred spawning habitat in Santa Rosa Creek headwaters.

Temporary impacts to juvenile steelhead, California giant salamander, foothill yellow-legged frog, red-bellied newt, and western pond turtle could occur from the dewatering of Santa Rosa Creek during Proposed Project construction. To avoid and minimize impacts to special-status aquatic species, Sonoma Water would implement Mitigation Measure BIO-2 (Special Status Aquatic Species Protection and Relocation), which involves relocating the special-status species to an area outside of the Proposed Project work area prior to construction activities. In addition, other non-listed aquatic species observed prior to or during construction would also be relocated out of the work area.

To further minimize potential impacts to steelhead and other special-status species, worker awareness training would be implemented as described in Mitigation Measure BIO-3 (Worker Environmental Awareness Training) to ensure that all personnel conducting construction and maintenance activities are aware of the special-status species and their habitats with potential to occur within the Proposed Project area and the measures to be implemented to avoid or minimize impacts to those species.

In addition, the Proposed Project may impact listed steelhead and require compliance with the federal Endangered Species Act (ESA). Because the Proposed Project would impact wetlands subject to the authority of the USACE pursuant to Section 404 of the Clean Water Act, the USACE will consult with the NMFS in compliance with Section 7 of the ESA. Through this consultation process, NMFS will define mitigation to compensate for unavoidable impacts to steelhead and issue its findings in a Biological Opinion for the Proposed Project. Section 7(a)(2) of the ESA requires that federal agencies ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of listed species. “Jeopardize the continued existence of” means to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species. (50 *Code of Federal Regulations* [CFR] 402.02). Section 7(a)(2) also requires that federal agencies ensure that any action they authorize, fund, or carry out is not likely to destroy or to adversely modify designated critical habitat. Thus, the federal permit process will further mitigate the impacts to steelhead.

Mitigation Measure BIO-1: Construction Work Windows

Proposed Project construction shall occur between June 15 and October 15 with a possible extension to October 31 if weather conditions permit. This duration is consistent with the historically federal and state agency approved in-water work window for Santa Rosa Creek.

Mitigation Measure BIO-2: Special Status Aquatic Species Protection and Relocation

Sonoma Water shall implement the following steps to minimize the potential for direct impacts to aquatic species, including steelhead:

1. *Obtain and comply with the requirements of the Section 404 permit issued by the U.S. Army Corps of Engineers and the Biological Opinion for steelhead issued by National Marine Fisheries Service.*
2. *Prior to construction, aquatic species shall be excluded from work areas by blocking the creek with fine-meshed net or screens. The bottom of the screens shall be completely secured to the channel bed. Screens shall be checked periodically and cleaned of debris to permit free flow of water.*
3. *Sonoma Water shall prepare a Special-Status Species Relocation Plan prior to relocating aquatic species out of construction or maintenance areas. The relocation plan at a minimum shall include the following:*
    a. *Qualifications of individuals conducting relocation activities, including documented experience with successful relocations for the relevant species and all required authorizations, a qualified biologist (including those specializing in botany, wildlife, and fisheries) is an individual who shall have a minimum of 5 years of academic training and professional experience in biological sciences and related resource management activities with a minimum of 2 years conducting surveys for each species that may be present within the Proposed Project site;*
    b. *Life stages (juveniles and adults) of the species that would be relocated if they are present, and life stages for which relocation may not be feasible (e.g., eggs) and associated avoidance measures;*
    c. *Survey methods for identifying special-status species in the project area, which are anticipated to include dipnetting, seining, and electrofishing;*
    d. *Capture and relocation methods, including dipnetting, seining, and electrofishing, including following the Restraint and Handling of Live Amphibians Standard Operation Procedures, prepared by U. S. Geological Survey, dated February 16, 2001;*
    e. *Identification and description of the relocation area;*
    f. *The following criteria shall be considered when selecting release site(s): proximity to the work area; similar water temperature as capture location; ample habitat availability prior to release of captured aquatic species; and low likelihood of animals reentering work site;*
    g. *Monitoring of water quality and health of relocated animals;*
    h. *Method for monitoring and ensuring relocated animals do not return to the project area, such as location of block nets or cofferdams, which will be*

determined in the field based on wetted conditions on site at the time of project construction; and

i. *The Special-Status Species Relocation Plan shall be submitted to the California Department of Fish and Wildlife for approval prior to commencement of relocating aquatic species out of construction or maintenance areas.*

Mitigation Measure BIO-3: Worker Environmental Awareness Training

Sonoma Water shall require contractors, through project contract specifications, and maintenance staff to participate in the following:

1. *Prior to beginning construction activities, all personnel involved in the activities shall participate in an educational training session conducted by a qualified biologist. A qualified biologist (including those specializing in botany, wildlife, and fisheries) is an individual who shall have a minimum of 5 years of academic training and professional experience in biological sciences and related resource management activities with a minimum of 2 years conducting surveys for each species that may be present within the Proposed Project site. Resumes will be submitted to California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, and/or National Marine Fisheries Service, as appropriate, for approval prior to commencement of biological surveys. Sonoma Water may also utilize appropriately experienced and/or trained environmental staff. This training shall include instruction on how to identify bird nests, recognize special status species and sensitive habitats, regulatory protections, and the appropriate protocol if any special species or nests are found during construction.*
2. *Personnel must participate in a training session before conducting construction activities.*

Implementation of Mitigation Measures BIO-1 (Construction Work Windows), BIO-2 (Special Status Aquatic Species Relocation), and BIO-3 (Worker Environmental Awareness Training) would reduce impacts to steelhead and other special-status aquatic species to a less-than-significant level.

Birds and Raptors

Breeding birds and raptors and their nests and eggs are protected under Sections 3503 and 3503.5 of California Department of Fish and Game Code. Additionally, Section 3513 of the California Department of Fish and Game Code, as well as the federal Migratory Bird Treaty Act (16 United States Code, Sec. 703 Supp. I, 1989), prohibit the “killing, possession, or trading of migratory birds.” Lastly, Section 3800 of the Code prohibits the take of non-game birds, defined as birds occurring naturally in California that are neither

game birds nor fully protected species. Disturbance of breeding birds and raptors during construction and maintenance activities would be a potentially significant impact.

Raptors, including Cooper's hawk and white-tailed kite, are likely to forage in the Proposed Project vicinity. There is also a potential for Cooper's hawk and other smaller raptors to nest in the mature trees along Santa Rosa Creek in the Proposed Project vicinity. The Proposed Project would remove up to five mature trees at the E Street Bridge Fishway Extension site and seven mature trees at the Melita Road Dam site along with understory shrubs and herbaceous vegetation along the creek banks. Disturbance to wetlands and aquatic habitat along the Santa Rosa Creek riparian zone during construction and maintenance activities would also occur. These permanent and temporary impacts to nesting and foraging habitat could cause direct impacts (removal of habitat and nests) and indirect impacts (noise, human and equipment presence, etc.) to nesting birds. Because there is additional habitat surrounding the work areas where birds and other wildlife could disperse to and because construction and maintenance impacts would be temporary and for a limited duration, potential impacts to nesting bird species would be minimal.

Disturbance to breeding birds would be avoided by conducting construction and maintenance outside of the breeding season or minimized by conducting pre-construction nest surveys as described in Mitigation Measure BIO-4 (Nesting Bird Protection Measures). If active nests are found in the Proposed Project vicinity, a buffer would be established around the nest and maintained until the young have fledged. Alternatively, work would be postponed in the area until a nest is no longer active. Mitigation Measure BIO-3 (Worker Environmental Awareness Training) would further minimize potential impacts to nesting birds. Impacts to nesting and foraging habitat would be offset by implementing Mitigation Measure BIO-5 (Revegetation of Riparian Areas), which involves replanting a total of 63 native trees in the Proposed Project area.

Mitigation Measure BIO-4: Nesting Bird Protection Measures

If construction or maintenance activities must be scheduled during the bird nesting season (February 15 through August 15 for most birds), a qualified biologist familiar with the species and habitats in the area, shall conduct pre-construction surveys for raptors within suitable habitat within 500 feet of construction and maintenance activities and passerine nesting birds within 50 feet of construction and maintenance activities. The surveys shall be conducted no more than 1 week before initiation of construction or maintenance activities. If no active nests are detected during surveys, activities may proceed. Vegetation removal activities shall be conducted under the guidance of a qualified biologist or designated biological monitor. A qualified biologist (including those specializing in botany, wildlife, and fisheries) is determined by a combination of academic training and professional experience in biological sciences and related resource

management activities. Sonoma Water may also utilize appropriately experienced and/or trained environmental staff. Resumes will be submitted to California Department of Fish and Wildlife (CDFW), U.S. Fish and Wildlife Service, and/or National Marine Fisheries Service, as appropriate, for approval prior to commencement of biological surveys.

If active nests are identified in the project area, non-disturbance buffers shall be established at a distance of 500 feet for raptors, and 50 feet for all other bird species. Buffer distance may be adjusted with CDFW approval if the adjustment will not disturb birds. If active nests are found within 500 feet of a work area, a qualified biologist shall be on site as necessary to monitor the nests for signs of nest disturbance. If it is determined that construction or maintenance activity is resulting in nest disturbance, work shall cease immediately and CDFW shall be contacted. Buffers shall remain in place until a qualified biologist determines that the young have successfully fledged, or nests have been otherwise abandoned.

Mitigation Measure BIO-5: Revegetation of Riparian Areas

Sonoma Water shall prepare a Revegetation Plan prior to commencement of construction activities. The Revegetation Plan at a minimum shall include the following:

1. *Sonoma Water shall conduct site revegetation that includes seeding with a mix of native grass, sedge and/or forb species after activities are complete during the fall and prior to the first significant rainfall (significant rainfall is defined as a forecast of 50% or greater chance of precipitation).*
    a. *Seed mix shall be applied to disturbed work areas with exposed soil above the creek's shoreline.*
    b. *Biodegradable erosion control fabric, hydromulch, or other mechanism shall be applied as appropriate to provide protection to seeds, hold them in place, and help retain moisture. Work areas that are concrete-lined or have a substrate of gravel and cobble deposited by creek flows shall not be seeded. If erosion control fabric is used, fabric shall consist of natural fibers that biodegrade over time. No plastic or other non-porous material shall be used as part of a permanent erosion control approach. Erosion control fabric shall be anchored in place. Anchors can include U-shaped wire staples, metal geotextiles stake pins or wooden stakes. The manufacturer's installation recommendations shall be followed.*
2. *Sonoma Water shall inspect seeded areas after the first winter rain events. If evidence of erosion is detected, corrective measures shall be implemented including additional seed application, installation of native nursery stock plantings, and/or installation of erosion control fabric.*
3. *Sonoma Water shall replant the 12 trees to be removed at a 3:1 ratio within the Proposed Project area, including five trees at E Street Fishway Extension and*

seven trees at Melita Dam site. The following trees would be removed and replaced with the same species on site, at a 3:1 ratio, at the E Street Bridge Fishway Extension site:

- *One 12-inch DBH box elder tree*
- *Two 24-inch DBH willow trees*
- *One multi-trunk oak tree (18- and 30-inch DBH trunks)*

The following trees would be removed and replaced with the same species on site, at a 3:1 ratio, at the Melita Road Dam site:

- *One 12-inch DBH alder tree*
- *One 13-inch DBH alder tree*
- *Three 14-inch DBH alder trees*
- *One 16-inch DBH alder tree*
- *One 20-inch DBH alder tree*

For willow species, green sticks shall be collected, prepared, and installed between December and February when willows are dormant and can be easily propagated in saturated soil conditions adjacent to the channel. For oak species, 1-gallon containers or smaller shall be installed in a suitable location above the ordinary high water mark. Trees shall be installed during the late fall or winter season after construction is complete.

4. *Natural recruitment of native trees within planted areas will be incorporated into revegetation monitoring. The monitoring of planted trees shall be conducted for 5 years to determine survival rates, remedial actions, or other maintenance needs to attain 50 percent survival of the mitigation trees. Monitoring shall involve collecting quantitative data on vegetative cover, percent cover of native plants, and photograph documentation of revegetation areas.*
5. *Sonoma Water shall prepare a monitoring report describing the success of revegetation and any corrective measures implemented annually for 5 years.*
6. *The Revegetation Plan shall be submitted to the California Department of Fish and Wildlife for approval prior to commencement of construction activities.*

Implementation of Mitigation Measures BIO-3 (Worker Environmental Awareness Training), and BIO-4 (Nesting Bird Protection Measures), and BIO-5 (Revegetation of Riparian Areas) would reduce the impact to nesting birds and their habitat to less than significant.

Conclusions

Overall, the mitigation measures incorporated into the Proposed Project would avoid and minimize potential impacts to fish and wildlife special-status species and their habitats, including Mitigation Measures BIO-1 (Construction Work Windows), BIO-2 (Special Status Aquatic Species Relocation), BIO-3 (Worker Environmental Awareness Training),

BIO-4 (Nesting Bird Protection Measures), and BIO-5 (Revegetation of Riparian Areas). Therefore, the Proposed Project would have a less-than-significant effect on sensitive species and their habitats 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, or regulations, or by the CDFW or USFWS? – *Less than Significant with Mitigation Incorporated.*

The Proposed Project occurs within areas covered by the City of Santa Rosa General Plan 2035 (Santa Rosa 2020a). This plan requires the protection of several natural communities. Relevant goals and objectives of these plans include the following:

- OSC-D: Conserve wetlands, vernal pools, wildlife ecosystems, rare plant habitats, and waterways.
- OSC-H: Conserve significant vegetation and trees and plant new trees.

The Proposed Project area includes riparian, wetland, and aquatic habitats as shown in Figures 3.4-1 and 3.4-2; this checklist question is specific to riparian impacts, and subsequent checklist questions address impacts on wetlands and aquatic habitats. The Proposed Project would impact riparian areas, as detailed in Table 3.4-1. Permanent impacts resulting from Proposed Project features are represented in the grey shaded polygons overlaying the existing habitat types in Figures 3.4-3 and 3.4-4.

Figure 3.4-3. Proposed Project Features Permanent Impacts at E Street Bridge Fishway Extension Site.

Source: FlowWest 2023

Figure 3.4-4. Proposed Project Features Permanent Impacts at Melita Road Dam Site.

Source: FlowWest 2023
Note: Forest riparian uplands north of the parking lot would not be impacted; work would occur below the canopy.

Table 3.4-1. Proposed Project Habitat Impacts.

Proposed Project Site	Habitat Type	Overlap on Existing Features	Overlap on Proposed Project Features	Proposed Project Permanent Habitat Impact Area (Net)[1]	Net Impact Cause
E Street Bridge Fishway Extension Site	Forested riparian upland	0.034 ac	0.133 ac	0.099 ac	Right bank enhancement and access road
	Wetlands	0.003 ac	0.061 ac	0.058 ac	Trash rack and fishway extension replacement and improvements, large rock placement on right bank, access road, and channel grading
	Non-wetland waters of the United States and state	0.010 ac	0.055 ac	0.045 ac	Trash rack and fishway extension replacement and improvements, large rock placement on right bank, access road, and channel grading
Melita Road Dam Site	Forested riparian upland	0 ac	0.003 ac	0.003 ac	Temporary access road
	Wetlands	0.013 ac	0.184 ac[1]	0.171 ac[2]	Rocks for rock weirs, engineered stream bed material placement in step pools, and temporary access road

Notes:
1. Construction of the temporary access road at the Melita Road Dam site is considered a permanent impact due to vegetation removal.
2. This includes impacts to non-wetland waters of the United States and state within mapped wetland (forested riparian) areas; the non-wetland water areas are fully shaded by the riparian canopy.
ac: acre

There is approximately 0.94 acre of forested riparian upland area within the Proposed Project area at both sites, as identified through site visits (Figures 3.4-3 and 3.4-4). As shown in Table 3.4-1, implementation of the Proposed Project would result in net impacts of 0.102 acre of forested riparian upland area along the banks of Santa Rosa Creek at the E Street Bridge Fishway Extension (0.099 acre) and Melita Road Dam sites (0.003 acre).

The Proposed Project includes removal of riparian trees at the E Street Bridge Fishway Extension site where the construction of an access road from the top of the left bank to the water line would facilitate future channel maintenance at the fishway extension. Five larger trees would be removed for an access road and bank repair (Figure 2.4-2), including:

- One 12-inch DBH box elder tree
- Two 24-inch DBH willow trees
- One multi-trunk oak tree with 18- and 30-inch DBH trunks (while this is one tree, it is counted as two for replanting/mitigation purposes since it has two large trunks)

The location of trees to be removed as well as tree types are shown in Figure 2.4-2 in Section 2.4.

At the Melita Road Dam site, a temporary access road is proposed to extend from Channel Drive into the work area within Santa Rosa Creek. The footprint for this access road would be minimized to the smallest size possible to provide access to the creek channel during construction activities. The access road is approximately 180 linear feet long by 10 feet wide. Riparian saplings, shrubs, and herbaceous vegetation over an area of approximately 1,750 square feet would be removed to construct the access road. No trees would be removed during construction of the temporary access road. Additionally, the removal of sediment accumulated downstream of the dam on the south side of the channel may require removal of riparian vegetation. A total of seven alder trees would be removed along the tops of the banks, including:

- One 12-inch DBH tree
- One 13-inch DBH tree
- Three 14-inch DBH trees
- One 16-inch DBH tree
- One 20-inch DBH tree

The location of trees to be removed as well as tree types are shown in Figure 2.4-10 in Section 2.4.

With implementation of Mitigation Measures BIO-1 (Construction Work Windows), BIO-2 (Special Status Aquatic Species Protection and Relocation), BIO-3 (Worker Environmental Awareness Training), BIO-4 (Nesting Bird Protection Measures), and BIO-5 (Revegetation of Riparian Areas), the Proposed Project would be consistent with the City of Santa Rosa General Plan 2035 goals, objectives, and policies outlined above because it would: 1) protect sensitive biological resources by avoiding or minimizing potential adverse impacts during construction and maintenance activities; and 2) improve fish passage and sedimentation issues post construction. Sonoma Water would restrict vegetation disturbance to the minimum areas necessary and revegetate disturbed areas with native plant species as described in Mitigation Measure BIO-5 (Revegetation of Riparian Areas).

Implementation of Mitigation Measures BIO-1 (Construction Work Windows), BIO-2 (Special Status Aquatic Species Protection and Relocation), BIO-3 (Worker Environmental Awareness Training), BIO-4 (Nesting Bird Protection Measures), and BIO-5 (Revegetation of Riparian Areas) would minimize disturbance to habitats during Proposed Project construction and maintenance activities to a less-than-significant level with mitigation incorporated.

c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, and coastal, etc.) through direct removal, filling, hydrological interruption, or other means? – *Less than Significant with Mitigation Incorporated.*

There are state and federally protected wetlands and other protected water features in the Proposed Project area as shown in Figures 3.4-1 and 3.4-2. A total of approximately 0.584 acre of potentially jurisdictional wetlands and 0.12 acre of non-wetland waters of the United States and state are present within the Proposed Project area, as identified through site visits.

The Proposed Project would result in permanent impacts to small portions of jurisdictional wetlands and waters as presented in Table 3.4-1. At the E Street Bridge Fishway Extension site, a net area of approximately 0.058 acre of wetlands and approximately 0.045 acre of non-wetland waters of the United States and state would be permanently impacted by the Proposed Project.

At the Melita Road Dam site, construction of the step pools and the access road would impact a net area of approximately 0.171 acre of wetlands (which includes waters of the United States and state areas below the canopy of the forested riparian wetland area) either permanently (step pools) or for a period over a year (access road). At the Melita Road Dam site, impacts would include grading the left bank sediment bar immediately downstream of the dam to slope toward the step pools and constructing a series of four non-grouted rock weir step pools to clear the vertical distance of 4 feet to the top of the

dam. These impacts would be permanent with the intention of improving fish passage over the dam for fish. These changes would improve the function of the aquatic habitats. Overall, the Proposed Project would permanently impact a net area of 0.229 acre of wetlands and 0.045 acre of non-wetland waters of the United States and state. Although the purpose of the Proposed Project is to improve fish passage within Santa Rosa Creek, potentially significant impacts to state and federally protected wetlands would occur during construction and maintenance activities. However, Sonoma Water would require contractors, through project contract specifications, and maintenance staff to participate in Worker Environmental Awareness Training, in accordance with Mitigation Measure BIO-3 (Worker Environmental Awareness Training) and restore riparian habitats (Mitigation Measure BIO-5: Revegetation of Riparian Areas). In addition, implementation of Mitigation Measure BIO-6 would further reduce impacts to wetlands from construction and maintenance activities.

Mitigation Measure BIO-6: Avoid, Minimize, or Compensate for Impacts to Jurisdictional Wetlands and Other Protected Waters

Construction activities resulting in the introduction of fill or other disturbance to jurisdictional wetlands and other protected waters may require a permit from the U.S. Army Corps of Engineers pursuant to Section 404 of the Clean Water Act (CWA) and a Water Quality Certification from North Coast Regional Water Quality Control Board pursuant to Section 401 of the CWA. California Department of Fish and Wildlife has jurisdiction over streams and may require a Streambed Alteration Agreement under Section 1602 of the California Fish and Game Code. Sonoma Water shall apply for permits from the appropriate regulatory agencies and comply with terms.

With implementation of Mitigation Measures BIO-3 (Worker Environmental Awareness Training), BIO-5 (Revegetation of Riparian Areas), and BIO-6 (Avoid, Minimize, or Compensate for Impacts to Jurisdictional Wetlands and Other Protected Waters), impacts to wetlands and non-wetland waters of the United States and state from construction and maintenance activities would be reduced to a less-than-significant level.

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 with Mitigation Incorporated.*

The Proposed Project would retain Santa Rosa Creek's riparian corridor, which is used for migration and movement of aquatic and terrestrial species. In fact, the Proposed Project would improve the in-channel conditions for fish passage per the project objectives described in Section 2.3. Temporary impacts to native resident, migratory fish, and wildlife species would occur during construction and maintenance activities. Sonoma Water would implement Mitigation Measure BIO-1 (Construction Work Windows), which

involves constraining all in-water work to the window of June 15 to October 15, with a possible extension to October 31 if weather conditions permit, when migratory fish species, including California Central Coast steelhead, are unlikely to be present in the Proposed Project area. Implementing this mitigation measure would minimize potential impacts to steelhead by avoiding their migration periods.

During the construction period, upstream and downstream movement of fish would be restricted when cofferdams are installed, and Sonoma Water would implement Mitigation Measure BIO-2 (Special-Status Aquatic Species Relocation) to reduce associated impacts on individuals. Should migratory fish species be present during Proposed Project construction, the cofferdam would reduce the potential for in-water impacts to be sustained outside of the dammed off area. The temporary interruption of fish passage from cofferdam installation would have a negligible effect because most fish migrate and disperse during late fall to spring, and the Proposed Project would be implemented during summer.

As described in item c above, vegetation removal would also occur as part of the Proposed Project. To further minimize potential impacts, worker awareness training would be implemented as described in Mitigation Measure BIO-3 (Worker Environmental Awareness Training) to ensure that all personnel conducting construction and maintenance activities are aware of the special-status species and their habitats with potential to occur within the Proposed Project area and the measures to be implemented to avoid or minimize impacts to those species.

With implementation of Mitigation Measures BIO-1 (Construction Work Windows), BIO-2 (Special Status Aquatic Species Protection and Relocation), BIO-3 (Worker Environmental Awareness Training), BIO-4 (Nesting Bird Protection Measures), and BIO-5 (Revegetation of Riparian Areas), the Proposed Project would not permanently or substantially interfere 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. Isolation of the creek work areas would be temporary during construction and maintenance activities and would ultimately result in permanent improvements in fish passage. Retaining the riparian corridor and avoiding the migration period for most fish would further reduce this potential impact to a level of less than significant with incorporation of mitigation.

e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? – *Less than Significant with Mitigation Incorporated.*

The City of Santa Rosa Code (Santa Rosa 2022a; Chapter 17-24 Trees, Article II., 17-24.020 Definitions, Article IV. Permits, and 17-24.050 Permit category II) identifies tree species and size that are defined as heritage and the required replacement ratios for

heritage trees. Of the 12 trees that would be removed as part of the Proposed Project, eight trees meet the City's heritage tree definition (one live oak [multi-trunk] and seven white alder trees).

The specific tree replacement ratios established by the City of Santa Rosa for each species depend on the trunk sizes of the trees. Based on this assessment, the Proposed Project would require the replanting of forty-six 15-gallon trees to comply with the City of Santa Rosa Code, as detailed in Table 3.4-2.

Table 3.4-2. City of Santa Rosa Code Heritage Tree Replacement Requirements.

Species	DBH (inches)	Replacement Multiplier	Replacement Number
Live oak (first trunk)	18	3	6
Live oak (second trunk)	30	5	10
		Total	**16**
White alder	12	2	4
White alder	13	2	4
White alder	14	2	4
White alder	14	2	4
White alder	14	2	4
White alder	16	2	4
White alder	20	3	6
		Total	**30**

Note:
1. The City's code requires that for each 6 inches or fraction thereof of the diameter of a heritage tree permitted for removal, two trees of the same genus and species as the removed tree, each of a minimum 15-gallon container size, shall be replanted. In some cases, reduced replacement scenarios may be approved.

Through implementation of Mitigation Measure BIO-5 (Revegetation of Riparian Areas), the Proposed Project would replant six oak trees and 21 alder trees on site within the Proposed Project area. There is not sufficient space for additional trees to be replanted within the Proposed Project area; therefore, to comply with the City of Santa Rosa Code, 10 additional live oak trees and nine additional white alder trees would require replanting off site. For instances where a site is inadequate in size to accommodate the required replacement trees, the City's code allows for trees to be planted on public property with the approval of the Director of the City's Recreation and Parks Department. Additionally, upon the approval of the Director, the City may accept an in-lieu payment of $100.00 per 15-gallon replacement tree on condition that all such payments shall be used for tree-related educational projects and/or planting programs of the City. Sonoma Water

would implement Mitigation Measure BIO-7 (Additional Off-site Heritage Tree Replanting) to comply with the Code.

Mitigation Measure BIO-7: Additional Off-Site Heritage Tree Replanting

Sonoma Water shall request approval from the City of Santa Rosa Recreation and Parks Department Director to replant 10 live oak and 9 alder trees off-site at a City-approved location, if required. Sonoma Water shall pay any required replanting fees or pay an in-lieu fee of $100.00 per 15-gallon replacement tree.

With implementation of Mitigation Measure BIO-7 (Additional Off-site Heritage Tree Replanting), impacts to heritage trees and local ordinances protecting biological resources would be reduced to a less-than-significant level.

f. Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan, or other approved local, regional, or state HCP? – *No Impact.*

There are no HCPs or Natural Community Conservation Plans that include the Proposed Project area (CDFW 2022; USFWS 2019). Therefore, the Proposed Project would not conflict with the provisions of an adopted or approved HCP or Natural Community Conservation Plan, and there would be no impact.

3.5 Cultural Resources

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	☐	☐	☒
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☒	☐	☐
c. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

Cultural Resources Setting

The cultural resources setting of the vicinity of the Proposed Project area was summarized for a project recently constructed in Santa Rosa Creek and is provided here from that document (Origer 2019). The study area for this nearby project, the Vortex Tube Rehabilitation Project, overlaps with the Proposed Project Area of Potential Effect (APE).

Precontact Setting. Early occupants of the Santa Rosa area appear to have had an economy based largely on hunting, with limited exchange, and social structures based on the extended family unit. This has been designated the Early Period (2100 BC to 600 BC). Later, milling technology (which infers intensive use of acorns) was introduced, along with a transition to a marine focus. This has been designated the Middle Period (600 BC to 1265 AD). This diversification of economy appears to be concurrent with the development of sedentism (the practice of living in one place for a long time) and population growth and expansion.

In the last 2,500 years, sociopolitical complexity and status distinctions based on wealth are also observable in the archaeological record, as evidenced by an increased range and distribution of trade goods (e.g., shell beads and obsidian tool stone), which are possible indicators of both status and increasingly complex exchange systems.

Acorn exploitation increased during the Late Period (1256 AD to 1770 AD), and the bow and arrow were introduced. Prehistoric archaeological site indicators expected to be found in the region include, but are not limited to, the following: obsidian and chert flakes

and chipped stone tools; grinding and mashing implements such as slabs and hand-stones and mortars and pestles; and locally darkened midden soils containing some of the previously listed items along with fragments of bone, shellfish, and fire-affected stones.

Ethnographic Setting. At the time of Euro-American settlement, people inhabiting this area spoke Southern Pomo, one of seven Pomoan languages belonging to the Hokan language stock. The Southern Pomo's aboriginal territory falls within present-day Sonoma County. To the north, it reaches the divide between Rock Pile Creek and the Gualala River, and to the south it extends to near the town of Cotati. The eastern boundary primarily runs along the western flanks of Sonoma Mountain until it reaches Healdsburg, where it crosses to the west side of the Russian River. Within the larger area that constitutes the Southern Pomo homelands, there were bands or tribelets that occupied distinct areas. Primary village sites of the Southern Pomo were occupied continually, while temporary sites were visited to procure resources that were especially abundant or available only during certain seasons. Sites often were situated near fresh water sources and in ecotones where plant life and animal life were diverse and abundant.

The Southern Pomo population was decimated early in the historic period, especially in the southern part of their territory. Ethnic identity was severely impacted in the region of Santa Rosa and Sebastopol. By 1976, the few remaining Southern Pomo speakers were from north of Healdsburg.

Historic Setting. The Proposed Project area at the E Street Bridge Fishway Extension site was granted to Maria Ygnacia Lopez de Carrillo in 1841. Lopez, a widow, died 9 years later and left the property to her children; it was sold in the late 1800s (SSUL 2022).

The Melita Road Dam site was within the Los Guilicos Rancho granted to John (Juan) Wilson (who was married to Maria Ygnacia Lopez de Carrillo's daughter) in 1837 and patented by the U.S. government in 1852 following the Mexican-American War. When granted, it consisted of 18,834 acres that extended from Santa Rosa to the town of Glen Ellen approximately 10 miles to the southeast. At that time, the plat map showed no development in the area around what is now the E Street Fishway Extension. The Rancho was sold off shortly after being patented to various farmers and ranchers (Kyle et al. 2002).

The town of Santa Rosa was incorporated in 1867. An 1876 map shows a wooden wagon bridge across Santa Rosa Creek in the location of the current E Street Bridge Fishway Extension site. Dozens of companies constructed rail lines in Marin and Sonoma counties in the late 1800s, intending to bring Humboldt County timber to market in the San Francisco Bay area. Early rail lines in the Proposed Project vicinity include the following:

- A spur of the Southern Pacific line known as the Santa Rosa and Carquinez Railroad, completed in 1888, that ran along what is now Channel Drive through the Melita Road Dam site.
- An expansion of the San Francisco and North Pacific Railroad, completed in 1890, that ran from Santa Rosa west to Sebastopol about 0.75 mile west of the Proposed Project area.

In 1906, 42 lines were joined as the Northwestern Pacific Railroad, a joint venture of the Southern Pacific and Atchison, Topeka, and Santa Fe Railway. The Northwestern Pacific Railroad is still in operation, covering 62 miles in Sonoma County. The Southern Pacific spur line was abandoned in 1935 (O'Hara et al. 2013; Poor 1907).

The reservoir at Lake Ralphine was first constructed by the Santa Rosa Water Works company in 1873, and it provided the newly burgeoning community with a much-needed municipal water supply (Fraser 1880).

Santa Rosa grew slowly and steadily into the twentieth century. In 1907, the E Street Bridge was replaced with an effort that included placement of "hundreds of loads of bricks and debris" at the bridge approaches (Santa Rosa Press-Democrat 1907).

With the end of World War II, Santa Rosa experienced a population boom, much like the rest of the nation. To accommodate this growth, entire neighborhoods were erected in short order, and the outward movement of families to the suburbs, begun during the late nineteenth century, recommenced with due speed. Much of this growth was bolstered by benefits extended to returning service members and their families.

To serve municipal growth, the Melita Diversion Dam was constructed by the City of Santa Rosa in 1948 as part of the City's municipal water system. The diversion dam's purpose was reportedly to divert water from Santa Rosa Creek by gravity to Lake Ralphine through a 24-inch steel pipe measuring approximately 8,000 feet in length (Santa Rosa Water 2016). The Melita Diversion Dam appears to have been one in a series of water control structures built to convey water to this reservoir.

Bolstered by post-war consumer confidence, new housing developments appeared, and with them the need for more schools, new churches, and new commercial enterprises. By the end of the 1950s, new commercial construction was usually located in the new suburbs at the edge of town.

The Santa Rosa Creek Diversion Structure consists of a culvert under Montgomery Drive, a sediment trench leading into the culvert, a grade control sill, a fish ladder, a high flow diversion channel, and the Santa Rosa Creek Reservoir, also known as Spring Lake. It was constructed in 1963 as part of the Central Sonoma Watershed Plan (CSWP), which was prepared in 1958 to reduce flooding in Santa Rosa (SRSCD 1958; Sonoma Water 2023). The Santa Rosa Creek Diversion Structure is approximately 350 feet downstream

of the Melita Road Dam site portion of the Proposed Project. Montgomery Drive was also constructed in the mid-1960s. Prior to construction of the reservoir, channel, and road, the location of this site was farmland and the existing channel of Santa Rosa Creek.

A series of aqueducts and box culverts conveying Santa Rosa Creek under the City was constructed in the 1960s as part of the CSWP. These improvements included construction of the E Street Bridge, fishway, and fishway extension in 1966 (FHWA 2022).

Results of Research and Surveys. Research for the Proposed Project included review of archival records at the Northwest Information Center (NWIC), Sonoma State University (NWIC File No. 22-0014); a request to the Native American Heritage Commission (NAHC) to search Sacred Lands Files; and historical maps, documents, and aerial photographs.

The NWIC search revealed that there are no buildings or structures listed in, or eligible for listing, in the National Register of Historic Places (NRHP) or the California Register of Historical Resources within the Proposed Project area. Results from the search of the Sacred Lands Files were negative.

Studies at the E Street Bridge Fishway Extension Site

One archaeological resource has been identified within the Proposed Project area at the E Street Bridge Fishway Extension site. The resource, CA-SON-11 (primary record number 49-000076; the Peter's 11 site), was identified in 1908. It was situated at the confluence of Santa Rosa Creek and Matanzas Creek. The boundaries are not well defined. The site was revisited in 1986, and the record from that date indicates that Santa Rosa City Hall and the Shea Federal Building had been constructed atop the site since its identification, and the site may have been completely destroyed.

Six cultural resources surveys have been conducted in or within 1 mile of the E Street Bridge Fishway Extension site. Identification and excavation at CA-SON-11 occurred in the 1970s, with some investigations adjacent to or slightly within the western extent of the E Street Bridge Fishway Extension site (Melander et al. 1973). One recent survey included the eastern portion of the E Street Bridge Fishway Extension site. It did not identify any archaeological resources in or near the Proposed Project area (Del Bondio and Origer 2010). Two other surveys were at properties atop the bank south of the creek, about 50 to 100 feet from the E Street Bridge Fishway Extension site. Neither identified archaeological resources (Rumph 1978; Elling 1980). The remaining two surveys were at properties atop the north bank of the creek about 50 to 100 feet from the E Street Bridge Fishway Extension site. Neither identified any archaeological resources, though some possible historic age items were observed (Baldrica 1980; Roscoe 1981). A survey of historic-age resources associated with the Central Sonoma Watershed Project was conducted in 2022 (AECOM 2022). The E Street Fishway Extension is part of the Central Sonoma Watershed Project, which consisted of an integrated network of several flood

control structures designed to reduce flooding in the Santa Rosa Creek lower watershed, constructed between 1962 and 1988. The E Street Fishway Extension was evaluated as a historic resource and determined not be eligible under any NRHP criteria (AECOM 2022). However, the Central Sonoma Watershed Project in its entirety may be considered a historic district, but individual structures do not reach the level of a significant historic resource. Therefore, the E Street Fishway Extension, as an individual structure, is not a historic resource.

Studies at the Melita Road Dam Site

The NWIC search revealed that there are no buildings or structures listed in, or eligible for listing, in the NRHP or the California Register of Historical Resources within the Proposed Project area. The Melita Diversion Dam is older than 50 years and was identified for NRHP evaluation as part of the Proposed Project.

Two cultural resources surveys have been conducted at the Melita Road Dam site. One was a recent survey for Vortex Tube Rehabilitation Project partially within the current APE (Origer 2019), and the other was a utilities survey about 150 feet north of the site (Cole 1987). None identified cultural resources. The survey found seasonal flooding, shallow groundwater, and upland conditions within the Vortex Tube Rehabilitation project area that are generally unsuitable for deposition and preservation of intact archaeological materials.

The Melita Diversion Dam has been evaluated to determine its eligibility for listing in the NRHP and found to be not eligible, based on Department of Parks and Recreation forms in Appendix E. The structure is associated with the construction of mid--twentieth century water infrastructure, built and operated by the City of Santa Rosa. The dam does not appear to possess qualities that would warrant special recognition for its design or engineering, and even though it was constructed in 1948, it does not appear to possess sufficient-enough importance in the history of Santa Rosa's water system to meet NRHP criteria. The City of Santa Rosa's acquisition of the Santa Rosa Water Works and the subsequent construction of the Melita Diversion Dam appears to have been minimally important to the history of Santa Rosa, especially when compared to the much earlier and more influential establishment of Lake Ralphine in the 1870s, the City water system in the 1900s, and completion of major flood-control improvement projects along Santa Rosa Creek in the 1960s and 1970s.

Native American Outreach

On December 20, 2022, Sonoma Water notified Native American Tribes who have requested CEQA consultation on Sonoma Water projects regarding the initiation of the Proposed Project in accordance with California State Assembly Bill (AB) 52 and the CEQA Guidelines. The Tribes notified included: Cloverdale Rancheria of Pomo Indians,

Dry Creek Rancheria Band of Pomo Indians, Federated Indians of Graton Rancheria (Graton Rancheria), Guidiville Band of Pomo Indians, Kashia Band of Pomo Indians of the Stewards Point Rancheria, Lytton Rancheria of California, and Middletown Rancheria of Pomo Indians of California. Sonoma Water received a formal request from Graton Rancheria on January 3, 2023, for Tribal consultation.

On March 23, 2023, Anchor QEA, on behalf of Sonoma Water requested a search of the Sacred Lands File and a list of Tribes that are traditionally and culturally affiliated with the geographic area of the Proposed Project from the NAHC. The NAHC responded on April 19, 2023, stating that the search of the Sacred Lands File was negative and providing a list of Tribes.

Discussion of Potential Impacts

In accordance with CEQA, the Proposed Project could result in potentially significant impacts to Cultural Resources if it would:

a. Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5? – *No Impact*

There are two historic-age structures in the Proposed Project area: the E Street Fishway Extension and the Melita Diversion Dam. Both have been evaluated and found not NRHP-eligible. There are no historical resources in the Proposed Project area, and there would be no impacts.

b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5? – *Less than Significant with Mitigation Incorporated.*

The E Street Bridge Fishway Extension site is near site CA-SON-11. A survey that overlaps with the Proposed Project area found no evidence of intact archaeological deposits (Del Bondio and Origer 2010). Ground disturbance at this location would occur within previously heavily disturbed areas. Disturbance has occurred from construction of the three E Street bridges, adjacent commercial development, and installation of the Central Sonoma Watershed Plan infrastructure. Some ground disturbance would also occur on steep slopes, and within the active creek bed, where no archaeological resources are expected. Ground disturbance at this site would be as follows:

- Access road: Ground disturbance on the steep slope that forms the left bank, up to 7 feet below the surface, except where a recently accumulated sediment bar of the creek would be removed, which could extend up to 12 feet below the surface
- Bank enhancement: Ground disturbance up to 3 feet below the existing surface to remove existing grouted rock bank protection

Neither of these activities are expected to encounter intact native soils.

The Melita Road Dam site includes areas within the Santa Rosa Creek corridor that have been previously extensively disturbed by construction activities for the Santa Rosa Creek Diversion Facility and Montgomery Drive. No historical, archaeological, or cultural resources are known to occur within the Melita Road Dam site. Based on previous surveys and landform history, the potential for intact buried historical and archaeological resources within this area is low. Ground disturbance at the Melita Road Dam site would consist of excavation in the creek channel up to 7 feet below the surface and clearing and access-related excavation up to 2 feet below the surface. As this is in the current active channel, this activity is not expected to encounter intact native soils.

While no resources have been recorded in the Proposed Project area, there is the potential to uncover previously unidentified archaeological resources during ground disturbance. The disturbance, or damage, of previously unidentified historical or archaeological resources would be a potentially significant impact.

Implementation of Mitigation Measure CUL-1 (Inadvertent Discovery of Historical or Archaeological Resources and Worker Awareness Training) would reduce potential impacts to less than significant by requiring worker awareness training, halting work, and implementing data recovery or preservation procedures. Implementation of Mitigation Measure CUL-1 (Inadvertent Discovery of Historical or Archaeological Resources) would reduce potential impacts to less than significant by ensuring that construction work would halt in the area of an unanticipated find so that a qualified archaeologist and Native American representative could make additional recommendations if required. If the resource is determined to be a significant historical or unique archaeological resource, additional measures would be taken to minimize or avoid significant effects, which may include (but are not limited to) avoidance, capping the site, deeding the site into a permanent conservation easement, or data recovery excavation.

Mitigation Measure CUL-1: Inadvertent Discovery of Historical and Archaeological Resources and Worker Awareness Training

1. *The contractor shall comply with Sonoma Water's Standard Contract Documents regarding the discovery of cultural resources, including Native American cultural resources and items of historical and archaeological interest. The Sonoma Water Construction Inspector and construction personnel will be notified of the possibility of encountering cultural resources during project construction.*

    a. *Prior to initiation of ground-disturbing activities, Sonoma Water shall arrange for construction personnel to receive training about the kinds of cultural materials that could be present at the project sites and protocols to be followed should any such materials be uncovered during construction.*

An archaeologist who meets the U.S. Secretary of Interior's professional standards (48 Federal Register *[Fed. Reg.] 44716, 44738-44739 and Appendix A to 36 CFR 61) shall provide appropriate archaeological training, including the purpose of the training to increase awareness and knowledge of Tribal cultural resources and appropriate protocols in the event of an inadvertent discovery. The Tribal Monitor shall provide appropriate Tribal cultural resources training as determined by the Tribe. Training may be required during different phases of construction to educate new construction personnel.*

2. *The project specifications will provide that if discovery is made of items of historical, archeological, or cultural interest, the contractor will immediately cease all work activities in the area of discovery. Historical, archaeological, and cultural indicators may include, but are not limited to, dwelling sites, locally darkened soils, stone implements or other artifacts, fragments of glass or ceramics, animal bones, and human bones. After cessation of excavation, the contractor will immediately contact Sonoma Water's Construction Inspector. The contractor will not resume work until authorization is received from the Construction Inspector.*
    a. *In the event of unanticipated discovery of archaeological materials during construction, Sonoma Water shall retain the services of a qualified professional archaeologist who meets the U.S. Secretary of Interior's professional standards (48 CFR Fed. Reg. 44716, 44738-44739 and Appendix A to 36 CFR 61) to evaluate the significance of the items prior to resuming any activities that could impact the site.*
    b. *In the case of an inadvertent archaeological discovery, if it is determined that the find is potentially eligible for listing in the California Register of Historical Resources and/or National Register of Historic Places, and the site cannot be avoided, additional mitigation measures shall be implemented. Mitigation measures may include (but are not limited to): avoidance; capping the site; deeding the site into a permanent conservation easement; or data recovery excavation. Mitigation measures for historical resources shall be developed in consultation with responsible agencies and the culturally affiliated Native American Tribe. If data recovery excavation is necessary, Sonoma Water shall provide an Archaeological Resource Management and Data Recovery Plan, prepared by a qualified archaeologist, outlining recovery of the resource, analysis, and reporting of the find. The Archaeological Resource Management and Data Recovery Plan shall be approved by Sonoma Water and affected Native American Tribe. Implementation of the Archaeological Resource Management and Data Recovery Plan shall be conducted prior to work being resumed.*

Implementation of Mitigation Measure CUL-1 would minimize the potential for the Proposed Project to adversely affect historical or archaeological resources by requiring worker awareness training and halting work and implementing data recovery or preservation procedures. With implementation of Mitigation Measure CUL-1, impacts would be reduced to less than significant.

c. Disturb any human remains, including those interred outside of formal cemeteries? – *Less than Significant with Mitigation Incorporated.*

No known historical or archaeological resources are located within the Proposed Project area, and no human remains are anticipated to be discovered. However, if previously unknown human remains were inadvertently discovered during ground-disturbing activities, the impact would be significant. To reduce the potential for impacts, Sonoma Water would implement Mitigation Measure CUL-2 (Inadvertent Discovery of Human Remains). Mitigation Measure CUL-2 requires that the Public Resources Code Section 5097.98 and Health and Safety Code Section 7050.5 process be followed. Under this process, if the coroner determines the remains are Native American, the coroner will contact the NAHC. As provided in Public Resources Code Section 5097.98, the NAHC will identify the person or persons believed to be most likely descended from the deceased Native American. The Most Likely Descendent makes recommendations for means of treating the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98.

Mitigation Measure CUL-2: Inadvertent Discovery of Human Remains

The project specifications shall require the contractor to comply with Public Resources Code 5097.98 and Health and Human Safety Code 7050.5, as they pertain to the discovery of human remains. If human remains are encountered, the contractor shall halt work within 50 feet of the find, and contact Sonoma Water's Construction Inspector and the Sonoma County Coroner in accordance with Public Resources Code Section 5097.98 and Health and Safety Code Section 7050.5. Work shall cease in the immediate area until the Section 5097.98 process is concluded.

Implementation of Mitigation Measure CUL-2 (Inadvertent Discovery of Human Remains) would ensure proper procedures are followed if previously unknown human remains are discovered, and the impact would be less than significant after mitigation is incorporated.

3.6. Energy

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

Energy Setting

Energy in California is regulated by a series of bills, regulations, and executive orders aimed at decreasing total energy demand and increasing the availability and production of renewable energy for all energy needs.

The Clean Energy and Pollution Reduction Act (Senate Bill [SB] 350), enacted in 2015, establishes clean energy, clean air, and GHG emission reduction goals, including reducing GHG emissions to 40% below 1990 levels by 2030 and to 80% below 1990 levels by 2050. SB 350 also authorizes utilities to undertake transportation electrification. Specifically, the California Public Utilities Commission, along with the California Air Resources Board and Energy Commission, will support transportation electrification by directing electrical corporations to file applications for programs and investments to accelerate widespread transportation electrification (CEC 2022). AB 802 (Williams, Chapter 590, Statutes of 2015) expands the Energy Commission's energy data collection authority to improve the development and evaluation of policy and programs and the state's energy infrastructure planning efforts. AB 802 also requires the California Public Utilities Commission to authorize electrical and gas corporations to provide financial incentives to their customers that increase the energy efficiency of existing buildings based on all estimated energy savings and energy usage reductions.

Discussion of Potential Impacts

In accordance with CEQA, the Proposed Project could result in significant impacts to Energy Resources if it would:

a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? – *Less than Significant.*

The Proposed Project would use fossil fuels (primarily gas, diesel, and motor oil) for vehicles and equipment required for the construction and maintenance activities. The materials for construction also require energy to manufacture, process, and transport. Proposed construction activities are anticipated to last approximately 7 months extending over 2 separate years.

The energy required for construction of the Proposed Project would be temporary over the approximate 7 months extending over 2 separate years. The use of fuels would not be wasteful or unnecessary because their use is required to complete the Proposed Project. As described in the project description, Section 2.4, the Proposed Project's construction specifications will incorporate the Bay Area Air Quality Management District's Air Quality Thresholds of Significance for Construction-Related Criteria Air Pollutants and Precursors (Project Level) and Best Management Practices for Construction-related GHG Emissions (BAAQMD 2023) that avoid wasteful, inefficient, or unnecessary consumption of energy resources by minimizing equipment and idling times by either shutting equipment off when not in use or limiting idling time to five minutes or less. Vehicle trips and equipment use associated with the operation and maintenance of the Proposed Project would be temporary and intermittent in nature and would only occur as needed. Therefore, the Proposed Project would have less-than-significant impact on energy resources, and no mitigation is required.

b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency? – *No Impact.*

Construction, operation, and maintenance of the Proposed Project would not conflict with or obstruct implementation of the SB 250 and AB 802 goals. Therefore, the Proposed Project would have no impact related to state or local plans for renewable energy and energy efficiency.

3.7 Geology and Soils

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
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.	☐	☐	☒	☐
ii. Strong seismic ground shaking?	☐	☐	☒	☐
iii. Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv. Landslides?	☐	☐	☒	☐
b. Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
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 an on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
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?	☐	☐	☒	☐

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒

Geology and Soils Setting

Regional Tectonism and Older Rocks. The geology and structure of Sonoma County has been shaped through a dynamic history of tectonism along the San Andreas Fault Zone (Fox 1983). The northwest-southeast alignment of this fault zone with its characteristic right-lateral strike-slip tensional movement is reflected in the alignment and orientation of the region's ridgelines and valleys. Movement along the fault zone was not only lateral but also included compression resulting in the mountain building of the Coast Ranges, including the Proposed Project area. In geologic terms, this combination of lateral tension plus compression is known as transpression. In Sonoma County, the main artery of the San Andreas Fault roughly follows Highway 1 near the coast. The Healdsburg-Rodgers Creek and Mayacama faults represent more interior arms of the San Andreas system, sharing its same orientation. The Proposed Project is located near the Healdsburg-Rogers Creek fault; the E Street Bridge Fishway Extension site is located to the east of the fault, and the Melita Road Dam site is located to the west (CGS 2021).

The San Andreas Fault has been relatively quiet in Sonoma County since the historic 1906 earthquake (magnitude 8.3). The Healdsburg-Rogers Creek and Mayacama faults are considered active faults with known activity during the Holocene period (last 10,000 years). Of recent note, in 1969, two moderate earthquakes (magnitudes 5.6 and 5.7) along the Rogers Creek Fault caused moderate damage in Santa Rosa.

The distribution and sequence of rock types in the Proposed Project vicinity reflect the area's geologic history (Norris and Webb 1990). The oldest rocks include the Great Valley Complex with its tilted marine sedimentary layers, mostly sandstones and shales, which underlay much of the Proposed Project area. The hills surrounding the Proposed Project vicinity are composed of the Huichica and Glen Ellen Formations and Sonoma Volcanics

(Wagner and Bortugno 1982). The geology of the Proposed Project area, located along the lowlands of Santa Rosa Creek, is described as Older Alluvium from the Pleistocene (Wagner and Bortugno 1982) and older deposits along channels from the Holocene (BAGG Engineering 2019).

Soils. At the association level, soils are generally distinguished according to their geomorphic and topographic setting, whether they are in basins, tidal flats, floodplains, terraces, alluvial fans, high terraces, foothills, uplands, and mountains. In general, the soils in the lowland basins, floodplains, and alluvial fans range from gravelly sandy loams to clays, most often composed of clays and clay loams that formed in alluvium from sedimentary and volcanic material. These soils vary in drainage capacity from poor to excessive, with the more clay-textured soils draining more poorly. The soils on the high terraces, foothills, uplands, and mountains consist of gravelly to stony sandy loams to clay loams and range in drainage capacity from moderate to excessive, with the coarser textured soils draining better.

While inherent erodibility is important in considering a soil's potential erosion, often it is the slope, type of land use, and intensity of land practices that are the more important determinants of potential erosion. Most of the Santa Rosa Creek headwaters upstream of the Proposed Project area have high erosion potential. USDA Natural Resources Conservation Service (NRCS) soil survey data identifies soils in the Proposed Project vicinity as loam to silty clay loam (NRCS 2021); however, the Proposed Project area is more characteristic of alluvial lands with native riverwash soils adjacent to Montgomery Drive (at the Melita Road Dam site). Montgomery Drive is an elevated roadway built on an artificial levee composed of clayey gravel and sand (BAGG Engineering 2019). Similar native riverwash soils are present near the E Street Bridge Fishway Extension site, as well as Yolo silt loam with 0% to 5% slopes, on the northwest portion of the site and Zamora silty clay loam with 0% to 2% slopes, on the southwest portion of the site (NRCS 2021).

Discussion of Potential Impacts

In accordance with CEQA, the Proposed Project could result in potentially significant impacts to Geology and Soils if it would:

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?; ii. strong seismic ground shaking; iii. seismic-related ground failure, including liquefaction; iv. landslides? – *Less than Significant.*

The Proposed Project is located in a geologically active area and would be subject to ground shaking as a result of earthquake activity on any of a number of faults in the

region. The nearest active fault is Healdsburg-Rogers Creek fault located approximately 0.5 mile to the east of the E Street Bridge Fishway Extension site and approximately 3 miles to the west of the Melita Road Dam site (Fox 1983; CGS 2021). Maximum ground accelerations and other earthquake-induced hazards could be sufficient to damage the Proposed Project area. The Fishway Extension and Melita Road Dam are at creek-level; these structures could be affected by earthquake-induced shaking but would not be expected to fail or increase hazards. Were Melita Road Dam to fail during an earthquake, it is a small grade-control structure that would not pose inundation hazards.

Proposed Project construction and maintenance activities would not directly or indirectly substantially affect, or be affected by, risks related to seismic events or other geologic hazards. Therefore, this impact is less than significant, and no mitigation is required.

b. Result in substantial soil erosion or the loss of topsoil? – *Less than Significant with Mitigation Incorporated.*

Most of the substrate in the Proposed Project area consists of cobble and gravel deposited during winter flooding, but the E Street Bridge Fishway Extension site also includes an area that includes soil and is subject to erosion. Scour at the bank toe threatens the structural integrity of the right bank. The Proposed Project would lightly vegetate the rock slope protection, as shown in Figure 2.4-6. Because one of the Proposed Project's objectives is to address ongoing erosion at the E Street Bridge Fishway Extension site, the potential for erosion would be minimal after construction activities are completed. At the Melita Road Dam site, soil is very limited with most of the ground consisting of cobble and gravel, which reduces the potential for soil erosion. Sonoma Water would implement Mitigation Measure BIO-5 (Revegetation of Riparian Areas), which would further reduce the potential for substantial soil erosion or loss of topsoil by stabilizing soils with erosion control measures and vegetation. Impacts would be less than significant with mitigation incorporated.

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 an on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse? – *Less than Significant.*

At the E Street Bridge Fishway Extension site, the fishway extension is located within and along the banks of Santa Rosa Creek. The creek bed itself would not be vulnerable to failure due to instability, and the Proposed Project includes right bank enhancement to counteract erosion, further limiting failure potential. At the Melita Road Dam site, the dam is located below and adjacent to Montgomery Drive, which consists of course-grained engineered fill material and native alluvial soils, which could be unstable. However, the potential for landslide, lateral spreading, subsidence, liquefaction, or collapse is very low because the Melita Road Dam grade revisions would be minor and would include new

rock weirs as a stabilizing element and because no work would occur on Montgomery Drive. Therefore, this impact is less than significant, and no mitigation is required.

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? – *Less than Significant.*

The soils under the E Street Bridge Fishway Extension site are composed of riverwash soils, with coarse-grained fill under concrete under the bridge supports, as well as Yolo silt loam with 0% to 5% slopes, on the northwest portion of the site and Zamora silty clay loam with 0% to 2% slopes, on the southwest portion of the site (CGS 2021; NRCS 2021). Improvements to the fishway extension would not be in expansive soils and would not pose a structural risk to life or property from expansivity. Enhancing the right bank, including adding erosion stabilization, would further improve conditions at the site. For the Melita Road Dam site, although most of the material below Montgomery Drive in the Proposed Project area is course-grained fill and native alluvium. Expansive soils are characterized by the ability to undergo significant volume change (shrink and swell) as a result of variation in soil moisture content. The grade revisions at the Melita Road Dam site would not enter expansive soils or pose structural risks. Therefore, this impact is less than significant, and no mitigation is required.

e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water? – *No Impact.*

The Proposed Project would not produce wastewater, nor involve the construction or modification of any septic tanks or alternative wastewater disposal systems. As such, the Proposed Project would have no impact.

f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? – *No Impact.*

The Proposed Project would consist of improving fish passage at the existing E Street Bridge Fishway Extension and Melita Road Dam sites. The underlying geology in the Proposed Project area includes sedimentary rock from the Holocene and Pleistocene that could contain paleontological resources (fossils). However, the Proposed Project is not located in an area known for paleontological resources or geologic features. Also, the sedimentary rock layer would be avoided. Construction and maintenance of the Proposed Project would not directly or indirectly impact unique paleontological or geologic resources, and there would be no impact.

3.8 Greenhouse Gas Emissions

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

Greenhouse Gas Emissions Setting

The passage of AB 32, the California Global Warming Solutions Act of 2006, required California to reduce its GHG emissions to 1990 levels by 2020—a reduction of approximately 15% below emissions expected under a “business as usual” scenario. The state achieved its 2020 GHG emissions reductions target of returning to 1990 levels 4 years earlier than mandated by AB 32. The passage of SB 32 in 2016 furthered the emissions reduction target to 40% below 1990 levels by 2030.

Construction activities associated with the Proposed Project would include infrastructure repair to facilitate fish passage that would occur over the course of approximately 7 months extending over 2 separate years. The majority of the Proposed Project-related GHG emissions would be generated on site during construction from the use of heavy-duty off-road equipment, including a long-reach excavator, an excavator, a bulldozer, a crane, a dump truck, and a concrete mixer truck. The equipment operation hours per day and number of required workdays would vary depending on the specific type of equipment and on the construction activity. Maintenance activities at the E Street Bridge Fishway Extension site would use maintenance vehicles that generate GHG emission. GHG emissions would also be generated off site associated with construction worker daily commutes and material and debris hauling. Following construction, the Proposed Project would not include any stationary sources of GHG emissions.

Discussion of Potential Impacts

In accordance with CEQA, the Proposed Project could result in potentially significant impacts to GHG emissions if it would:

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

As described in Section 3.3 (Air Quality), the Proposed Project is located within the SFBAAB, which is under the jurisdiction of the BAAQMD. The BAAQMD has not developed a quantitative threshold of significance for construction-related GHG emissions (BAAQMD 2023). The BAAQMD previously identified a quantitative threshold for non-stationary source projects as annual operational emissions of more than 1,100 metric tons of carbon dioxide equivalent (CO_2e), which was derived from a gap-filling analysis of the measures necessary to meet the 2020 target established by AB 32 to achieve 1990 levels by 2020 (BAAQMD 2017a). The new SB 32 climate pollution reduction target is to reduce GHG emissions by 40% below 1990 levels by 2030. To develop a quantitative threshold to be used on an interim basis, the previous BAAQMD quantitative threshold of 1,100 metric tons of CO_2e/year was adjusted downward by 40%. A quantitative threshold of 660 metric tons of CO_2e/year for 2030 was applied to the Proposed Project.

For projects that are linear in nature (e.g., road or levee construction, pipeline installation, and transmission lines), the most current version of Sacramento Metropolitan Air Quality Management District's (SMAQMD) Road Construction Emissions Model (RoadMod) can be used to quantify construction-related GHG emissions. The Proposed Project emissions that would be generated during construction were estimated using the latest version of SMAQMD RoadMod (Version 9.0.0) (SMAQMD 2018). Modeling details can be found in Appendix B. The Proposed Project would result in a total GHG emission of approximately 305 metric tons CO_2e. The anticipated life of the infrastructure replacement of the project is 50 years. When construction emissions are amortized over a 50-year life of the project, the emissions are 10 metrics tons CO_2e/year, which is well below 660 metric tons CO_2e/year. Therefore, GHG emissions generated during construction of the Proposed Project would be a less-than-significant impact, and no mitigation is required.

Following construction, the Proposed Project would not include any stationary sources of GHG emissions. Long-term operation and maintenance of the Proposed Project would involve periodic inspection and/or maintenance of the E Street Bridge Fishway Extension and Melita Road Dam sites, which would result in negligible sources of GHG emissions. However, the Proposed Project would reduce the frequency and extent of channel maintenance needs to maintain fish passage through the E Street Bridge Fishway Extension site. In addition, the Proposed Project would not result in a net increase in existing Vehicles Miles Traveled (VMT; Section 3.17 Transportation). Therefore, there

would be a minimal reduction in long-term baseline conditions as a result of the Proposed Project, the impact would be less than significant, and no mitigation is required.

b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? – *No Impact.*

Existing plans and policies aimed at reducing GHG emissions apply to a variety of sources such as residential, transportation, agriculture, water, waste management and industry. There are no adopted GHG-related plans, policies, or regulations that are directly applicable to the Proposed Project, which is a fish passage improvement project that would not result in land use changes, population growth, or new development of any kind. As described in Sections 3.3 (Air Quality) and 3.8a, the Proposed Project would not exceed the BAAQMD air pollutant and GHG emission thresholds. Therefore, the Proposed Project would not conflict with any applicable plan, policy, or regulation to reduce GHG emissions, and there would be no impact.

3.9 Hazards and Hazardous Materials

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
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?	☐	☒	☐	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☒	☐	☐
d. Be located on a site that 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?	☐	☐	☐	☒
e. For a project located within an airport land use plan area or, where such a plan has not been adopted, within 2 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?	☐	☐	☐	☒

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☒	☐	☐
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☒	☐

Hazards and Hazardous Materials Setting

Listed Hazardous Material Sites. A search for existing known contaminated sites in the Proposed Project area of the U.S. Environmental Protection Agency (USEPA) databases of Resource Conservation and Recovery Act; Comprehensive Environmental Response, Compensation, and Liability Act; or National Priorities List sites (USEPA 2022a, 2022b), as well as the California Department of Toxic Substances Control (DTSC) EnviroStor (DTSC 2022) and State Water Resources Control Board GeoTracker (SWRCB 2022) databases was conducted. No contaminated or remediation sites are located at either of the Proposed Project sites. The GeoTracker database identifies two active cleanup sites within 1,000 feet of the E Street Bridge Fishway Extension site: the former Santa Rosa Department of Public Works garage at 97 D Street (approximately 780 feet west of the site), and the former Pacific Gas & Electric Substation B at 10 E Street (approximately 200 feet west across E Street from the site).

Potential Hazardous Material On Site. There are no reported or anticipated sources of hazardous material contamination within the Proposed Project area. However, a 2-inch gas line owned by PG&E, currently under a revocable license between PG&E and Sonoma Water, is attached to the downstream side of Melita Road Dam.

Sensitive Receptors. The New Horizon School & Learning Center, located at 827 Third Street, is approximately 0.14 mile north of the E Street Bridge Fishway Extension site. There are no schools located within 0.25 mile of the Melita Road Dam site. The Proposed Project is not located within 2 miles of a public airport or public use airport.

Wildfire Hazards. The Proposed Project area has a Wildfire Hazard Rating of Urban Fuels (urban areas not expected to burn during wildfires), and the areas near the two

sites range from Urban Fuels to Moderate Hazard rating (Geo Elements 2020). The Proposed Project area is within a Local Responsibility Area and is not within an area designated as a Very High Fire Hazard Severity Zone (CAL FIRE 2022a, 2022b).

Discussion of Potential Impacts

In accordance with CEQA, the Proposed Project could result in potentially significant impacts to Hazards and Hazardous Materials if it would:

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

While the Proposed Project would involve the temporary transport and handling of small quantities of hazardous substances during construction and periodic maintenance activities, it would not otherwise involve transport, use, or disposal of hazardous materials. Additionally, Sonoma Water staff and contractors would be required to use, store, and transport hazardous materials in accordance with local, state, and federal regulations, including California Occupational Safety and Health Administration and DTSC requirements and manufacturer's instructions, during Proposed Project construction and maintenance activities. The Proposed Project would be required to implement and comply with existing hazardous material regulations; therefore, the routine transport, use, and disposal of hazardous materials would be unlikely to result in a significant hazard to the public or the environment. Therefore, this impact would be less than significant, and no mitigation is necessary.

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 with Mitigation Incorporated.*

There are no reported or anticipated sources of hazardous material contamination within the Proposed Project area. As described above, the Proposed Project would involve temporary transport and handling of small quantities of hazardous substances (e.g., fuels and lubricants) during construction and periodic maintenance activities. The Proposed Project would be required to implement and comply with existing hazardous material regulations; therefore, the Proposed Project would be unlikely to result in a significant hazard to the public or the environment. If these fuels and lubricants were released into the water or ground during application or equipment refueling or maintenance, contamination and harm to the environment could result in a significant hazard to the public or the environment. The Proposed Project also involves work in the vicinity of an existing 2-inch gas line owned by PG&E. There would be no operational transport, use, or disposal of hazardous materials. Sonoma Water would implement Mitigation Measure HAZ-1 (Spill Prevention and Response) to minimize the potential effects of an

unforeseeable release of hazardous materials. Sonoma Water would also implement Mitigation Measure HAZ-2 (Existing Gas Line Protection) to ensure that the existing PG&E gas line is protected and no accidental release of gas occurs.

Mitigation Measure HAZ-1: Spill Prevention and Response

Sonoma Water shall require the contractors, through contract specifications, to prepare a Storm Water Pollution Prevent Plan (SWPPP). The SWPPP shall comply with Caltrans Storm Water Pollution Prevention Plan and Water Pollution Control Program Preparation Manual and the Caltrans Construction Site Best Management Practices Manual. Sonoma Water shall require contractors, through contract specifications, and maintenance staff to follow the SWPPP during all Proposed Project activities as well as implement the following measures:

1. *All field personnel shall be appropriately trained in spill prevention, hazardous material control, and cleanup of accidental spills.*
2. *Equipment and materials for cleanup of spills shall be available on site and spills and leaks shall be cleaned up immediately and disposed of in accordance with local, state, and federal regulations.*
3. *Spill prevention kits shall always be in close proximity when using hazardous materials (e.g., crew trucks and other logical locations). Spill clean-up materials shall be stockpiled where they are readily accessible. All field personnel shall be advised of these locations and trained in their appropriate use.*
4. *During construction and maintenance activities, Sonoma Water staff and contractor(s) shall routinely inspect the work site to verify that items 1-4 above are properly implemented and maintained.*
5. *Absorbent materials shall be used on small spills located on impervious surface rather than hosing down the spill; wash waters shall not discharge to the storm drainage system or surface waters. For small spills on pervious surfaces such as soils, wet materials shall be excavated and properly disposed rather than burying it. The absorbent materials shall be collected and disposed of properly and promptly.*
6. *Vehicle and equipment maintenance activities shall be conducted off-site or in a designated, protected area away from the creek channel equipped with secondary containment and designed to avoid a direct connection to underlying soil, surface water, or the storm drainage system. For stationary equipment that must be fueled on-site, secondary containment, such as a drain pan or drop cloth, shall be provided in such a manner to prevent accidental spill of fuels to underlying soil, surface water, or the storm drainage system.*
7. *All vehicles and equipment shall be kept clean. Excessive build-up of oil or grease shall be avoided. Incoming vehicles and equipment shall be checked for leaking*

oil and fluids (including delivery trucks, and employee and subcontractor vehicles). Leaking vehicles or equipment shall not be allowed on-site.

Mitigation Measure HAZ-2: Existing Gas Line Protection

Sonoma Water shall require the contractors, through contract specifications, to complete the following protection measures when working at the Melita Road Dam site:

1. *The contractor shall mark the project area and contact Underground Service Alert (USA) at least 2 business days prior to beginning work.*
2. *The contractor shall coordinate with PG&E prior to conducting work near the gas line and establish a point of contact for emergency response.*
3. *The contractor shall identify and delineate a 24-inch buffer around the existing gas pipe.*
4. *The contractor shall protect in place the existing gas pipe by:*
    a. *Not using power-operated equipment within the 24-inch buffer around the existing gas pipe, and*
    b. *Not placing rock within the buffer, and*
    c. *Installing steel sheets across the channel 24 inches downstream from the face of the Melita Road Dam to protect accidental placement of rock within the 24-inch buffer. The steel sheets shall be able to withstand the impact force of a 4-foot diameter boulder being rolled onto it, or*
    d. *Any other acceptable existing utility protection methods approved by Sonoma Water to protect the existing gas pipe.*
5. *Utility protection measures shall adhere to American Public Works Association Greenbook Section 402-2 for existing utilities protection, USA best practices, PG&E utility protection guidance, and any other relevant standards relating to utility protection.*
6. *The contractor shall be aware of the signs of a gas leak. The signs of a gas leak can be the presence of a sulfur-like odor; hissing, whistling, or roaring sounds; dirt spraying into the air; continual bubbling in the presence of standing water; or dead or dying vegetation in an otherwise moist area.*
7. *In the event of accidental release, or if the contractor dents, scrapes, or damages the gas pipe in any way, the contractor shall first evacuate the worksite at least 300 feet upwind from the damage, then call 911 to notify emergency personnel, and then call PG&E at 1-800-743-5000 to report the gas leak.*

With implementation of Mitigation Measures HAZ-1 and HAZ-2, the potential hazard impacts would be reduced to less than significant.

c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? – *Less than Significant Impact with Mitigation Incorporated.*

The New Horizon School & Learning Center, located at 827 Third Street, is approximately 0.14 mile north of the E Street Bridge Fishway Extension site. There are no schools located within 0.25 mile of the Melita Road Dam site. The Proposed Project would involve temporary transport and handling of small quantities of hazardous substances such as diesel fuels, lubricants, and solvents for equipment during construction and periodic maintenance activities that would be used in accordance with local, state, and federal regulations. Construction of the Proposed Project would also generate DPM and gasoline fuel combustion emissions, which are considered to be TACs. The majority of TAC emissions would be generated during construction due to the use of heavy-duty off-road equipment. There would be no operational transport, use, or disposal of hazardous materials.

Because a school is located less than a 0.25 mile from the Proposed Project area and the Proposed Project would generate DPM and gasoline fuel combustion emissions and involve the temporary transport and handling of small quantities of hazardous substances, the Proposed Project has the potential to result in significant hazardous emissions and handling of hazardous materials that could impact the sensitive receptor located at 827 Third Street. Sonoma Water would implement Mitigation Measure HAZ-3 (Heavy-Duty Off Road Equipment Avoidance of Third Street) to ensure that any construction-related truck trips do not use Third Street between E Street and Brockwood Avenue (the location of the sensitive receptor). With incorporation of Mitigation Measure HAZ-3, any temporary impacts from DPM and gasoline fuel combustion emissions in the vicinity of the New Horizon School & Learning Center would be reduced to less than significant.

Mitigation Measure HAZ-3: Vehicle Avoidance of Third Street

All trucks and other vehicles carrying hazardous substances associated with construction activities shall be required to avoid Third Street between E Street and Brookwood Avenue at all times.

With implementation of Mitigation Measure HAZ-3, any handling of hazardous materials would avoid the immediate vicinity of the New Horizon School & Learning Center and reduce the potential of hazardous substances affecting the New Horizon School & Learning Center sensitive receptor. With implementation of mitigation, the potential impact would be reduced to less than significant.

d. Be located on a site that 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? – *No Impact.*

As described above, the Proposed Project is not located at a known hazardous materials site and would not create a significant hazard to the public or the environment. Therefore, there would be no impact, and no mitigation is necessary.

e. For a project located within an airport land use plan area or, where such a plan has not been adopted, within 2 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.*

The Proposed Project is not located within 2 miles of a public airport or public use airport. Airports in the Proposed Project vicinity consist of Charles M. Schulz Sonoma County Airport located approximately 7.4 miles to the northwest of the E Street Bridge Fishway Extension site and approximately 10 miles to the west-northwest of the Melita Road Dam site, Santa Rosa Memorial Hospital Heliport (a private-use hospital heliport) approximately 0.5 mile to the northwest of the E Street Bridge Fishway Extension site and approximately 3.5 miles west of the Melita Road Dam site, and Belos Cavalos Airport (a private-use airport also known as Graywood Ranch Airport) approximately 7.8 miles to the east of the E Street Bridge Fishway Extension site and approximately 4.4 miles to the east of the Melita Road Dam site (AirNav 2022). Proposed Project activities would not interfere with airport operations, would not involve the use of any equipment that would affect aircraft using any airports in the County, and would not result in a substantial safety hazard to people residing or working in vicinity of airports. Therefore, there would be no impact.

f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? – *Less than Significant with Mitigation Incorporated.*

During construction and maintenance activities, infrequent one-lane road closures, which may cause delays, may be necessary on E Street for the E Street Bridge Fishway Extension site or Montgomery and Channel drives and Melita Road for the Melita Road Dam site. If lane closures or traffic generated by Proposed Project activities were to interfere with emergency response measures such that response times were extended, a significant impact would result. However, the Proposed Project would ensure that temporary lane closures are avoided or minimized and advanced notice is provided in the Proposed Project area to avoid inadequate emergency access by implementation of Mitigation Measure TRA-1 (Traffic Control Measures; see Section 3.17 [Transportation] for a full description). The Proposed Project would have a less-than-significant impact with implementation of mitigation on emergency response or evacuations during construction and maintenance.

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

Proposed Project construction and maintenance activities would not involve placement of people or habitable structures that would result in exposure to a significant risk of wildland fires. The Proposed Project area has a Wildfire Hazard Rating of Urban Fuels (urban

areas not expected to burn during wildfires), and the two sites range from Urban Fuels to Moderate Hazard rating (Geo Elements 2020). The Proposed Project area is within a Local Responsibility Area and is not within an area designated as a Very High Fire Hazard Severity Zone (CAL FIRE 2022a, 2022b). Therefore, this impact would be less than significant, and no mitigation is necessary.

3.10 Hydrology and Water Quality

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☒	☐	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	☒
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 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 offsite;	☐	☐	☐	☒
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	☐	☐	☐	☒
iv. impede or redirect flood flows?	☐	☐	☒	☐

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

Hydrology and Water Quality Setting

The climate in Sonoma County is classified as Mediterranean with warm, dry summers and mild, wet winters. Annual average precipitation in this region historically amounts to approximately 31 inches per year, with the majority occurring as rain that generally falls between November and April. Precipitation patterns in the region are influenced by local topography with mean annual precipitation generally increasing with elevation. Precipitation runoff brings higher flows in the winter and lower flows in the summer. Groundwater supports lower flows in Santa Rosa Creek during dry summer conditions (Sonoma Water 2020b).

Surface Water Quality. The Regional Water Quality Control Boards in California implement basin plans that characterize the region's natural water quality, water quality issues, and potential beneficial uses. The basin plans also define programs to achieve the water quality objectives (NCRWQCB 2018). The Proposed Project area is covered by North Coast Region Basin Plan within the Russian River Hydrologic Unit and is implemented by the NCRWQCB.

The Proposed Project area is in portions of Santa Rosa Creek that are highly urbanized. Pollutant types that currently exist in the creek come from a mix of urban, rural, agricultural, and undeveloped land uses within the Proposed Project vicinity and upstream. Runoff from urban areas can contain pollutants such as sediment, oil and grease, heavy metals, pesticides, and debris. Agricultural pollutants can include contaminants from chemical fertilizers and livestock. Rural residences can potentially contribute pollutants through faulty sewage disposal systems.

Groundwater Resources. Within Sonoma County, the principal water-bearing materials consist of alluvial deposits and sedimentary units of the valleys and volcanic rock.

Development in these areas increases surface runoff and reduces groundwater quality. Natural recharge occurs along streams, rivers, and through direct infiltration of precipitation through surficial and permeable portions of these water-bearing materials.

The Proposed Project is located in the Santa Rosa Valley-Rincon Valley Groundwater Basin within the North Coast hydrologic region (CDWR 2020). The Sustainable Groundwater Management Act was enacted in 2014 and requires governments and water agencies in high- and medium-priority basins to form Groundwater Sustainability Agencies (GSAs). These GSAs are responsible for managing groundwater sustainably and adopting Groundwater Sustainability Plans (GSPs). Santa Rosa Valley-Rincon Valley Groundwater Basin is designated as a "very low" priority, and no GSA has been formed and no GSP has been developed for the Proposed Project area.

Discussion of Potential Impacts

In accordance with CEQA, the Proposed Project could result in potentially significant impacts to Hydrology and Water Quality if it would:

a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality? – *Less than Significant with Mitigation Incorporated.*

Construction and maintenance activities associated with the Proposed Project would require work within the Santa Rosa Creek channel. Avoidance and minimization measures would be implemented to reduce the possibility of accidental releases of sediment and contaminants from ground disturbance during construction and maintenance activities. Cofferdams would be installed prior to conducting work below the OHWM, water would be filtered during dewatering, and poured concrete would be allowed to cure before making contact with flowing creek water.

Sonoma Water would implement Mitigation Measure HWQ-1 (Staging and Stockpiling of Materials) to minimize the potential for construction and maintenance activities to result in discharges that could degrade surface waters.

Mitigation Measure HWQ-1: Staging and Stockpiling of Materials

Sonoma Water shall require contractors, through contract specifications, and maintenance staff to implement the following:

1. *Staging shall occur on work areas, access roads, surface streets, designated stockpile areas, or other disturbed areas that are already compacted and only support ruderal vegetation. Similarly, all equipment and materials shall be contained within the existing service roads, paved roads, or other pre-determined*

staging and stockpile areas. Equipment and materials that contain lubricants and fuels shall not be staged within the creek channel.

2. *All project-related items, including equipment, stockpiled material, temporary erosion control treatments, and trash, shall be removed within 72 hours of construction completion.*
3. *As necessary, to prevent sediment-laden water from being released back into the channel during transport of spoils to disposal locations, truck beds shall be lined with an impervious material (e.g., plastic), or the tailgate blocked with wattles, hay bales, or other appropriate filtration material. Trucks may drain excess water by slightly tilting the loads and allowing the water to drain out through the applied filter, only within the active work area where the sediment is being loaded into the trucks.*
4. *No runoff from the staging areas shall be allowed to enter waters of the state, including the creek channel or storm drains, without being subjected to adequate filtration (e.g., vegetated buffer, hay wattles or bales, silt screens). The discharge of decant water from any temporary sediment stockpile or storage areas to waters of the state, including surface waters or surface water drainage courses, outside of the active project site, is prohibited.*

Implementation of additional mitigation measures would further limit the potential for impacts to surface and groundwater quality, including Mitigation Measure HAZ-1 (Spill Prevention and Response; e.g., drip pans would be used under machinery and soil piles would be covered) and Mitigation Measure BIO-5 (Revegetation of Riparian Areas). Implementation of these mitigation measures as well as Mitigation Measure HWQ-1 (Staging and Stockpiling of Materials) would reduce the level of impact to surface and groundwater quality to less than significant.

b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? – *No Impact.*

The Proposed Project is located in the Santa Rosa Valley-Rincon Valley Groundwater Basin (CDWR 2020). This basin is designated as a “very low” priority, and no GSP has been developed. The Proposed Project consists of improving fish passage at two locations and would not change the existing groundwater conditions. As such, the Proposed Project would not impact groundwater supplies or impede management, and there would be no 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:

The Proposed Project would not alter the existing drainage pattern of Santa Rosa Creek or increase impervious surfaces. Right bank enhancement and construction of an access

road at the E Street Bridge Fishway Extension site would occur outside of the stream bed, reduce erosion, and enhance access to the channel for maintenance purposes. Replacement of and improvements to the fishway extension and trash rack would allow for improved fish passage and reduce the amount of trash and debris flowing downstream. Improvements at the Melita Road Dam site would also improve fish passage. Temporary dewatering during construction and periodic maintenance would direct creek flow around the work areas but would not substantially change the drainage through Santa Rosa Creek. Below are responses to Section 3.10c sub-questions:

i. result in substantial erosion or siltation on- or off-site – *Less than Significant.*

As described in Section 3.7 (Geology and Soils), the Proposed Project would not substantially cause erosion or siltation. There would be a less-than-significant impact.

ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite – *No Impact*.

The structures to be constructed as part of the Proposed Project would replace infrastructure that already exists at the E Street Bridge Fishway Extension site. At the E Street Bridge Fishway Extension site, the Proposed Project would enhance function and improve access for maintenance of these structures and therefore would not change surface runoff or cause flooding. At the Melita Road Dam site, the Proposed Project would enhance fish passage and would not contribute to surface runoff. 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 – *No Impact.*

The Proposed Project would enhance fish passage and improve access for maintenance. It would not create or contribute additional runoff water and would not be a source of polluted runoff. There would be no impact.

iv. impede or redirect flood flows? – *Less than Significant.*

The Proposed Project would temporarily divert Santa Rosa Creek flows during construction in the summer low-flow season and would not impede or redirect flood flows that typically occur during winter. The Proposed Project would enhance fish passage and result in a less-than-significant effect on the existing drainage pattern. No mitigation is required.

d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? – *No Impact.*

The Proposed Project area is inland from the coast and is outside the influence of large waterbodies. Consequently, seiche or tsunami events could not influence the Proposed Project area. Implementing the Proposed Project would improve maintenance access to help prevent flooding at the E Street Bridge Fishway Extension site. The Proposed Project would not influence flooding at the Melita Road Dam site. Also, there would be no source of pollutants on site during the winter flood (inundation) season. Therefore, no impact from tsunami, seiche, or pollutants due to inundation would occur.

e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? – *Less than Significant.*

The Proposed Project is within the North Coast Region Basin Plan implemented by the NCRWQCB. The Basin Plan requirements would be followed through the conditions of the Proposed Project's 401 Water Quality Certification. In addition, the Proposed Project is not expected to violate any water quality standards. There is no GSP for the Proposed Project area. Overall, the Proposed Project would not conflict with or obstruct existing water quality or groundwater management plans. The impact would be less than significant, and no mitigation is required.

3.11 Land Use and Planning

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a. Physically divide an established community?	☐	☐	☐	☒
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

Land Use and Planning Setting

Santa Rosa's General Plan (Santa Rosa 2020a) designates the project sites for Core Mixed Use (E Street Bridge Fishway Extension site) and residential-very low density (Melita Road Dam site). The zoning classification for the E Street Bridge Fishway Extension site is Core Mixed Use-Downtown Station Area, and the zoning classification for the Melita Road Dam site is Rural Residential (Santa Rosa 2022b). The Core Mixed Use designation has no maximum for residential density but allows for residential, retail, office, office, and other urban uses. This land use classification allows for one single-family dwelling unit per lot and is intended to preserve the rural character and amenities of lands best used for low-density residential development. The Rural Residential designation is applied to areas of the City of Santa Rosa intended to accommodate residential neighborhoods with compatible agricultural uses, but where the primary uses are residential, and compatible accessory uses. The maximum allowable density ranges from 0.2 to 2 dwellings per acre (Santa Rosa, California City Code Title 20 Division 2 Chapter 20-22).

Discussion of Potential Impacts

In accordance with CEQA, the Proposed Project could result in potentially significant impacts to Land Use and Planning if it would:

a. Physically divide an established community? – *No Impact.*

The Proposed Project would not permanently affect access to any of the surrounding land uses, nor create any new permanent, physical barriers between developed areas.

Therefore, the Proposed Project would not divide an established community, and there would be no impact.

b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? – *No Impact.*

The Proposed Project's fish passage and maintenance activities would not conflict with the current land use designations or regulations. Proposed Project activities would not result in new development, and land would not be altered from its present use. Implementation of the Proposed Project would improve fish passage at the two sites. The Proposed Project would support existing land use plans and would not result in incompatibilities with existing and adjacent land uses. The Proposed Project would not cause an environmental impact due to a conflict with a land use plan, policy, or regulation, and there would be no impact.

3.12 Mineral Resources

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

Mineral Resources Setting

There are no mineral resource areas in the Proposed Project area identified in the City of Santa Rosa General Plan 2035 (Santa Rosa 2020a).

Discussion of Potential Impacts

In accordance with CEQA, the Proposed Project could result in potentially significant impacts to Mineral Resources if it would:

a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? – *No Impact.*

The Proposed Project would not involve any activities that would result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state. Therefore, there would be no impact.

b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan? – *No Impact.*

The Proposed Project would not involve any activities that would result in the loss of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. Therefore, there would be no impact.

3.13 Noise

Would the Project result in:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
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 a local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b. Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
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 2 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?	☐	☐	☐	☒

Noise Setting

Section 17-16 of the City of Santa Rosa's Noise Ordinance limits permanent noise levels produced by stationary mechanical equipment to 60 dBA (A-weighted decibels, a measurement of sound) during daytime hours (7:30 a.m. to 6:30 p.m.), to 55 dBA during evening hours (6:30 p.m. to 10:00 p.m.), and to 50 dBA at night (10:00 p.m. to 7:30 a.m.) at single-family residential property lines. While the City's Noise Ordinance does not set limits for construction noise, Section 17-16.120 provides that it is unlawful for any person to operate any machinery, equipment, pump, fan, air-conditioning apparatus, or similar mechanical device in any manner so as to create any noise which would cause the noise level at the property line of any property to exceed the ambient base noise level by more than five decibels. (Prior code § 27.20).

The primary contributors to the noise environment in the Proposed Project area include vehicle traffic on adjacent roads, airplane over-flights, sounds emanating from

residences, and naturally occurring sounds such as wind and wildlife. The nearest residential receptor to the E Street Bridge Fishway Extension site is 300 feet to the north at 810 Second Street. The nearest residential receptor to the Melita Road Dam site is 125 feet to the northwest at 5850 Melita Road.

Discussion of Potential Impacts

In accordance with CEQA, the Proposed Project could result in potentially significant impacts to Noise Resources if it would:

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 a local general plan or noise ordinance, or applicable standards of other agencies? – *Less than Significant with Mitigation Incorporated.*

The Proposed Project is located within the City of Santa Rosa Urban Boundary. As noted above, the City does not have standards or ordinances specifically limiting construction noise. Section 17-16.120 of the Santa Rosa City Code limits noise from equipment to not exceeding the ambient base noise level by more than five decibels.

Construction of the Proposed Project would require heavy equipment, though use would be temporary and localized. Table 3.13-1 lists the anticipated equipment use period for construction of the Proposed Project and the reference noise level that would be generated by the equipment. The reference noise levels presented in Table 3.13-1 are based on information provided by the U.S. Department of Transportation (USDOT 2006).

Table 3.13-1. Anticipated Equipment Use Periods and Reference Noise Levels for the Proposed Project.

Equipment Description	Anticipated Equipment Use Period*	Reference Noise Level (Lmax at 50 feet [dBA])**
Dump truck	21 weeks	76
Concrete mixer truck	21 weeks	79
Crane	21 weeks	81
Excavator	21 weeks	81
Bulldozer	21 weeks	82

*Equipment use would be intermittent and vary from day to day throughout the given use period.

**Lmax is the highest measure of magnitude of the varying noise source quantity within the measuring period.
Reference noise level source: USDOT (2006)

As shown in Table 3.13-1, the typical noise levels that would be produced during construction would range from 76 to 82 dBA at 50 feet and occur intermittently during the 7-month construction period. The equipment that would produce the loudest noise during

construction would be the bulldozer (82 dBA at 50 feet), but it is not significantly louder than the other equipment. Most of the construction would also occur within the creek, and existing vegetation would provide some level of shielding. Mobile noise sources typically attenuate at a rate of 3.0 to 4.5 dBA per doubling of distance, whereas noise generated by stationary sources typically attenuates at a rate of 6.0 to 7.5 dBA per doubling of distance depending on the ground surface and obstructions between the noise source and the receiver. Hard and flat surfaces, such as concrete or asphalt, typically have an attenuation rate of 3.0 dBA per doubling of distance. Soft surfaces, such as uneven or vegetated terrain, typically have an attenuation rate of 4.5 dBA per doubling of distance. The nearest sensitive noise receptor at the E Street Bridge Fishway Extension site is located approximately 300 feet north of the site. At the Melita Road Dam site, the nearest sensitive noise receptor is a residence approximately 125 feet northwest of the site. At this distance, the loudest equipment may still intermittently be above ambient noise levels.

The Proposed Project would restrict construction and maintenance activities to the hours of 7:00 a.m. to 7:00 p.m. Monday through Friday and 8:00 a.m. to 6:00 p.m. on Saturdays. No construction or maintenance would be scheduled on Sundays or on holidays as stipulated in Mitigation Measure NOI-1 (Avoid and Minimize Construction Noise). Limiting construction and maintenance activities to the stated time periods would ensure that construction noise would not result in a substantial temporary or periodic increase in ambient noise levels that would result in annoyance or sleep disturbance of nearby sensitive receptors. Mitigation Measure NOI-1 (Avoid and Minimize Construction Noise) also requires power equipment to be equipped with sound control devices. Construction of the Proposed Project would resemble the existing maintenance activities at the E Street Bridge Fishway Extension site and other previously completed construction activities in the vicinity of both sites, and it would not notably increase noise levels. There would be no permanent increase in ambient noise levels as a result of implementation of the Proposed Project.

Mitigation Measure NOI-1: Avoid and Minimize Construction Noise

Sonoma Water shall require contractors, through contract specifications, and maintenance staff to implement the following:

1. *Work shall be limited to the hours of 7:00 a.m. to 7:00 p.m. Monday through Friday, and 8:00 a.m. to 6:00 p.m. on Saturday. No construction shall be permitted on Sunday or on holidays.*
2. *Power equipment (vehicles, heavy equipment, and hand equipment such as chainsaws) shall be equipped with manufacturer's sound-control devices, or alternate sound control that is no less effective than those provided as original equipment. Equipment shall be operated and maintained to meet applicable*

standards for construction noise generation. No equipment shall be operated with an unmuffled exhaust.

With incorporation of mitigation, there would be a less-than-significant impact to ambient noise levels in the vicinity of the Proposed Project from construction and maintenance activities.

b. Generation of excessive groundborne vibration or groundborne noise levels? – *Less than Significant.*

Construction equipment can generate perceptible groundborne vibration and groundborne noise, which varies depending on the equipment type, weight, and soil/pavement conditions. Construction of the Proposed Project would include the use of equipment that generates groundborne vibration. The nearest sensitive receptors (residences) are located approximately 125 feet to the northwest of the Melita Road Dam site and 300 feet north of the E Street Bridge Fishway Extension site. People residing in these areas could potentially be exposed to temporary groundborne vibration or groundborne noise levels during construction of the Proposed Project. Continuous vibrations with a peak particle velocity of approximately 0.1 inch/second begin to cause annoyance (Caltrans 2015).

Groundborne vibration typically attenuates (diminishes) over short distances. Table 3.13-2 lists the reference peak particle velocity (PPV; a measurement of vibration) for typical construction equipment at a distance of 25 feet and the attenuated PPV at 125 and 300 feet (the distance from the Proposed Project to the nearest receptors). The reference vibration source levels listed in Table 3.13-2 are based on information provided by the Federal Transit Administration (FTA 2018).

Table 3.13-2. Vibration Source Levels for Construction Equipment at 25 Feet and Attenuated at 125 Feet (Proposed Project Distance to Nearest Sensitive Noise Receptor).

Equipment	Reference PPV at 25 Feet (inch/second)*	Attenuated PPV at 125 Feet (inch/second)**	Attenuated PPV at 300 Feet (inch/second)**
Large bulldozer	0.089	0.008	0.002
Loaded trucks	0.076	0.007	0.002

*PPV = peak particle velocity (a measurement of vibration).

**Attenuated PPV = PPVref x (25/D)1.5 where attenuated PPV = peak particle velocity of the equipment adjusted for distance (inch/second), PPVref = the source reference vibration level at 25 feet (inch/second), and D = distance from the equipment to the receptor (feet).

The bulldozer would produce the greatest groundborne vibration levels during construction of the Proposed Project. The vibration levels generated by the bulldozer at the nearest sensitive receptor (approximately 125 feet away) to the Proposed Project would be a PPV of 0.008 inch/second. Given the distance from the construction area to the nearest sensitive receptor and the anticipated construction equipment, the PPV would be less than the vibration threshold of potential annoyance of 0.1 inch/second. Therefore, construction-generated vibration is not expected to significantly impact sensitive receptors, and impacts would be less than significant.

Additionally, by implementing Mitigation Measure NOI-1 (Avoid and Minimize Construction Noise), the Proposed Project would restrict construction and maintenance activities to the hours of 7:00 a.m. to 7:00 p.m. Monday through Friday and 8:00 a.m. to 6:00 p.m. on Saturdays, further reducing the potential for vibration impacts on sensitive receptors.

c. For a project located within the vicinity of a private airstrip or an airport land use plan area, or, where such a plan has not been adopted, within 2 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.*

The Proposed Project is not located within or near an airport land use area or the vicinity of a private airstrip as described in Section 3.9 (Hazards and Hazardous Materials). Therefore, there would be no impact.

3.14 Population and Housing

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b. Displace a substantial number of existing people or housing units, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Population and Housing Setting

There are no residences located directly within the two project sites. The E Street Bridge Fishway Extension site is located in an area designated as Core Mixed Use, and the areas immediately adjacent to the site include businesses and industrial buildings. The Melita Road Dam site is located in an area designated as residential-very low density. The nearest residential receptor to the E Street Bridge Fishway Extension site is 300 feet to the north at 810 Second Street. The nearest residential receptor to the Melita Road Dam site is 125 feet to the northwest at 5850 Melita Road.

Discussion of Potential Impacts

In accordance with CEQA, the Proposed Project could result in potentially significant impacts to Population and Housing if it would:

a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? – *No Impact.*

The Proposed Project would not involve new development or extension of infrastructure that could directly or indirectly induce population growth in the area, nor would it create demand for additional housing. Therefore, there would be no impact.

b. Displace a substantial number of existing people or housing units, necessitating the construction of replacement housing elsewhere? – *No Impact.*

The Proposed Project would not displace any existing housing units or persons and would not require construction of replacement housing elsewhere. Therefore, there would be no impact.

3.15 Public Services

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:				
i. Fire protection?	☐	☐	☐	☒
ii. Police protection?	☐	☐	☐	☒
iii. Schools?	☐	☐	☐	☒
iv. Parks?	☐	☐	☒	☐
v. Other public facilities?	☐	☐	☒	☐

Public Services Setting

Fire Protection. The City of Santa Rosa's Fire Department provides fire protection to the City and contiguous areas, including the Proposed Project area. The department has 10 fire stations, each with one fire engine (Santa Rosa Fire Department 2022). The department's goal for response time is to arrive at fire suppression incidents within 5 minutes of notification 90% of the time. Nearby fire stations include Station 1 at 955 Sonoma Avenue (0.4 mile east of the E Street Bridge Fishway Extension site) and Station 6 at 205 Calistoga Road (2.6 miles northwest of the Melita Road Dam site).

Police Protection. The City of Santa Rosa patrols on a 24-hour basis and is served by 256 staff (Santa Rosa Police 2021). The department responds to emergencies within approximately 7 to 21 minutes, depending on time of day, location, and the number of requests for services (Santa Rosa Police 2021).

Schools. The New Horizon School & Learning Center, located at 827 Third Street, is approximately 0.14 mile north of the E Street Bridge Fishway Extension site, and the Austin Creek Elementary School is located 0.52 mile north of the Melita Road Dam site.

Parks. Santa Rosa's General Plan (Santa Rosa 2020a) designates the Proposed Project area for Core Mixed Use (E Street Bridge Fishway Extension site) and residential-very low density (Melita Road Dam site). Nearby parks include the Sonoma Avenue Park, approximately 430 feet southwest of the E Street Bridge Fishway Extension site, and the Trione-Annadel State Park, approximately 200 feet south of the Melita Road Dam site.

Discussion of Potential Impacts

In accordance with CEQA, the Proposed Project could result in potentially significant impacts to Public Services if it would:

i and ii. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services: fire protection; police protection? – *No Impact.*

The Proposed Project would not increase population levels, nor would it alter the existing population distribution temporarily or permanently that could increase the need for additional governmental facilities. The Proposed Project would not increase demand for fire and police protection, and there would be no impact.

iii. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services: schools? – *No Impact.*

The Proposed Project does not include any activity that would affect the demand for schools or other public facilities, and while there are schools in the vicinity of the Proposed Project (0.14 mile north of the E Street Bridge Fishway Extension site and 0.52 mile north of the Melita Road Dam site), the Proposed Project would not affect any schools' service ratios or other performance objectives. Therefore, the Proposed Project would have no adverse impact on public facilities, including schools.

iv and v. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause

significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services: parks; other public facilities? – *Less than Significant.*

The Proposed Project's staging area along Channel Drive at the Melita Road Dam site and E Street near the E Street Fishway Extension site are owned by Sonoma Water and the City of Santa Rosa, respectively. These areas are available to the public and are typically used for transit and parking by visitors to the nearby Trione-Annadel State Park and Downtown Santa Rosa. The Proposed Project would temporarily limit public use of the Sonoma Water and City-owned property during construction and maintenance activities, but it would not result in a need for new or physically altered governmental facilities. Therefore, there would be a less-than-significant impact, and no mitigation is required.

3.16 Recreation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a. Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b. Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Recreation Setting

The specific footprint of the Proposed Project is not located in an area actively used for recreational purposes, but recreational uses occur in the vicinity of the two sites, including Trione-Annadel State Park adjacent to the Melita Road Dam site.

Discussion of Potential Impacts

In accordance with CEQA, the Proposed Project could result in potentially significant impacts to Recreation if it would:

a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated – *Less than Significant.*

As noted in Section 3.14 (Population and Housing), the Proposed Project would not result in population growth that could increase the use of existing neighborhood and regional parks.

Project staging of equipment and materials would occur in a public street near the E Street Bridge Fishway Extension site and along Channel Drive in a gravel parking area owned by Sonoma Water that is often used by the public to access Trione-Annadel State Park at the Melita Road Dam site. During construction, all or parts of these streets and parking

areas may be temporarily closed to public access, which could result in an increase in the use of other streets or lots. Specifically, the State Park designated parking facility located at 6201 Channel Drive in Santa Rosa (approximately 0.5 mile southeast of the Melita Road Dam site) may have increased use if the other lots are temporarily closed to public access. However, the increase in the use of the parking facilities is anticipated to be minor, would be intermittent and temporary in nature, and would cease following project construction. The minor and temporary increase in the use of the State Park designated parking facility would not cause or accelerate substantial deterioration of the facility. Therefore, the potential impacts to recreational facilities would be less than significant, and no mitigation is required.

b. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment – *No Impact.*

The Proposed Project does not include recreational facilities and would not require the creation or expansion of recreational facilities. Therefore, there would be no impact.

3.17 Transportation

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

Transportation Setting

The E Street Bridge Fishway Extension site is located in Santa Rosa Creek between Sonoma Avenue and Second Street, within a developed commercial and residential area. This bridge contains a sidewalk for pedestrians. The Melita Road Dam site is bounded by residential streets, including Montgomery Drive and Melita Road. Channel Drive is used by hikers and bicyclists to access Trione-Annadel State Park, and there are bike and pedestrian lanes located on E Street, just west of the E Street Bridge Fishway Extension site.

There are no public transportation services along the Proposed Project area roadways. The nearest service along both the E Street Bridge Fishway Extension site and Melita Road Dam site is a bus route that connects the Santa Rosa area and Oakmont, along Third Street and Highway 12, at an approximately 0.1- and 0.5-mile walking distance, north of the two sites.

City of Santa Rosa General Plan 2035 and Bicycle & Pedestrian Master Plan. The City of Santa Rosa General Plan 2035 Transportation Element contains goals and

policies to reduce traffic congestion and support alternative modes of transportation, including the following:

Goal T-B: Provide a safe, efficient, free-flowing circulation system.

Goal T-J: Provide attractive and safe streets for pedestrians and bicyclists.

Sonoma County Transportation Authority Moving Forward 2050. The Sonoma County Transportation Authority's (SCTA's) Comprehensive Transportation Plan, called Moving Forward 2050, outlines the following goals for the transportation system to be:

1. Connected and reliable
2. Safe and well maintained
3. Community oriented and place-based
4. Zero-emissions (Sonoma County 2021)

To support these goals, Moving Forward 2050 proposes road and transit projects that would improve the County transportation system and improve mobility for county residents.

Discussion of Potential Impacts

In accordance with CEQA, the Proposed Project could result in potentially significant impacts to Transportation if it would:

a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? – *No Impact.*

The Proposed Project is a construction and maintenance project located primarily within Santa Rosa Creek. The Proposed Project would not affect any of the existing bridge infrastructure at E Street Bridge Fishway Extension or adjacent roadways within the Proposed Project area. There are no bicycle or pedestrian facilities in the Proposed Project area, aside from an existing bike line and sidewalk on top of the E Street Bridge. The Proposed Project includes construction of a permanent access road at the E Street Bridge Fishway Extension site and a temporary access road at the Melita Road Dam site. As described in Section 3.9.f (Hazards and Hazardous Materials), construction and maintenance activities may require infrequent one-lane road closures on E Street, Montgomery and Channel drives, and Melita Road, which may cause delays of short duration immediately adjacent to the Proposed Project site. When built, the access road would only be used by Sonoma Water's contractor and maintenance staff and would not be open to the public.

As the Proposed Project would not affect the roadway systems or conflict with alternative transportation goals, it would be consistent with the goals and objectives of the City of Santa Rosa and SCTA Comprehensive Transportation Plan by maintaining the existing

roadways in the Proposed Project area. There would be no conflict with City of Santa Rosa and County programs, plans, ordinances, or policies regarding transportation and therefore no impact.

b. Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)? – *Less than Significant.*

CEQA Guidelines Section 15064.3, subdivision (b) describes specific considerations for evaluating a project's transportation impacts, which is measured by "vehicle miles traveled" (VMT) and refers to the amount and distance of automobile travel that is attributable to a project.

The City of Santa Rosa has published final draft *Vehicle Miles Traveled Guidelines* (Santa Rosa 2020b) to identify key elements required for preparing and reviewing transportation analysis studies in Santa Rosa. The City's final draft guidelines require a transportation analysis when any one or more of the following conditions are met:

1. "The project has the potential to create a significant environmental transportation impact under CEQA [see below criteria from OPR].
2. A project with unique land uses or operating characteristics, as determined by the City Traffic Engineer or his/her/their designee.
3. The project requires discretionary planning approval and was not previously analyzed under a prior transportation analysis or similar study.
4. A transportation project that is likely to lead to a substantial or measurable increase in VMT." (Santa Rosa 2020b)

The City's final draft guidelines also identify thresholds of significance, relying on the California Governor's Office of Planning and Research (OPR) published *Technical Advisory on Evaluating Transportation Impacts in CEQA* (OPR 2018) (referred to herein as the OPR Technical Advisory), which provides guidelines on the implementation of SB 743. The thresholds of significance are as follows:

"In accordance with OPR's guidelines for CEQA, a project could have significant transportation impact on the environment if it:

a) Conflicts with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities;
b) Conflicts with or is inconsistent with CEQA Guidelines section 15064.3(b);
c) Substantially increases hazards due to geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
d) Results in inadequate emergency access." (Santa Rosa 2020b)

In addition, CEQA Guidelines Section 15064.3(b) provides the following criteria for analyzing transportation impacts:

1. “Land Use Project. Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.
2. Transportation Projects. Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, such as in a regional transportation plan EIR [environmental impact report], a lead agency may tier from that analysis.”

The Proposed Project is not a land use or transportation project as described in CEQA Guidelines Section 15064.3(b). The Proposed Project is a construction project to improve fish passage in Santa Rosa Creek. A VMT analysis is not required by the City of Santa Rosa’s guidelines for the following reasons: 1) the Proposed Project does not have the potential to create a significant environmental transportation impact per CEQA Guidelines Section 15064.3(b) (not a land use or transportation project); 2) it is not a project with unique land uses or operating characteristics; 3) it does not require discretionary planning approval and was not previously analyzed under a prior transportation analysis or similar study; and 4) it is not a transportation project that is likely to lead to a substantial or measurable increase in VMT.

The Proposed Project’s construction and maintenance activities would not generate a long-term net increase in VMT. Construction activities would occur over a period of 7 months extending over 2 separate years. Maintenance activities would also occur but would not generate more than two one-way trips on a monthly basis. In total, the Proposed Project would result in up to 30 daily one-way trips for worker commutes per site primarily before or after peak traffic hours. It would also result in approximately 112 total one-way trips over the 80 days of construction for soil hauling, asphalt, and water trucks at the E Street Bridge Fishway Extension site, as well as approximately 310 total one-way trips over the 60 days of construction for soil hauling and water trucks at the Melita Road Dam site. Parking for worker vehicles and construction vehicles would be available in designated on-site staging areas or adjacent roads and parking lots. Maintenance of the Proposed Project would not generate more than two one-way trips on a monthly basis and would not result in a long-term net increase in VMT.

Per the Governor's Office of Planning and Research's Technical Advisory, On Evaluating Transportation Impacts in CEQA (OPR 2018), the term "automobile" in Guidelines Section 15064.3 means cars and light trucks, which only includes the "Worker commute" category of trips above. Per this advisory, projects with less than 110 worker commute trips per day can be screened as small projects with less-than-significant VMT impacts (OPR 2018). As the Proposed Project would result in 30 worker commute trips per day for each site, it can be screened as a small project that has a less-than-significant impact.

Therefore, the Proposed Project would not conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). Impacts would be less-than-significant.

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.*

The Proposed Project would install a new access road at the E Street Bridge Fishway Extension site. It would only be used by Sonoma Water's contractor and maintenance staff and would not be open to the public. Additionally, the new access road would adhere to City Public Storm Drain Standards and City of Santa Rosa Standard 216 – Utility Access Road, which precludes it from including geometric design features or incompatible uses. There would be no increase in hazards generated by the Proposed Project or any changes to the existing designs or uses of roadways. Therefore, there would be no impact.

d. Result in inadequate emergency access? – *Less than Significant with Mitigation Incorporated.*

The Proposed Project does not include any structures that would permanently block or constrain roadways and would not result in inadequate emergency access. As described in Section 3.9.f (Hazards and Hazardous Materials), construction and maintenance activities may require infrequent one-lane road closures on E Street, Montgomery and Channel drives, and Melita Road, which may cause delays of short duration immediately adjacent to the Proposed Project site. Operation of the Proposed Project would resemble the existing operations at the sites and would not result in inadequate emergency access. If lane closures or traffic generated by Proposed Project construction and maintenance activities were to interfere with emergency access such that response times were extended, a significant impact would result. To minimize the potential impact, Mitigation Measure TRA-1 (Traffic Control Measures) would be implemented during construction and maintenance activities to ensure emergency access is maintained.

Mitigation Measure TRA-1: Traffic Control Measures

Sonoma Water shall require contractors, through contract specifications, and maintenance staff to implement the following:

1. *Construction and activities shall be staged and conducted in a manner that maintains two-way traffic flow on maintenance public roadways in the vicinity of the work site to the maximum extent practicable. If temporary lane closures are necessary, they shall be coordinated with the City of Santa Rosa at least seven days prior to commencement of closure and scheduled to occur outside of peak traffic hours (7:00 – 10:00 a.m. and 3:00 – 6:00 p.m.). Work shall be coordinated so that emergency vehicles and personnel shall be provided immediate access at all times.*
2. *Traffic control and safety precautions shall conform to the "California Manual on Uniform Traffic Control Devices" (latest edition), and applicable provisions of the City of Santa Rosa encroachment permits.*
3. *Traffic control and safety precautions shall provide safe passage for vehicular and pedestrian traffic through the work at all times.*
4. *Subject to encroachment permit requirements, traffic on two-lane streets may be reduced to one lane provided that restriction of traffic flow, flaggers, cones, signs, and barricades are furnished as required by Sonoma Water. Traffic shall be permitted equal flow time in each direction.*
5. *At least seven days prior to commencement of work, notify residents along the Proposed Project roadways, in writing, that traffic flows will be subject to detours and/or delays, and that access to individual driveways may be disrupted during working hours. Notice shall also be provided in writing to the property owner.*
6. *At least seven days prior to commencement of work, post notifications in the project area to inform drivers of impending construction work and likely delays and detours.*
7. *Access for driveways and private roads shall be maintained. If brief periods of construction would temporarily block access, property occupants would be notified, in writing, at least three days in advance of blocking property occupants' driveways. Notice shall also be provided in writing to the property owner.*
8. *Adequate off-street parking shall be provided or designated public parking areas shall be used for workers' personal vehicles and construction-related vehicles not in use through the maintenance period.*

The infrequent, short duration one-lane road closures adjacent to the Proposed Project sites would not result in inadequate emergency access. With implementation of mitigation, the impact would be less than significant.

3.18 Tribal Cultural Resources

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 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:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a. 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	☐	☐	☐	☒
b. 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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

Tribal Cultural Resources Setting

Public Resources Code Section 21074 defines Tribal cultural resources as either of the following:

- Sites, features, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that are either of the following: a) included or determined to be eligible for inclusion in the California Register of Historical Resources; or b) included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

- 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 Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this analysis, the lead agency shall consider the significance of the resource to a California Native American Tribe.

Native American Outreach. On December 20, 2022, Sonoma Water notified the Tribes who have requested CEQA consultation on Sonoma Water projects regarding the initiation of the Proposed Project in accordance with AB 52 and the CEQA Guidelines. Sonoma Water received a formal request from Federated Indians of Graton Rancheria for Tribal consultation. Consultation with the Federated Indians of Graton Rancheria included Sonoma Water's sharing of the cultural resources information prepared for the Proposed Project, measures proposed for the Proposed Project, and initial evaluation of potential for cultural and Tribal cultural resources impacts.

On March 23, 2023, Anchor QEA, on behalf of Sonoma Water requested a search of the Sacred Lands File and a list of Tribes that are traditionally and culturally affiliated with the geographic area of the Proposed Project from the NAHC. The NAHC responded on April 19, 2023, stating that the search of the Sacred Lands File was negative and providing a list of Tribes.

Discussion of Potential Impacts

In accordance with CEQA, the Proposed Project could result in potentially significant impacts to Tribal Cultural Resources if it would cause a substantial adverse change in the significance of a Tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, or 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:

a. 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) – *No Impact.*

As described in Section 3.5, there are no buildings or structures listed in, or eligible for listing, in the NRHP or the California Register of Historical Resources recorded within the Proposed Project area. Therefore, there would be no impact.

b. 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 – *Less than Significant with Mitigation Incorporated.*

Previously unrecorded archaeological sites could be Tribal cultural resources. There is the potential to uncover previously unidentified archaeological resources during ground disturbance. The disturbance or damage of a previously unidentified Tribal cultural resource would be a potentially significant impact.

Implementation of Mitigation Measure TCR-1 (Tribal Monitor During Ground-disturbing Activities), Mitigation Measure CUL-1 (Inadvertent Discovery of Historical or Archaeological Resources and Worker Awareness Training), and Mitigation Measure CUL-2 (Inadvertent Discovery of Human Remains) would minimize the potential for the Proposed Project to adversely affect Tribal cultural resources by ensuring a Tribal Monitor is present during ground-disturbing activities, requiring worker awareness training, halting work, and implementing data recovery or preservation procedures.

Mitigation Measure TCR-1: Tribal Monitor During Ground-Disturbing Activities

During ground-disturbing activities, a representative from a culturally affiliated Tribe shall be present to monitor ground-disturbing activities.

With implementation of Mitigation Measures TCR-1, CUL-1, and CUL-2, potential impacts would be reduced to less than significant.

3.19 Utilities and Service Systems

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
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?	☐	☒	☐	☐
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c. Result in a determination by the waste water treatment provider, which serves or may serve the project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
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?	☐	☐	☒	☐
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

Utilities and Service Systems Setting

Natural gas and electricity within the City of Santa Rosa is provided by PG&E through established distribution networks. The City's water supply is largely derived from the Russian River watershed and is delivered by the Sonoma Water. The City receives a

maximum of 56.6 million gallons of water per day up to an annual volume of 29,100 acre feet. Wastewater from the City is treated at the Laguna Subregional Wastewater Treatment Plan and is reclaimed in the Santa Rosa Subregional Water Reclamation System. The current system's rated capacity is 21.34 million gallons per day (Santa Rosa 2020a). A PG&E gas line is located on the downstream side of the Melita Road Dam at the Melita Road Dam site.

Discussion of Potential Impacts

In accordance with CEQA, the Proposed Project could result in potentially significant impacts to Utilities and Service Systems if it would:

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? – *Less than Significant with Mitigation Incorporated.*

The Proposed Project includes bank enhancement, maintenance access improvements, and other elements to improve fish passage along Santa Rosa Creek. The Proposed Project does not include any uses, features, or facilities that would require potable water, generate wastewater, electric power, natural gas, or telecommunications or relocations of such facilities. The Proposed Project would not expand the capacity of any existing storm water drainage facility. Impacts to the existing PG&E gas line at the Melita Road Dam site would be avoided by implementing Mitigation Measure HAZ-2 (Existing Gas Line Protection) to ensure that the existing gas line is protected and no accidental gas release occurs. The Proposed Project would not affect the existing underground utility line. As such, there would be a less-than-significant impact with mitigation related to water and wastewater facilities, storm water drainage, or other utility.

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

The Proposed Project does not involve future development requiring water supply (see Section 3.19a). The Proposed Project may require water for dust control during construction and maintenance activities, on-site vehicle cleaning, and irrigation of seeds and young plants associated with revegetation. These water uses would be infrequent, short-term, and provided by a water truck that is supplied from a nearby water hydrant or other source. Thus, this impact would be less than significant, and no mitigation would be required.

c. Result in a determination by the wastewater treatment provider that serves or may serve the Project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments? – *No Impact.*

The Proposed Project does not involve development requiring wastewater treatment (see Section 3.19a). Therefore, there would be 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.*

The Proposed Project would not create a permanent source of solid waste; however, there would be small amounts of debris and trash generated during construction and maintenance activities. Debris and trash would be regularly removed and disposed of at the County Central Landfill or similar facility that is compliant with federal, state, and local regulations. The Proposed Project would not generate solid waste in excess of state or local standards or in excess of local infrastructure or otherwise impair attainment of solid waste goals. This impact would be less than significant, and no mitigation is required.

e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste? – *Less than Significant.*

The Proposed Project would generate a small amount of debris and trash during construction and maintenance activities and would comply with all federal, state, and local regulations related to solid waste. Therefore, there would be a less-than-significant impact, and no mitigation is required.

3.20 Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☒	☐	☐
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?	☐	☒	☐	☐
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐

Wildfire Setting

The Proposed Project area is located within a Local Responsibility Area (CAL FIRE 2022a) and the service area of the City of Santa Rosa's Fire Department. Local fire districts are responsible for fire suppression and prevention within Local Responsibility Areas. The City's Community Wildfire Protection Plan (CWPP) was approved by the City in 2020 (Geo Elements 2020). The CWPP identifies the E Street Bridge Fishway Extension and Melita Road Dam sites with a Wildfire Hazard Rating of "Urban Fuels," indicating urban areas that would not be expected to burn during wildfire. Areas near the Proposed Project area range from Urban Fuels to Moderate hazard rating (Geo Elements 2020). A small portion of Santa Rosa, approximately 1.7 miles north of the Melita Road

Dam site, is designated as a Very High Fire Hazard Severity Zone (CAL FIRE 2022b). Additionally, the mountainous areas outside of urban Santa Rosa to the north, west, and south of the Melita Road Dam site are state responsibility areas with High to Very High Wildfire Hazard ratings (Geo Elements 2020; CAL FIRE 2022b).

Discussion of Potential Impacts

In accordance with CEQA, the Proposed Project could result in potentially significant impacts to Wildfire if it would be located in or near state responsibility areas or lands classified as very high fire hazard severity zones and would:

a. Substantially impair an adopted emergency response plan or emergency evacuation plan? – *Less than Significant with Mitigation Incorporated.*

The E Street Bridge Fishway Extension and Melita Road Dam sites have a Wildfire Hazard Rating of Urban Fuels, and areas near the sites range from Urban Fuels to Moderate Hazard rating (Geo Elements 2020). A small portion of Santa Rosa approximately 1.7 miles north of the Melita Road Dam site is designated as a Very High Fire Hazard Severity Zone, and the mountainous areas surrounding the Proposed Project area have a High to Very High Wildfire Hazard Rating (CAL FIRE 2022b; Geo Elements 2020). During construction activities, infrequent one-lane road closures, which may cause delays, may be necessary. If lane closures or traffic generated by Proposed Project activities were to interfere with emergency response measures such that response times were extended, a significant impact would result. However, the Proposed Project would not result in inadequate emergency access, as described in Section 3.17d (Transportation). Implementation of Mitigation Measure TRA-1 (Traffic Control Measures) during construction and maintenance activities would ensure that emergency access is maintained. The Proposed Project would have a less-than-significant impact on emergency response or evacuation planning with implementation of mitigation.

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 with Mitigation Incorporated.*

The Proposed Project area consists of concrete, metal, and grouted rock structures, asphalt and gravel roads, Santa Rosa Creek, and riparian/wetland vegetation that is Urban Fuels Hazard rating (Geo Elements 2020). Construction and maintenance of the Proposed Project would not exacerbate the risk of wildfire. Also, conditions at the sites would not exacerbate wildfire risks. Work crews would only be on site during temporary construction (7 months extending over 2 separate years) and maintenance (intermittent) activities. The E Street Bridge Fishway Extension site is in central Santa Rosa and has multiple emergency access routes for work crew evacuation, including E Street.

Montgomery Drive and Channel Drive are surface roads that provide emergency access routes for work crew evacuation from the Melita Road Dam site. The Proposed Project would not result in inadequate emergency access, as described in Section 3.17d (Transportation). Implementation of Mitigation Measure TRA-1 (Traffic Control Measures) during construction and maintenance activities would ensure emergency access is maintained. As such, the Proposed Project would minimize the risk of wildfire and minimize the exposure of occupants to wildfire pollutants or uncontrolled wildfires to less-than-significant with incorporation of mitigation.

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.*

The Proposed Project's activities consist of construction and repair of fish passage-related structures that would not increase the risk of wildfire. The Proposed Project would not require the installation or maintenance of infrastructure such as fuel breaks, emergency water sources, power lines, or other utilities that may exacerbate fire risk. One access road would be constructed at the E Street Bridge Fishway Extension site to allow maintenance access to the fishway extension. This access road would not increase fire risk and would be constructed consistent with City of Santa Rosa and other relevant regulations to prevent environmental impacts (Section 2.4 [Proposed Project Description]). Therefore, the impact would be less than significant, and no mitigation is required.

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? – *Less than Significant.*

The Proposed Project consists of improving fish passage and includes right bank enhancement, creation of an access road, fishway extension and trash rack replacement and improvements at the E Street Bridge Fishway Extension site, and construction of non-grouted rock weir step pools at the Melita Road Dam site. Damage to the flood control structures, which are primarily concrete, metal, and grouted rock and are in the Santa Rosa Creek, from wildfire is very unlikely. Slopes at the E Street Bridge Fishway Extension site would be improved as part of the Proposed Project, reducing the likelihood of post-fire slope instability or runoff. As such, post-fire impacts from slope instability, drainage changes, landslides, or flooding are very unlikely. Therefore, the impact would be less than significant, and no mitigation is required.

3.21 Mandatory Findings of Significance

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
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?	☐	☒	☐	☐
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.)	☐	☒	☐	☐
c. Does the Project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Discussion of Potential Impacts

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 with Mitigation Incorporated.*

Potentially significant impacts from the Proposed Project were identified for species identified as a candidate, sensitive, or special-status species; riparian habitats; wetlands and non-wetland waters; fish; inadvertent discovery of cultural resources and human remains; and unidentified Tribal cultural resources. For more details, please refer to the impact discussions presented in Sections 3.4c (Biological Resources), 3.5a-c (Cultural Resources), and 3.18b (Tribal Cultural Resources). The Proposed Project includes mitigation measures that would minimize these impacts to a less-than-significant level. The Proposed Project with incorporation of the mitigation measures would not have a significant environmental impact on any of the 20 factors listed on the Environmental Checklist and described in Sections 3.1 to 3.20.

b. Does the Project have impacts that are individually limited but cumulatively considerable? – *Less than Significant with Mitigation Incorporated.*

A cumulative impact refers to the combined effect of "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts" (State CEQA Guidelines Section 15355). As defined by the State of California, cumulative impacts reflect "the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time" (State CEQA Guidelines Section 15355[b]).

Sonoma Water conducts regular (often annual) maintenance of Santa Rosa Creek under the Stream Maintenance Program (SMP). The SMP maintains over 75 miles of engineered flood control infrastructure and implements BMPs and mitigation (such as pre-construction surveys for sensitive resources and on-site habitat restoration) that reduce the program's potential impacts to less than significant. Under the SMP, maintenance activities include sediment removal and vegetation management. Another project located in the vicinity of the Proposed Project site at Melita Road Dam is the Vortex Tube Rehabilitation Project. The Vortex Tube Rehabilitation Project restored the structural integrity of the Vortex Tube and facilitated future inspections and maintenance. The Proposed Project would improve fish passage for juvenile and adult steelhead and Pacific lamprey over a broader range of flows at the E Street Bridge Fishway Extension and Melita Road Dam sites; address ongoing erosion to the right bank at the E Street Bridge Fishway Extension site; and improve access for and reduce the frequency and extent of channel maintenance needs to maintain fish passage through the E Street Bridge Fishway Extension site. At the E Street Bridge Fishway Extension site, the Proposed Project would have less-than-significant impacts with mitigation incorporated

during construction and maintenance, and in the long-term, the Proposed Project would have beneficial effects by improving fish passage and addressing erosion and improving access/reducing the frequency and extent of channel maintenance. At the Melita Road Dam site, the Proposed Project would have less-than-significant impacts with mitigation incorporated during construction and maintenance, and in the long-term, the Proposed Project would have beneficial effects by improving fish passage and addressing erosion. When considered together, the less-than-significant impacts of the Proposed Project after mitigation, ongoing SMP activities, and the Vortex Tube Rehabilitation Project do not result in significant cumulative effects.

c. Does the Project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly? – ***Less than Significant with Mitigation Incorporated.***

The Proposed Project consists of replacing and structurally improving the fishway extension, replacing the existing trash racks and installing a system of improved trash racks, enhancing the right bank to address erosion, and constructing an access road for maintenance activities at the E Street Bridge Fishway Extension site as well as installing non-grouted rock weir step pools at the Melita Road Dam site. The Project actions would not alter the human population or community in the vicinity. There may be construction-related temporary impacts to humans associated with cultural resources, energy, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, transportation, Tribal cultural resources, and wildfire that with implementation mitigation measures would be less-than-significant. Please refer to the impact discussions presented in Sections 3.1 through 3.20. As such, the Proposed Project would have a less-than-significant impact on human beings after incorporation of mitigation.

4.0 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.

Signature: Grant Davis Date: 6/28/2023

Grant Davis - General Manager

5.0 List of Preparers

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Appendix A: Notice of Availability/Intent to Adopt

404 Aviation Boulevard
Santa Rosa, CA 95403
Front Desk: 707-526-5370
www.sonomawater.org

Notice of Availability / Notice of Intent to Adopt Initial Study and Mitigated Negative Declaration for the SANTA ROSA CREEK FISH PASSAGE IMPROVEMENTS PROJECT

Posted: June 28, 2023

Public Review Period: June 29, 2023, to July 28, 2023

The Sonoma County Water Agency (Sonoma Water) is the Lead Agency under the California Environmental Quality Act (CEQA) for the proposed Santa Rosa Creek Fish Passage Improvements Project (Proposed Project). Sonoma Water has prepared an Initial Study and Mitigated Negative Declaration (IS/MND) for the project in accordance with the CEQA, the State CEQA Guidelines, and Sonoma Water's Procedures for Implementation of CEQA. This notice is to announce that the IS/MND is available for review by the public, agencies, and interested parties. Instructions for submitting comments on the document are included in this notice.

Project Location: The Proposed Project site is located on Santa Rosa Creek at two locations in the City of Santa Rosa:

- The E Street Bridge Fishway Extension site is located at the intersection of E Street between Sonoma Avenue and Second Street within a developed commercial and residential area.
- The Melita Road Dam site is adjacent to Montgomery Drive at Melita Road.

Project Description: There are barriers to fish passage along Santa Rosa Creek at the E Street Bridge Fishway Extension and Melita Road Dam sites due to non-functioning structures and erosion. Additionally, site conditions limit regular maintenance at the E Street Bridge Fishway Extension. The purpose of the Proposed Project is to improve fish passage, primarily for steelhead, over a broader range of flows at the E Street Bridge Fishway Extension and Melita Road Dam sites, address ongoing erosion to the right bank at the E Street Bridge Fishway Extension site, and improve access for and reduce the frequency and extent of channel maintenance needs to maintain fish passage through the E Street Bridge Fishway Extension site.

Proposed Project construction activities would include replacing and structurally improving the fishway extension, removing the existing trash rack and installing a system of improved trash racks installing grouted rock upstream of the fishway extension to support the grouted rock weirs and fishway extension infrastructure, enhancing the right bank to address erosion, and constructing an access road for maintenance activities at the E Street Bridge Fishway

Extension site. At the Melita Road Dam site, a series of non-grouted rock weir step pools would be installed below the dam site to facilitate fish passage.

Materials: A copy of the IS/MND and supporting materials is available at the Sonoma Water administrative office at 404 Aviation Blvd., Santa Rosa, CA 95403. The IS/MND is available online at: https://www.sonomawater.org/environmental-documents.

Public Review: The 30-day public review on the IS/MND runs from June 29 to July 28, 2023. Please include a name, address, and email address of a contact person for all future correspondence on this subject. Written comments must be submitted no later than 5:00 p.m. on July 28, 2023. Written comments may be addressed to David Cook, Senior Environmental Specialist, Sonoma Water, 404 Aviation Blvd., Santa Rosa, CA 95403-9019, or emailed to david.cook@scwa.ca.gov.

ADOPTION OF THE INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION

Tentative Adoption Schedule: Following the close of the IS/MND public review period, Sonoma Water's Board of Directors will consider adoption of the IS/MND. The project is scheduled for consideration and adoption by Sonoma Water's Board of Directors at their regularly scheduled meeting beginning at **8:30 a.m. on October 3, 2023.** Comments submitted during the Initial Study review period will be included in our report to the Board of Directors.

Appendix B. Air Quality and Greenhouse Gas Emission Calculations

Road Construction Emissions Model, Version 9.0.0

Daily Emission Estimates for -> Santa Rosa Creek Fish Passage Improvement Project Phases (Pounds)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)	Overlap?
Grubbing/Land Clearing	1.65	14.38	14.95	3.89	0.69	3.20	1.25	0.58	0.67	0.04	4,269.32	1.01	0.16	4,341.15	No
Grading/Excavation	1.61	15.86	14.63	3.90	0.70	3.20	1.27	0.61	0.67	0.04	3,584.67	0.93	0.08	3,632.35	No
Drainage/Utilities/Sub-Grade	1.27	7.76	10.58	0.49	0.49	0.00	0.41	0.41	0.00	0.03	2,849.40	0.69	0.08	2,889.14	No
Paving	1.65	15.86	14.95	3.90	0.70	3.20	1.27	0.61	0.67	0.04	4,269.32	1.01	0.16	4,341.15	No
Maximum (pounds/day)	0.14	1.21	1.20	0.30	0.06	0.25	0.10	0.05	0.05	0.00	331.14	0.08	0.01	336.15	
Total (tons/construction project)	1.65	14.38	14.95	3.89	0.69	3.20	1.25	0.58	0.67	0.04	4,269.32	1.01	0.16	4,341.15	

Notes:

Project Start Year ->	2024
Project Length (months) ->	7
Total Project Area (acres) ->	5
Maximum Area Disturbed/Day (acres) ->	0.32
Water Truck Used? ->	Yes

Phase	Total Material Imported/Exported Volume (yd^3/day)		Daily VMT (miles/day)			
	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	0	0	0	0	600	80
Grading/Excavation	43	0	120	0	600	80
Drainage/Utilities/Sub-Grade	0	0	0	0	600	80
Paving	0	0	0	0	600	80

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1, 25, and 298 for CO2, CH4, and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

Total Emission Estimates by Phase for -> Santa Rosa Fish Passage Improvement Project Project Phases (Tons for all except CO2e. Metric tons for CO2e)	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Total PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.01	0.07	0.05	0.03	0.00	0.03	0.01	0.00	0.01	0.00	22.67	0.01	0.00	20.87
Grading/Excavation	0.06	0.52	0.54	0.14	0.03	0.12	0.05	0.02	0.02	0.00	155.40	0.04	0.01	143.35
Drainage/Utilities/Sub-Grade	0.05	0.51	0.47	0.12	0.02	0.10	0.04	0.02	0.02	0.00	114.17	0.03	0.00	104.95
Paving	0.02	0.11	0.14	0.01	0.01	0.00	0.01	0.01	0.00	0.00	38.89	0.01	0.00	35.78
Maximum (tons/phase)	0.06	0.52	0.54	0.14	0.03	0.12	0.05	0.02	0.02	0.00	155.40	0.04	0.01	143.35
Total (tons/construction project)	0.14	1.21	1.20	0.30	0.06	0.25	0.10	0.05	0.05	0.00	331.14	0.08	0.01	304.95

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1, 25, and 298 for CO2, CH4, and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

The CO2e emissions are reported as metric tons per phase.

Note: Emissions values of “0.00” indicate emissions levels below 0.01, as that is the lowest value returned by the model.

Calculation Assumptions:

- Used default equipment emission factors supplied by RoadMod.
- Phases: (1) Grubbing/Land Clearing = vegetation removal and Project staging; (2) Grading/Excavation = grading work areas, grade cobble bar along left bank for access road (Site 1), remove grouted rock right bank, trash rack, fishway extension (Site 1), overexcavate right bank (Site 1), excavate footings (Site 1), overexcavate step pools (Site 3); (3) Drainage/Utilities/Sub-Grade = construct fishway extension, grouted rock weirs, large debris deflection bollards, toe rock (Site 1), construct rock weir step pools (Site 3); and (4) Paving = Access road construction (Site 1) and construction wrap-up.
- Off-Highway Trucks = dump truck, concrete truck (depending on phase).
- The Proposed Project's activities would impact approximately 0.6 acre (including temporary and permanent impacts). A perimeter surrounding the Proposed Project activities includes an area of approximately 4.55 acres. To be conservative, the larger 4.5 acre area was used for the "Total Project Area" in the emissions model calculation. It was assumed that the "Maximum Area Disturbed/Day would be 0.32 acre because only one site would be under construction at a time.
- Haul trips: Melita Dam – Assuming import and export do not occur within the same round trip. Grading scheduled for 3 months. 2 RT/day*2.8 months (73 workdays) = 146 RTs, which is more than sufficient to move the 2,708 cy of material in/out (136 RT). E Street Bridge Fish Passage – 1 RT/day is conservative due to low volume of material/day. Material volumes only require 56 RTs. Because Grading phase spans 2.8 months (73 workdays), 1 RT/day in grading will more than cover the 56 RTs.
- Worker commute VMT estimate is based on 15 workers, 2 one-way trips/day, and 20 miles/trip.

Road Construction Emissions Model Data Entry Worksheet — **Version 9.0.0**

To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Note: Required data input sections have a yellow background.
Optional data input sections have a blue background. Only areas with a
yellow or blue background can be modified. Program defaults have a white background.
The user is required to enter information in cells D10 through D24, E28 through G35, and D38 through D41 for all project types.
Please use "Clear Data Input & User Overrides" button first before changing the Project Type or begin a new project.

Input Type

Project Name	Santa Rosa Creek Fish Passage Improvement	
Construction Start Year	2024	Enter a Year between 2014 and 2040 (inclusive)
Project Type For 4: Other Linear Project Type, please provide project specific off-road equipment population and vehicle trip data	4	1) New Road Construction: Project to build a roadway from bare ground, which generally requires more site preparation than widening an existing roadway 2) Road Widening: Project to add a new lane to an existing roadway 3) Bridge/Overpass Construction: Project to build an elevated roadway, which generally requires some different equipment than a new roadway, such as a crane 4) Other Linear Project Type: Non-roadway project such as a pipeline, transmission line, or levee construction
Project Construction Time	7.00	months
Working Days per Month	26.00	days (assume 22 if unknown)
Predominant Soil/Site Type: Enter 1, 2, or 3	1	1) Sand Gravel : Use for quaternary deposits (Delta/West County)

Please note that the soil type instructions provided in cells E18 to E20 are specific to Sacramento County. Maps available from the

		California Geologic Survey (see weblink below) can be used to determine soil type outside Sacramento County.
(for project within "Sacramento County," follow soil type selection instructions in cells E18 to E20 otherwise see instructions provided in cells J18 to J22)		2) Weathered Rock-Earth : Use for Laguna formation (Jackson Highway area) or the Ione formation (Scott Road, Rancho Murieta)
		3) Blasted Rock : Use for Salt Springs Slate or Copper Hill Volcanics (Folsom South of Highway 50, Rancho Murieta)
Project Length	0.25	miles
Total Project Area	4.50	acres
Maximum Area Disturbed/Day	0.32	acres
Water Trucks Used?	1	1. Yes 2. No

http://www.conservation.ca.gov/cgs/information/geologic_mapping/Pages/googlemaps.aspx#regionalseries

Material Hauling Quantity Input

Material Type	Phase	Haul Truck Capacity (yd^3) (assume 20 if unknown)	Import Volume (yd^3/day)	Export Volume (yd^3/day)
Soil	Grubbing/Land Clearing	20.00	0.00	0.00
	Grading/Excavation	20.00	19.11	23.53
	Drainage/Utilities/Sub-Grade	20.00	0.00	0.00
	Paving	20.00	0.00	0.00
Asphalt	Grubbing/Land Clearing	20.00	0.00	0.00
	Grading/Excavation	20.00	0.00	0.00
	Drainage/Utilities/Sub-Grade	20.00	0.00	0.00
	Paving	20.00	0.00	0.00

Mitigation Options

On-road Fleet Emissions Mitigation	No Mitigation	Select "2010 and Newer On-road Vehicles Fleet" option when the on-road heavy-duty truck fleet for the project will be limited to vehicles of model year 2010 or newer
Off-road Equipment Emissions Mitigation	No Mitigation	Select "20% NOx and 45% Exhaust PM reduction" option if the project will be required to use a lower emitting off-road construction fleet. The SMAQMD Construction Mitigation Calculator can be used to confirm compliance with this mitigation measure (http://www.airquality.org/Businesses/CEQA-Land-Use-Planning/Mitigation). Select "Tier 4 Equipment" option if some or all off-road equipment used for the project meets CARB Tier 4 Standard

The remaining sections of this sheet contain areas that require modification when 'Other Project Type' is selected.

Note: The program's estimates of construction period phase length can be overridden in cells D50 through D53, and F50 through F53.

Construction Periods	User Override of Construction Months	Program Calculated Months	User Override of Phase Starting Date	Program Default Phase Starting Date
Grubbing/Land Clearing		0.20	6/15/2024	1/1/2024
Grading/Excavation		0.80	7/15/2024	1/8/2024
Drainage/Utilities/Sub-Grade		0.70	6/15/2025	2/2/2024
Paving		0.30	10/28/2025	2/24/2024
Totals (Months)	7			

Note: Soil Hauling emission default values can be overridden in cells D61 through D64, and F61 through F64.

Soil Hauling Emissions User Input	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing	40.00			0	0.00
Miles/round trip: Grading/Excavation	40.00			3	120.00
Miles/round trip: Drainage/Utilities/Sub-Grade	40.00			0	0.00
Miles/round trip: Paving	40.00			0	0.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.04	0.43	3.49	0.12	0.05	0.02	1,704.13	0.00	0.27	1,784.00
Grading/Excavation (grams/mile)	0.04	0.43	3.49	0.12	0.05	0.02	1,704.13	0.00	0.27	1,784.00
Draining/Utilities/Sub-Grade (grams/mile)	0.04	0.43	3.49	0.12	0.05	0.02	1,700.24	0.00	0.27	1,779.93
Paving (grams/mile)	0.04	0.43	3.46	0.12	0.05	0.02	1,682.27	0.00	0.26	1,761.12
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.01	0.11	0.95	0.03	0.01	0.00	450.84	0.00	0.07	471.97
Tons per const. Period - Grading/Excavation	0.00	0.00	0.03	0.00	0.00	0.00	16.41	0.00	0.00	17.18
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.03	0.00	0.00	0.00	16.41	0.00	0.00	17.18

Note: Asphalt Hauling emission default values can be overridden in cells D91 through D94, and F91 through F94.

Asphalt Hauling Emissions User Input	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing	40.00			0	0.00
Miles/round trip: Grading/Excavation	40.00			0	0.00
Miles/round trip: Drainage/Utilities/Sub-Grade	40.00			0	0.00
Miles/round trip: Paving	40.00			0	0.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.04	0.43	3.49	0.12	0.05	0.02	1,704.13	0.00	0.27	1,784.00
Grading/Excavation (grams/mile)	0.04	0.43	3.49	0.12	0.05	0.02	1,704.13	0.00	0.27	1,784.00
Draining/Utilities/Sub-Grade (grams/mile)	0.04	0.43	3.49	0.12	0.05	0.02	1,700.24	0.00	0.27	1,779.93
Paving (grams/mile)	0.04	0.43	3.46	0.12	0.05	0.02	1,682.27	0.00	0.26	1,761.12
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: Worker commute default values can be overridden in cells D121 through D126.

Worker Commute Emissions	User Override of Worker			
User Input	Commute Default Values	Default Values		
Miles/ one-way trip	20		Calculated	Calculated
One-way trips/day	2		Daily Trips	Daily VMT
No. of employees: Grubbing/Land Clearing	15		30	600.00
No. of employees: Grading/Excavation	15		30	600.00
No. of employees: Drainage/Utilities/Sub-Grade	15		30	600.00
No. of employees: Paving	15		30	600.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.01	0.84	0.06	0.05	0.02	0.00	306.70	0.00	0.01	308.54
Grading/Excavation (grams/mile)	0.01	0.84	0.06	0.05	0.02	0.00	306.70	0.00	0.01	308.54
Draining/Utilities/Sub-Grade (grams/mile)	0.01	0.78	0.06	0.05	0.02	0.00	295.84	0.00	0.01	297.52
Paving (grams/mile)	0.01	0.78	0.06	0.05	0.02	0.00	295.84	0.00	0.01	297.52
Grubbing/Land Clearing (grams/trip)	0.98	2.66	0.27	0.00	0.00	0.00	65.99	0.07	0.03	76.61
Grading/Excavation (grams/trip)	0.98	2.66	0.27	0.00	0.00	0.00	65.99	0.07	0.03	76.61
Draining/Utilities/Sub-Grade (grams/trip)	0.93	2.56	0.25	0.00	0.00	0.00	63.73	0.06	0.03	73.77
Paving (grams/trip)	0.93	2.56	0.25	0.00	0.00	0.00	63.73	0.06	0.03	73.77
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**

Pounds per day - Grubbing/Land Clearing	0.08	1.29	0.10	0.06	0.03	0.00	410.06	0.01	0.01	413.20
Tons per const. Period - Grubbing/Land Clearing	0.00	0.01	0.00	0.00	0.00	0.00	3.73	0.00	0.00	3.76
Pounds per day - Grading/Excavation	0.08	1.29	0.10	0.06	0.03	0.00	410.06	0.01	0.01	413.20
Tons per const. Period - Grading/Excavation	0.00	0.05	0.00	0.00	0.00	0.00	14.93	0.00	0.00	15.04
Pounds per day - Drainage/Utilities/Sub-Grade	0.08	1.20	0.09	0.06	0.03	0.00	395.54	0.01	0.01	398.43
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.04	0.00	0.00	0.00	0.00	12.60	0.00	0.00	12.69
Pounds per day - Paving	0.08	1.20	0.09	0.06	0.03	0.00	395.54	0.01	0.01	398.43
Tons per const. Period - Paving	0.00	0.02	0.00	0.00	0.00	0.00	5.40	0.00	0.00	5.44
Total tons per construction project	0.01	0.11	0.01	0.01	0.00	0.00	36.65	0.00	0.00	36.93

Note: Water Truck default values can be overridden in cells D153 through D156, I153 through I156, and F153 through F156.

Water Truck Emissions

User Input	User Override of Default # Water Trucks	Program Estimate of Number of Water Trucks	User Override of Truck Round Trips/Vehicle/Day	Default Values Round Trips/Vehicle/Day	Calculated Trips/day	User Override of Miles/Round Trip	Default Values Miles/Round Trip	Calculated Daily VMT
Grubbing/Land Clearing - Exhaust	1		2.00			40.00		80.00
Grading/Excavation - Exhaust	1		2.00			40.00		80.00
Drainage/Utilities/Subgrade	1		2.00			40.00		80.00
Paving	1		2.00			40.00		80.00

Emission Rates	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Grubbing/Land Clearing (grams/mile)	0.04	0.43	3.49	0.12	0.05	0.02	1,704.13	0.00	0.27	1,784.00
Grading/Excavation (grams/mile)	0.04	0.43	3.49	0.12	0.05	0.02	1,704.13	0.00	0.27	1,784.00
Draining/Utilities/Sub-Grade (grams/mile)	0.04	0.43	3.46	0.12	0.05	0.02	1,682.27	0.00	0.26	1,761.12
Paving (grams/mile)	0.04	0.43	3.46	0.12	0.05	0.02	1,682.27	0.00	0.26	1,761.12
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.01	0.08	0.64	0.02	0.01	0.00	300.56	0.00	0.05	314.64
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.01	0.00	0.00	0.00	2.74	0.00	0.00	2.86
Pounds per day - Grading/Excavation	0.01	0.08	0.64	0.02	0.01	0.00	300.56	0.00	0.05	314.64
Tons per const. Period - Grading/Excavation	0.00	0.00	0.02	0.00	0.00	0.00	10.94	0.00	0.00	11.45
Pounds per day - Drainage/Utilities/Sub-Grade	0.01	0.08	0.63	0.02	0.01	0.00	296.70	0.00	0.05	310.61
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.02	0.00	0.00	0.00	9.45	0.00	0.00	9.89
Pounds per day - Paving	0.01	0.08	0.63	0.02	0.01	0.00	296.70	0.00	0.05	310.61
Tons per const. Period - Paving	0.00	0.00	0.01	0.00	0.00	0.00	4.05	0.00	0.00	4.24
Total tons per construction project	0.00	0.01	0.06	0.00	0.00	0.00	27.18	0.00	0.00	28.45

Note: Fugitive dust default values can be overridden in cells D183 through D185.

Fugitive Dust	User Override of Max Acreage Disturbed/Day	Default Maximum Acreage/Day	PM10 pounds/day	PM10 tons/per period	PM2.5 pounds/day	PM2.5 tons/per period
Fugitive Dust - Grubbing/Land Clearing	0.32		3.20	0.04	0.67	0.01
Fugitive Dust - Grading/Excavation	0.32		3.20	0.11	0.67	0.02
Fugitive Dust - Drainage/Utilities/Subgrade	0.32		3.20	0.11	0.67	0.02

Values in cells D195 through D228, D246 through D279, D297 through D330, and D348 through D381 are required when 'Other Project Type' is selected.

Off-Road Equipment Emissions

Grubbing/Land Clearing	Default Number of Vehicles	Mitigation Option: Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Override of Default Number of Vehicles	*Program-estimate*		Equipment Tier	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Excavators	0.18	3.27	1.40	0.07	0.06	0.01	500.27	0.16	0.00	505.66
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Off-Highway Trucks	0.50	3.25	3.33	0.12	0.11	0.01	1,280.35	0.41	0.01	1,294.14
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

			Model Default Tier	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment	If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab				ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Number of Vehicles	Equipment Tier	Type			pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
0.00	N/A		0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Grubbing/Land Clearing	pounds per day			0.68	6.52	4.73	0.19	0.17	0.02	1,780.62	0.58	0.02	1,799.80
	Grubbing/Land Clearing	tons per phase			0.01	0.07	0.05	0.00	0.00	0.00	19.59	0.01	0.00	19.80

Grading/Excavation	Default Number of Vehicles	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Override of Default Number of Vehicles	*Program-estimate*		Equipment Tier	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.00			Model Default Tier	Excavators	0.36	6.53	2.81	0.14	0.13	0.01	1,000.53	0.32	0.01	1,011.32
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Off-Highway Trucks	0.50	3.25	3.33	0.12	0.11	0.01	1,280.35	0.41	0.01	1,294.14
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Rubber Tired Dozers	0.70	3.13	7.13	0.32	0.30	0.01	826.98	0.27	0.01	835.89

			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment Number of Vehicles	If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation		pounds per day		1.55	12.91	13.26	0.58	0.53	0.03	3,107.86	1.01	0.03	3,141.34
Grading/Excavation		tons per phase		0.05	0.43	0.44	0.02	0.02	0.00	102.56	0.03	0.00	103.66

Drainage/Utilities/Subgrade Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Cement and Mortar Mixers	0.06	0.31	0.37	0.01	0.01	0.00	50.52	0.01	0.00	50.77
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Cranes	0.33	1.77	3.44	0.14	0.13	0.01	558.81	0.18	0.01	564.84
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.00			Model Default Tier	Excavators	0.36	6.53	2.74	0.14	0.12	0.01	1,000.56	0.32	0.01	1,011.34
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Off-Highway Tractors	0.17	3.02	1.41	0.07	0.06	0.00	455.28	0.15	0.00	460.19
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Override of Default Number of Vehicles	Default Number of Vehicles	Mitigation Option Override of Default Equipment Tier	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Rubber Tired Dozers	0.69	3.11	7.04	0.32	0.29	0.01	826.98	0.27	0.01	835.88
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment — If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Drainage/Utilities/Sub-Grade	pounds per day	1.60	14.73	15.01	0.68	0.62	0.03	2,892.15	0.92	0.03	2,923.03
Drainage/Utilities/Sub-Grade	tons per phase	0.05	0.49	0.50	0.02	0.02	0.00	95.44	0.03	0.00	96.46

Paving

Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Cement and Mortar Mixers	0.06	0.31	0.37	0.01	0.01	0.00	50.52	0.01	0.00	50.77
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Off-Highway Trucks	0.48	3.19	2.87	0.10	0.09	0.01	1,279.68	0.41	0.01	1,293.45
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

					ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
			Model Default Tier	Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Rubber Tired Dozers	0.65	3.00	6.63	0.29	0.27	0.01	826.96	0.27	0.01	835.87
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment

If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Paving	pounds per day	1.18	6.49	9.87	0.41	0.38	0.02	2,157.15	0.69	0.02	2,180.09
Paving	tons per phase	0.01	0.07	0.11	0.00	0.00	0.00	23.73	0.01	0.00	23.98
Total Emissions all Phases (tons per construction period) =>		0.12	1.06	1.09	0.05	0.04	0.00	241.32	0.08	0.00	243.90

Equipment default values for horsepower and hours/day can be overridden in cells D403 through D436 and F403 through F436.

Equipment	User Override of Horsepower	Default Values Horsepower	User Override of Hours/day	Default Values Hours/day	Horse power	Load Factor adjustment
Aerial Lifts		63		8	63.00	0.31
Air Compressors		78		8	78.00	0.48
Bore/Drill Rigs		221		8	221.00	0.50
Cement and Mortar Mixers		9		8	9.00	0.56
Concrete/Industrial Saws		81		8	81.00	0.73
Cranes		231		8	231.00	0.29
Crawler Tractors		212		8	212.00	0.43
Crushing/Proc. Equipment		85		8	85.00	0.78
Excavators		158		8	158.00	0.38
Forklifts		89		8	89.00	0.20
Generator Sets		84		8	84.00	0.74
Graders		187		8	187.00	0.41
Off-Highway Tractors		124		8	124.00	0.44
Off-Highway Trucks		402		8	402.00	0.38
Other Construction Equipment		172		8	172.00	0.42
Other General Industrial Equipment		88		8	88.00	0.34
Other Material Handling Equipment		168		8	168.00	0.40
Pavers		130		8	130.00	0.42
Paving Equipment		132		8	132.00	0.36
Plate Compactors		8		8	8.00	0.43
Pressure Washers		13		8	13.00	0.30
Pumps		84		8	84.00	0.74
Rollers		80		8	80.00	0.38
Rough Terrain Forklifts		100		8	100.00	0.40
Rubber Tired Dozers		247		8	247.00	0.40
Rubber Tired Loaders		203		8	203.00	0.36
Scrapers		367		8	367.00	0.48
Signal Boards		6		8	6.00	0.82
Skid Steer Loaders		65		8	65.00	0.37
Surfacing Equipment		263		8	263.00	0.30
Sweepers/Scrubbers		64		8	64.00	0.46
Tractors/Loaders/Backhoes		97		8	97.00	0.37
Trenchers		78		8	78.00	0.50
Welders		46		8	46.00	0.45

END OF DATA ENTRY SHEET

Appendix C. Sonoma Water Construction Contract Specifications Incorporation of Bay Area Air Quality Management District's Best Management Practices

Project-Level Air Quality Impacts

On April 20, 2022, the Bay Area Air Quality Management District's (BAAQMD's) Board of Directors adopted *California Environmental Quality Act (CEQA) Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans*. The *2022 CEQA Air Quality Guidelines* (BAAQMD 2023) were developed to assist lead agencies in evaluating air quality and climate impacts from proposed land use projects and plans in the San Francisco Bay Area Air Basin (SFBAAB).

Chapter 5, "Project-Level Air Quality Impacts," of the *2022 CEQA Air Quality Guidelines* provides guidance on how to conduct an air quality analysis at the project level. Construction-related activities, such as soil disturbance, grading, and material hauling, can result in fugitive dust emissions (e.g., $PM_{2.5}$ and PM_{10}). For a project to have a less-than-significant criteria air pollutant impact related to construction-related fugitive dust emissions, it must implement all Air District's basic best management practices (BMPs) listed in Table 5-2 (BAAQMD 2023). In addition to the mitigation measures described in Table 5-2, projects are strongly encouraged to implement enhanced BMPs to control fugitive dust emissions. These enhanced measures are especially important when there are schools, residential areas, or other sensitive land uses located near the construction site and are described in Table 5-3 (BAAQMD 2023).

The objectives of the BAAQMD guidance are met through Sonoma County Water Agency's (Sonoma Water's) construction contract specifications, which have similar requirements as the recommended basic and enhanced construction-related fugitive dust emissions BMPs. Tables A-1 and A-2 identify the BAAQMD's basic and enhanced BMPs and the location of their inclusion in Sonoma Water's standard construction contract specifications. Some BMPs in Sonoma Water's standard construction contract specifications are incorporated by reference to the California Department of Transportation's (Caltrans's) Construction Site Best Management Practices (BMP) Manual (Caltrans 2017).

Table C-1. Bay Area Air Quality Management District 2022 CEQA Guidelines – Table 5-2, Basic Best Management Practices for Construction-Related Fugitive Dust Emissions (BAAQMD 2023)

BAAQMD BMP ID	BAAQMD Basic Best Management Practice	Located in Sonoma Water Standard Contract Specifications at
B-1	All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.	Spec Date: 11/2022: By reference to Caltrans Construction Site BMP Manual[1] Section 5.
B-2	All haul trucks transporting soil, sand, or other loose material off-site shall be covered.	Spec Date: 11/2022; Specification Section 01 10 00 paragraph 1.11, C.
B-3	All visible mud or dirt trackout 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.	Spec Date: 11/2022; Specification Section 01 10 00 paragraph 1.11, G.
B-4	All vehicle speeds on unpaved roads shall be limited to 15 mph.	Spec Date: 11/2022; Contract limits speeds to 10mph on unpaved areas. Specification Section 01 10 00 paragraph 1.11, H.
B-5	All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.	Spec Date: 11/2022; Specification Section 01 10 00 paragraph 1.11, E.

BAAQMD BMP ID	BAAQMD Basic Best Management Practice	Located in Sonoma Water Standard Contract Specifications at
B-6	All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.	Spec Date: 11/2022; Contract limits work during high winds to a maximum of 15 mph. Specification Section 01 10 00 paragraph 1.11, D.
B-7	All trucks and equipment, including their tires, shall be washed off prior to leaving the site.	Spec Date: 11/2022: By reference to Caltrans Construction Site BMP Manual[1] Section 6 for tracking controls, BMP TC-3
B-8	Unpaved roads providing access to sites located 100 feet or further from a paved road shall be treated with a 6- to 12-inch layer of compacted layer of wood chips, mulch, or gravel.	Spec Date: 11/2022: By reference to Caltrans Construction Site BMP Manual[1] Section 6 for tracking controls, BMP TC-1.
B-9	Publicly visible signs shall be posted with the telephone number and name of the 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 General Air Pollution Complaints number shall also be visible to ensure compliance with applicable regulations.	Spec Date 11/2022. Signs are specified in Specification Section 01 10 00 paragraph 1.11.

[1] Caltrans (California Department of Transportation), 2017. Construction Site Best Management Practices (BMP) Manual. CTSW-RT-17-314.18.1. May 2017.

Table C-2. Bay Area Air Quality Management District 2022 CEQA Guidelines – Table 5-3, Enhanced Best Management Practices for Construction-Related Fugitive Dust Emissions (BAAQMD 2023)

BAAQMD BMP ID	BAAQMD Enhanced Best Management Practice	Located in Sonoma Water Standard Contract Specifications at
E-1	Limit the simultaneous occurrence of excavation, grading, and ground-disturbing construction activities.	Spec Date: 11/2022: By reference to Caltrans Construction Site BMP Manual[1] Section 3 for Temporary Soil Stabilization; BMP SS-1.
E-2	Install wind breaks (e.g., trees, fences) on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity.	Spec Date: 11/2022: By reference to Caltrans Construction Site BMP Manual[1] Section 5 for Wind Erosion Control.
E-3	Plant vegetative ground cover (e.g., fast-germinating native grass seed) in disturbed areas as soon as possible and watered appropriately until vegetation is established.	Spec Date: 11/2022: By reference to Caltrans Construction Site BMP Manual[1] Section 3 for Temporary Soil Stabilization.
E-4	Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent.	Spec Date: 11/2022: By reference to Caltrans Construction Site BMP Manual[1] Section 3 for Temporary Soil Stabilization.
E-5	Minimize the amount of excavated material or waste materials stored at the site.	Spec Date: 11/2022: By reference to Caltrans Construction Site BMP Manual Section 3 for Temporary Soil Stabilization; BMP SS-1.

BAAQMD BMP ID	BAAQMD Enhanced Best Management Practice	Located in Sonoma Water Standard Contract Specifications at
E-6	Hydroseed or apply non-toxic soil stabilizers to construction areas, including previously graded areas, that are inactive for at least 10 calendar days.	Spec Date: 11/2022: By reference to Caltrans Construction Site BMP Manual[1] Section 3 for Temporary Soil Stabilization, BMP SS-1.

[1] Caltrans (California Department of Transportation), 2017. Construction Site Best Management Practices (BMP) Manual. CTSW-RT-17-314.18.1. May 2017.

References

BAAQMD (Bay Area Air Quality Management District), 2023. 2022 California Environmental Quality Act Air Quality Guidelines. Revised April 20, 2023. Available at: https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines.

Caltrans (California Department of Transportation), 2017. Construction Site Best Management Practices (BMP) Manual. CTSW-RT-17-314.18.1. May 2017. Available at: https://dot.ca.gov/programs/construction/storm-water-and-water-pollution-control/manuals-and-handbooks.

Appendix D: Special-Status Species

Table D-1: Special-Status Plant Species Unlikely to Occur in the Proposed Project Area due to Habitat Restrictions. These species have specialized habitat requirements, including vernal pools, serpentine soils, and exposed rock outcrops, that do not occur in the project area.

Scientific Name **(Common Name)**	**Status Federal, State, CNPS[1]**
Vernal Pool Dependent	
Blennosperma bakeri (Sonoma sunshine)	FE, CE, 1B.1
Downingia pusilla (Dwarf downingia)	2B.2
Lasthenia burkei (Burke's goldfields)	FE, CE, 1B.1
Limnanthes vinculans (Sebastopol meadowfoam)	FE, CE, 1B.1
Navarretia leucocephala ssp. *bakeri* (Baker's navarretia)	1B.1
Navarretia leucocephala ssp. *plieantha* (Many-flowered navarretia)	FE, CE, 1B.2
Trifolium amoenum (two-fork clover)	FE, 1B.1
Trifolium [depauperatum] hydrophilum (saline clover)	1B.2
Serpentine/Ultramafic	
Allium peninsulare var. *franciscanum* (Franciscan onion)	1B.2
Arctostaphyos stanfordiana ssp*. decumbens* (Rincon Ridge Manzanita)	1B.1
Ceanothus sonomensis (Sonoma ceanothus)	1B.2
Fritillaria liliacea (Fragrant fritillary)	1B.2
Layia septentrionalis (Colusa layia)	1B.2
Jepson's leptosiphon (Jepson's leptosiphon)	1B.2
Mountainous/Rocky Xeric Uplands	
Amorpha californica var. *napensis* (Napa false indigo)	1B.2
Balsamorhiza macrolepis (Big-scale balsamroot)	1B.2
Ceanothus confuses (Rincon Ridge ceanothus)	1B.1
Ceanothus divergens (Calistoga ceanothus)	1B.2
Ceanothus purpureus (Holly-leaved ceanothus)	1B.2
Viburnum ellipticum (oval-leaved viburnum)	2B.3

Scientific Name **(Common Name)**	**Status Federal, State, CNPS[1]**
Mesic Woodland and Grassland, Coastal	
Amsinckia lunaris (Bent-flowered fiddleneck)	1B.2
Astragalus claranus (Clara Hunt's milk-vetch)	1B.1
Trifolium buckwestiorum (Santa Cruz clover)	1B.1
Unique Habitat	
Penstemon newberryi var. *sonomensis* (Sonoma beardtongue)	1B.3
Sidalcea oregana ssp. *valida* (Kenwood Marsh checkerbloom)	FE, CE, 1B.1

[1]Status:
FE: Federally listed as Endangered
FT: Federally listed as Threatened
CE: State of California listed as Endangered
CT: State of California listed as Threatened
CR: State of California listed as Rare
California Native Plant Society (CNPS)
1A: Presumed extinct in California
1B: Rare, Threatened, or Endangered in CA and elsewhere
2: Rare, Threatened, or Endangered in CA, but more common elsewhere
4: Plants of limited distribution

Table D-2: Special-Status Plant Species with Potential to Occur in Project Area.

Scientific Name **(Common Name)**	**Status[1]**	**Habitat Preferences and Distribution**	**Flowering and Life Form**	**Habitat Suitability and Local Distribution[2]**	**Potential for Occurrence[3]**
Alopecurus aequalis var. *sonomensis* (Sonoma alopecurus)	FE 1B.1	Freshwater marshes, swamps, and riparian scrub.	May–July perennial herb	CNDDB record from Ledson Marsh 4 miles from project area in the Sonoma Valley Watershed. Marginal and degraded habitat along creek edges in project area.	Low
Brodiaea leptandra (Narrow-anthered brodiaea)	1B.2	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland/volcanic.	May–July perennial herb	CNDDB record from vicinity of Spring Lake Park. Marginal habitat along Channel Drive staging area.	Low
Hemizonia congesta ssp. *congesta* (Congested-headed hayfield tarplant)	1B.2	Valley and foothill grassland, sometimes roadsides.	Apr–Nov	Marginal habitat along Channel Drive staging area. CNPS report from Santa Rosa quadrangle, but not known from the project area.	Low
Carex albida (White sedge)	FE	Coastal marshes and sphagnum bogs.		One occurrence in Santa Rosa Creek extirpated in 1960s. No suitable habitat in project area.	Low

Scientific Name **(Common Name)**	**Status[1]**	**Habitat Preferences and Distribution**	**Flowering and Life Form**	**Habitat Suitability and Local Distribution[2]**	**Potential for Occurrence[3]**
Triquetrella californica Coastal triquetrella	1B.2	Coastal scrub and grasslands on rocky slopes, open gravels on roadsides, and thin soils over outcrops.		CNDDB report from hillside at Spring Lake Park 0.7 mile from project area in 2005. Marginal and degraded habitat along Channel Drive staging area.	Low

[1] Legal Status

Federal listing: California listing:

FE Federally listed as Endangered SE State listed as Endangered

FT Federally listed as Threatened ST State listed as Threatened

SR State listed as Rare

CNPS listing (CEQA significance):

1B.1 Plants Rare, Threatened, or Endangered in California and elsewhere, seriously threatened in California.

1B.2 Plants Rare, Threatened, or Endangered in California and elsewhere, moderately threatened in California.

1B.3 Plants Rare, Threatened, or Endangered in California and elsewhere, not very threatened in California.

2B.1 Plants Rare, Threatened, or Endangered in California but more common elsewhere, seriously threatened in California.

2B.3 Plants Rare, Threatened, or Endangered in California but more common elsewhere, not very threatened in California.

3 Plants about which more information is needed, a review list.

3.1 Plants about which more information is needed, a review list, seriously threatened in California.

3.2 Plants about which more information is needed, a review list, moderately threatened in California.

4 Plants of limited distribution

[2] Local distribution determined by a search of the California Natural Diversity Database (CNDDB) and California Native Plant Society (CNPS).

[3] Potential for occurrence defined as:

Low: Few of the habitat components meeting the species requirements may be present in the project area and/or few occurrences in the region. In these instances, the species is not likely to be present.

Moderate: Some of the habitat components meeting the species requirements are possibly present in the project area and there are some occurrences in the region. The species has a moderate probability of occurring at a maintenance site.

High: All of the habitat components meeting the species requirements are likely present in the project area and there are several known occurrences in the vicinity. The species has a high probability of occurring in the project area.

Table D-3: Special-Status Fish and Wildlife Species Potentially Occurring in Proposed Project Area.

Common & *Scientific Name*	Federal & State Listing[1]	Habitat Requirements	Habitat Suitability and Local Distribution[2]	Potential for Occurrence[3]
INVERTEBRATES				
Obscure bumble bee *Bombus caliginosus*	SA	Food plant species include several upland shrubs and forbs.	No CNDDB reports in project vicinity. No Suitable habitat in project area.	Low
Blennosperma vernal pool andrenid bee *Andrena blennospermatis*	--	Host plant is vernal pool endemic *Blennosperma* spp. Nests in uplands around vernal pools.	No CNDDB reports in project vicinity. No Suitable habitat in project area.	Low
California linderiella *Linderiella occidentalis*	--	Seasonal wetlands and vernal pools.	No CNDDB reports in project vicinity. No Suitable habitat in project area.	Low
Western bumble bee *Bombus occidentalis*	SC	Nests in colonial hives. Forages on a variety of flower types for pollen.	No CNDDB reports in project vicinity. No Suitable habitat in project area.	Low
Leech's skyline diving beetle *Hydroporus leechi*	--	Aquatic	No CNDDB reports in project vicinity.	Low
California freshwater shrimp *Syncaris pacifica*	FE SE	Low gradient streams where riparian cover is moderate to heavy in Marin, Sonoma and Napa Counties. Utilizes pools and undercut banks with exposed roots out of direct streamflow.	Extirpated occurrence in Santa Rosa Creek. No suitable cover or overwintering habitat in project area.	Low

Common & *Scientific Name*	Federal & State Listing[1]	Habitat Requirements	Habitat Suitability and Local Distribution[2]	Potential for Occurrence[3]
San Bruno elfin butterfly *Callophrys (=Incisalia) mossii bayensis (=Incisalia)*	FE	Coastal, mountainous areas with grassy ground cover, near San Bruno mountain. Steep, north facing slopes within fog belt.	No reports in project vicinity. No suitable habitat in project area.	No Potential
FISH				
California Coastal Chinook Salmon *Oncorhynchus tshawytscha*	FT	Adults migrate upstream in fall. Spawns in cold, clear, freshwater rivers and large creeks with gravel substrate. Juveniles (smolts) migrate downstream in spring and summer to the ocean.	Infrequent migrant to Santa Rosa Creek. No established spawning run. No suitable spawning habitat in project area.	Low
Central California Coast Coho Salmon *Oncorhynchus kisutch*	FE SE	Adults migrate upstream in early winter. Spawns in cold streams with riffles, loose, silt-free gravel substrate. Preferred rearing habitat consists of slow water pools or cool back water areas.	No known occurrences in project vicinity No suitable spawning habitat in project area.	Low

Common & *Scientific Name*	Federal & State Listing[1]	Habitat Requirements	Habitat Suitability and Local Distribution[2]	Potential for Occurrence[3]
Central California Coast steelhead *Oncorhynchus mykiss irideus*	FT	Requires streams with cool water, pools and riffles, and moderate velocities. Adults spawn in clean gravel along moderate gradient creeks. Juveniles rear in creeks and estuaries before migrating to the ocean.	Several reports from Santa Rosa Creek. Known to spawn in the headwaters of Santa Rosa Creek. Project area provides adult migration and juvenile rearing habitat, and marginal spawning habitat.	High
AMPHIBIANS				
California giant salamander *Dicamptodon ensatus*	SSC	Adults inhabit forests. Breeding occurs in perennial streams with cool, clear water. Prefers moderate and high gradient creeks with pools and riffles.	Found in project area upstream of weir during several years (CNDDB #222) and approximately 3 miles upstream (CNDDB #223). Suitable habitat in project area.	High
California tiger salamander *Ambystoma californiense*	FE ST	Adults inhabit grasslands and oak savannahs. Adults breed in vernal pools and seasonal wetlands. Locally endemic to Santa Rosa Plain and adjacent lowlands.	Project area outside of species range. No suitable habitat on site. Project area outside of federal Critical Habitat designation.	No Potential

Common & *Scientific Name*	Federal & State Listing[1]	Habitat Requirements	Habitat Suitability and Local Distribution[2]	Potential for Occurrence[3]
California red-legged frog *Rana draytonii*	FT SSC	Inhabits lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Often found in ponds, marshes, or slow-moving sections of creeks. Local breeding occurs in winter.	Nearest CNDDB record 3 miles south near Taylor Mountain Regional Park (CNDDB #1575). Project area outside of federal Critical Habitat designation. Aquatic habitats in project area unsuitable breeding habitat. Amphibian surveys in diversion channel had no findings.	Low
Foothill yellow-legged frog *Rana boylii*	SSC, SC	Inhabits moderate-gradient streams with cool, clear water in woodland and coniferous forest.	Population documented approximately 3 miles upstream of project area (CNDDB #1517). Also found in Santa Rosa Creek headwaters (CNDDB #1522 and 1523). Suitable habitat in project area.	High
Red-bellied newt *Taricha rivularis*	SSC	Moderate-gradient streams with rocky substrate forested foothill and mountain terrain.	One CNDDB record from Santa Rosa Creek 3 miles upstream of project area (CNDDB #131). Santa Rosa Creek in project area provides potential habitat.	High

Common & *Scientific Name*	Federal & State Listing[1]	Habitat Requirements	Habitat Suitability and Local Distribution[2]	Potential for Occurrence[3]
REPTILES				
Green turtle *Chelonia mydas*	FT	Globally distributed, occurring generally in tropical and subtropical marine waters. Nests on sandy beaches. May occur in California coastal waters, but no breeding.	Marine species. No suitable habitat in project area.	No Potential
Western pond turtle Actinemys *marmorata*	SSC	Freshwater turtle that inhabits permanent or nearly permanent bodies of water with low velocities. Habitats include creeks, rivers, ponds, lakes, ditches.	Several CNDDB reports from project vicinity. Reported basking on weir in Project area (CNDDB #762) and documented near E Street Bridge (CNDDB #648 and 649). Suitable habitat in the project area.	High
BIRDS				
Cooper's hawk *Accipiter cooperii*	WL	Forages in woodlands and nests in riparian trees.	CNDDB reports approximately 1.7 miles southwest of Site 1. Riparian forest in project area provides suitable foraging and nesting habitat.	Moderate

Common & *Scientific Name*	Federal & State Listing[1]	Habitat Requirements	Habitat Suitability and Local Distribution[2]	Potential for Occurrence[3]
Marbled Murrelet *Brachyramphus marmoratus*	FT	Feeds along coastal waters. Nests in old-growth forests, characterized by large trees, multiple canopy layers, and moderate to high canopy closure. Forests must be near marine environment.	CNDDB reports along coast at Arched Rock, Jenner. No reports of nesting in project vicinity.	Low
Northern spotted owl *Strix occidentalis caurina*	FT SSC	Moist, dense coniferous old-growth forests of redwood, Douglas fir, western red cedar and other conifers. Nest in cavities in trees.	No CNDDB occurrences in project vicinity. No suitable nesting habitat in project area but may infrequently forage in vicinity.	Low
White-tailed kite *Elanus leucurus*	FP	Forages in foothill and valley areas with scattered oaks. Nests in dense-topped trees.	There are CNDDB records approximately 2 miles southwest of the E Street Bridge (CNDDB #77). May infrequently visit project area to forage or roost.	Moderate
Yellow rail *Coturnicops noveboracensis*	SSC	Summer resident to western California. Prefers freshwater marshlands.	CNDDB report from Rincon Valley from 1912 (CNDDB #9). No suitable habitat in project area.	No Potential

Common & *Scientific Name*	Federal & State Listing[1]	Habitat Requirements	Habitat Suitability and Local Distribution[2]	Potential for Occurrence[3]
MAMMALS				
Pallid bat *Antrozous pallidus*	SSC	Inhabits rocky terrain in open areas in lowlands, foothills and mountainous areas near water throughout California. Roosts in caves, rock crevices, mines, hollow trees, buildings and bridges in arid regions.	CNDDB report occurrence #56 is approximately 1.7 miles southeast of project area and assumed extirpated. Riparian in project area provides potential foraging but no roosting habitat.	Low

[1]Legal Status

Federal listing:

FE Federally listed as Endangered

FT Federally listed as Threatened

California listing:

SE State listed as Endangered

ST State listed as Threatened

SR State listed as Rare

SC State Candidate for listing

SSC Species of Special Concern

SA Special Animal

FP Fully Protected

WL Watch List

[2]Local distribution determined by a search of the California Natural Diversity Database (CNDDB) and other resources.

[3]Potential for occurrence defined as:

No Potential: Habitat components of a species are not known to occur in along creeks and riparian areas in the Project area. Habitats outside of the Project area include: marine, salt and brackish marsh, salt ponds, vernal pools, coniferous forest, and cismontane woodland.

Low: Few of the habitat components meeting the species requirements may be present in the Project area and/or few occurrences in the region. In these instances, the species is not likely to be present.

Moderate: Some of the habitat components meeting the species requirements are possibly present in the Project area and there are some occurrences in the region. The species has a moderate probability of occurring in the Project area.

High: All of the habitat components meeting the species requirements are likely present in the Project area and there are several known occurrences on-site or nearby. The species has a high probability of occurring in the Project area.

Appendix E. Department of Parks and Recreation Forms

State of California - The Resources Agency	Primary # P –
DEPARTMENT OF PARKS AND RECREATION	HRI#
PRIMARY RECORD	Trinomial CA –
	NRHP Status Code 6Z
Other Listings Review Code	Reviewer Date

Page 1 **of** 6 ***Resource Name or #: (Assigned by recorder)** Melita Diversion Dam

P1. Other Identifier: City of Santa Rosa Diversion Wier

***P2. Location:** ☐ Not for Publication ☒ Unrestricted ***a. County** San Joaquin

***b. USGS 7.5' Quad** Santa Rosa, CA **Date:** 2021 **Section** 21 **T** 7 **N R** 6 **W**; MDM

c. Address N/A **City** Stockton **Zip** 95409

d. UTM: **Zone** 10 ; 531587 **mE/** 4256565 **mN NAD**

e. Other Locational Data: None.

***P3a. Description:**

The property contains a concrete diversion dam that spans the main channel of Santa Rosa Creek at a location east of downtown Santa Rosa, California. The structure is situated near the intersection of Montgomery Road and Melita Drive (on the north) and the alignment of Channel Drive (to the south), and is located approximately 285 feet upstream (eastward) from a 1960s water-control feature known as the Spring Lake Diversion or Vortex Tube (a concrete culvert beneath Montgomery Drive). Built in 1948, the Melita Diversion Dam consists of a board-formed poured concrete water check structure with a north-south orientation, measuring over 70-feet in length. A portion of the dam's original length is buried beneath sediment along the creek's left bank, concealing its full size. The dam's overall height is likewise unknown, as the water reservoir and channels above and below the structure have filled-in with silt. The existing structure features an abandoned headgate and remnant water diversion channel on the creek's south bank. The headgate has a poured concrete headwall, poured concrete and rubblestone wingwalls, and is fit with a welded-steel, rectangular-frame, lift gate. Both the existing headgate and diversion channel are almost completely buried beneath sediment. In addition, a remnant set of poured concrete steps remains at the creek's north bank, which once provided access to the check structure.

***P3b. Resource Attributes: (List attributes and codes)** HP11. Engineering Structure; HP21. Dam

***P4. Resources Present:** ☐ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing:

P5b. Description of Photograph:
Melita Diversion Dam, looking southeast

***P6. Date Constructed/Age and Sources:** ☒ Historic ☐ Prehistoric ☐ Both
1948 (Santa Rosa Water)

***P7. Owner and Address:**
Santa Rosa Water
100 Santa Rosa Avenue
Santa Rosa, CA 95404

***P8. Recorded by:**
Christopher Hetzel, Anchor QEA LLC
1203 3rd Ave #2600
Seattle, WA 98101

***P9. Date Recorded:** 2/2/2023

***P10. Survey Type: (Describe)**
Reconnaissance Level Survey

***Attachments:** ☐ NONE ☒ Location Map ☐ Sketch Map ☒ Continuation Sheet ☒ Building, Structure and Object Record ☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other:

Photographs:

Melita Diversion Dam, Looking Southeast

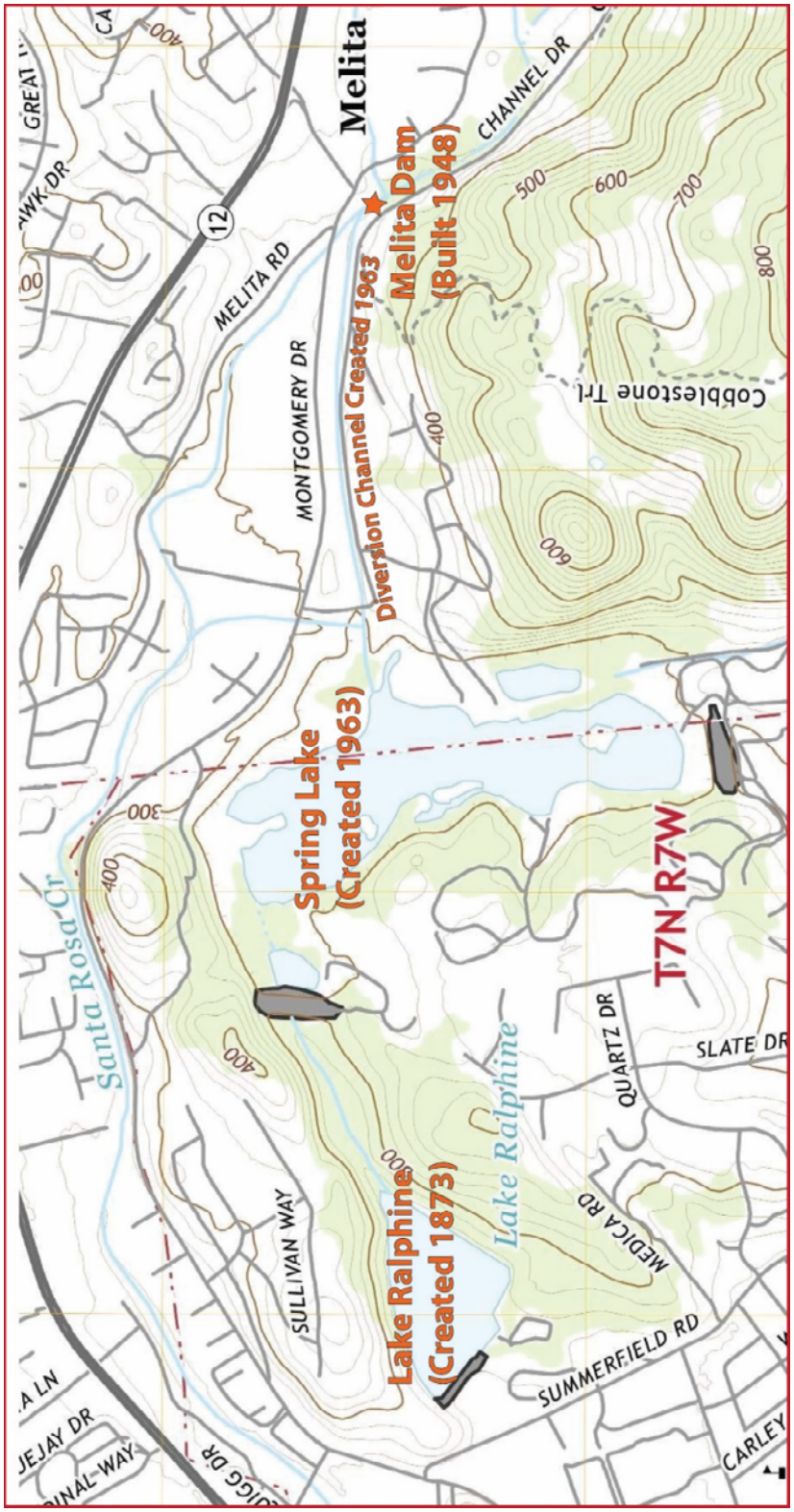
Melita Diversion Dam, Looking West

Melita Diversion Dam, Looking East

Detail of Headgate

Detail of Diversion Channel

Detail of Concrete Steps


Melita
Melita Dam (Built 1948)
Diversion Channel Created 1963
Spring Lake (Created 1963)
Lake Ralphine (Created 1873)
Lake Ralphine
Santa Rosa Cr
T7N R7W
MELITA RD
MONTGOMERY DR
CHANNEL DR
QUARTZ DR
SLATE DR
MEDICA RD
SUMMERFIELD RD
SULLIVAN WAY
Cobblestone Trl
12

B1. Historic Name: Unknown
B2. Common Name: Melita Diversion Dam, City of Santa Rosa Diversion Wier
B3. Original Use: Diversion Dam/Check Structure **B4. Present Use:** N/A (Abandoned)
***B5. Architectural Style:** N/A
***B6. Construction History:** *(Construction date, alterations, and date of alterations)* The diversion dam was constructed in 1948.
***B7. Moved?** ☒ No ☐Yes ☐Unknown **Date:** N/A **Original Location:** N/A
***B8. Related Features:**
B9a. Architect: Unknown **b. Builder** Unknown
***B10. Significance: Theme** Engineering, Community Planning and Development **Area** City of Santa Rosa, CA
Period of Significance 1948 **Property Type** Dam **Applicable Criteria** A, C
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity).

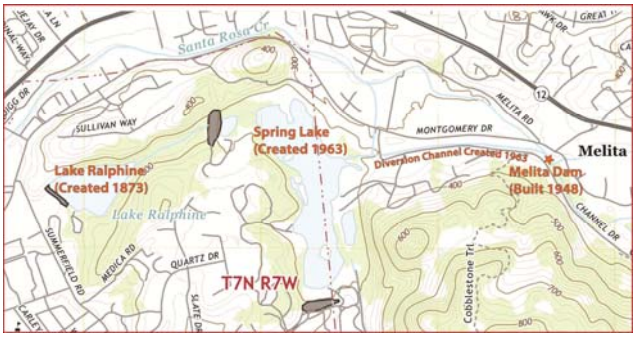
The Melita Diversion Dam was evaluated at a reconnaissance level in a cultural resources assessment completed for the Sonoma County Water Agency as part of the Santa Rosa Creek Fish Passage Improvements and Planning Project. The dam was constructed by the City of Santa Rosa, California, in 1948 as part of the city's municipal water system. The diversion dam's purpose was reportedly to divert water from Santa Rosa Creek into a diversion channel, to be conveyed by gravity to Lake Ralphine through a 24-inch steel pipe, measuring approximately 8,000 feet in length (Santa Rosa Water). Lake Ralphine was first established as a water supply reservoir in the late nineteenth century and continued to be used for this purpose into the 1960s. The Melita Diversion Dam appears to have been one in a series of water control structures built to convey water to this reservoir.

The reservoir at Lake Ralphine was first constructed by the Santa Rosa Water Works company in 1873. The company was incorporated by Mark L. McDonald (1833-1917) and a group of investors in January, and construction of an earthen dam reservoir commenced immediately following the company's organization. Water was first distributed from the privately owned reservoir to the City of Santa Rosa in the Fall of 1873 (Fraser, 410; Thompson, 89). Mark L. McDonald was a prominent figure in Santa Rosa's history. Among other ventures, his establishment of the Santa Rosa Water Works provided the newly burgeoning community with a much-needed municipal water supply, and one that also supported development of McDonald's various real estate investments in the area (Fraser, 410; Offenbacher; Thompson, 89).

In 1875, the Santa Rosa Water Works erected a new reservoir about half a mile below the old one. Named after McDonald's wife Ralphine, construction of what is now Lake Ralphine was completed in the Spring of 1877. According to one account, the new reservoir was about 1800 feet long and 600 feet wide with a depth of 24 feet. McDonald owned the land around the reservoir, and he established a park (now known as Howarth Memorial Park) on the grounds (Fraser 439; Thompson, 89-90; Lebaron)(Continued)

B11. Additional Resource Attributes: (List attributes and codes) None
***B12. References:** (See Continuation Sheet)

B13. Remarks: None.



***B14. Evaluator:** (See Continuation Sheet)
***Date of Evaluation** 2/2/2023

(This space reserved for official comments.)

B10. Significance (Continued):

The reservoir is further described as having a capacity of 400 million gallons in an area of 26 acres with an elevation gain of 80 feet, and that, by the late 1890s, water distribution to the City of Santa Rosa was facilitated by 25-miles of water mains (Baker 1892, 354; Baker 1897, 572).

Contemporary documents differ slightly on the exact nature of the reservoir's water supply – i.e., the distance and size/type of conduit used – but all agree on its source, as coming from Santa Rosa Creek east of the city near its confluence with Los Alamos Creek. A county history published in 1880 states that water was taken from Santa Rosa Creek and conveyed approximately 1-mile to the reservoir through either a 7-inch pipe or an 11-inch pipe, over an elevation drop of 35 feet (Fraser, 410 and 439). An 1884 history similarly describes the distance as 1.25-miles and the conduit a 7-inch pipe (Thompson, 89). Meanwhile, two later reports published in 1892 and 1897 mention the water source as being conveyed through a 2.5-mile long, 18-inch terra cotta conduit (Baker 1892, 354; Baker 1897, 572; Lebaron). All may be true.

During the 1880s and 1890s, the Santa Rosa Water Works was plagued by accusations (and litigation) concerning poor water quality and the company's near monopoly of the city's water utility, and both appear to have been common news-worthy issues (Cummings; Elliot).

Following years of controversy, the City of Santa Rosa formed California's first municipal water company in 1904. Intended as direct competition to the Santa Rosa Water Works company, this agency offered residents free water, supplied from a unique tunnel-well at the corner of Farmers Lane and Sonoma Avenue, stored in a reservoir on the hill now known as Proctor Heights. The City of Santa Rosa continued to provide the community with free water until 1960, when it entered into an agreement with the Sonoma County Water Agency for water from the new Coyote Valley Dam in Mendocino County (Lebaron).

Despite the availability of free water, the Santa Rosa Water Works company continued operation of the Lake Ralphine reservoir, and Santa Rosa residents continued to purchase water from the older system. Apparently, water quality remained an ongoing issue, and many residents reportedly eschewed the city's free water, instead preferring the taste of water from the older Lake Ralphine system (Lebaron).

The City of Santa Rosa eventually purchased the Santa Rosa Water Works and merged it into the city water system in 1947 (Lebaron). At this time, it appears the city water agency undertook efforts to upgrade the infrastructure of the older Lake Ralphine water system, including construction of the Melita Diversion Dam that still exists today. It also appears the diversion dam was most-likely abandoned during the 1960s, after the city's agreement with the Sonoma County Water Agency and the construction of the Spring Lake reservoir, the Spring Lake Diversion (or Vortex Tube), and other flood control infrastructure along Santa Rosa Creek, beginning in 1963 (Crowhurst).

Evaluation

The Melita Diversion Dam has been evaluated to determine its eligibility for listing in the National Register of Historic Places (NRHP) and found to be not-eligible. The structure is associated with the construction of mid-twentieth century water infrastructure, built and operated by the City of Santa Rosa and the Sonoma County Water Agency. However, the diversion dam does not appear to possess qualities that would warrant special recognition for its design or engineering and, constructed in 1948, it does not appear to possess sufficient-enough importance in the history of Santa Rosa's water system to meet National Register criteria. The City of Santa Rosa's acquisition of the Santa Rosa Water Works and the subsequent construction of the Melita Diversion Dam appears to have been minimally important to the history of Santa Rosa, especially when compared to the much earlier and more influential establishment of Lake Ralphine in the 1870s, the city water system in the 1900s, and completion of the major flood-control improvement projects along Santa Rosa Creek in the 1960s and 1970s.

Under NRHP Criteria A or B, the property is not known to be associated with events that have made a significant contribution to the broad patterns of history, nor with the lives of persons significant in our past. Under NRHP Criterion C, the structure exhibits the typical engineering of a concrete check structure, but does not embody characteristics or a method of construction that would warrant special recognition. While at one time integral to the function of the Lake Ralphine water system, the diversion dam does not individually represent a notable example of water distribution technology and does not appear to retain sufficient integrity or association for individual recognition or to contribute to the significance of a larger irrigation system. Furthermore, there is no evidence to suggest that it is associated with a significant designer or craftsman. Finally, the structure is also not considered to be, or have been, the principal source of information. Therefore, it is not considered significant, pursuant to Criterion D.

Based on our review, the property does not appear eligible for listing in the NRHP individually or as a contributor to a potential historic district.

B12. References (Continued):

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Fraser, J. P. Munro-Fraser. History of Sonoma County. San Francisco, CA: Alley, Bowen & Company, Publishers, 1880.

Lebaron, Gaye. "Sonoma County's 150-year journey to current system hasn't been without bumps," The Press Democrat (27 August 2010), Santa Rosa, CA. Online resource, accessed February 2023: https://www.pressdemocrat.com/article/news/sonoma-countys-150-year-journey-to-current-system-hasnt-been-without-bump/.

Offenbacher, Doug. "Mark McDonald," KenwoodDepot.com. Online resource, accessed February 2023: https://www.kenwooddepot.com/pub/article/mark-mcdonald.html.

Santa Rosa Water. Personal Communication. Email from Ron Mrincic, Utility System Superintendent, to Steve Brady, Senior Environmental Specialist, dated 15 October 2016.

Thompson, Robert A. Central Sonoma: A Brief Description of the Township and Town of Santa Rosa, Sonoma County, California, Its Climate and Resources. Santa Rosa, CA: R. A. Thompson, 1884.

B14. Evaluator (Continued):

Christopher Hetzel, Anchor QEA, LLC
1201 3rd Ave #2600, Seattle, WA 98101