Sonoma Water

Administrative Office
404 Aviation Blvd
Santa Rosa, CA 95403

Office Hours
8:00 AM – 5:00 PM
Monday – Friday

Front Desk
707-536-5370

SANTA ROSA AQUEDUCT AND RUSSIAN RIVER TO COTATI AQUEDUCT CATHODIC PROTECTION PROJECT

DRAFT Initial Study and Mitigated Negative Declaration of Environmental Impact



Lead Agency:
Sonoma County Water Agency
404 Aviation Boulevard
Santa Rosa, CA 95403

Contact:
Candace Messner, Environmental Specialist
candace.messner@scwa.ca.gov
(707) 524-6424

Posting and Review Period: September 28, 2021 to October 28, 2021

American Disabilities Act Compliance

This Initial Study and Proposed Mitigated Negative Declaration of Environmental Impact for the Santa Rosa Aqueduct and Cotati Aqueduct Cathodic Protection 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.

This disclaimer is provided to advise that portions of the document, including the figures, charts, and graphics included in the document, are non-convertible material, and could not reasonably be adjusted to be fully compliant with ADA regulations. For assistance with this data or information, please contact the Sonoma County Water Agency's Community & Government Affairs Division, at SonomaWater@scwa.ca.gov or 707-547-1900.

Table of Contents

Chapter 1 Introduction 1
Introduction 1
Initial Study Review 2
Summary of Findings 2
Chapter 2 Project Location and Description 3
Project Background 3
Project Purpose and Need 3
Project Description 4
Project Location 4
Project Components and Implementation 29
Duration of Construction 37
Construction Staging Areas 37
Operation and Maintenance 37
Conformance with General Plans and General Plan Designations 38
Rights-of-Way 38
Other Public Agencies Whose Approval Is Required 39
Project Alternatives 39
Determination 41
Chapter 3 Environmental Checklist 42
Section 3.1 Aesthetics 44
Section 3.2 Agriculture and Forestry Resources 49
Section 3.3 Air Quality 52
Section 3.4 Biological Resources 66
Section 3.5 Cultural Resources 95
Section 3.6 Energy 103
Section 3.7 Geology and Soils 105
Section 3.8 Greenhouse Gas Emissions 117
Section 3.9 Hazards and Hazardous Materials 125
Section 3.10 Hydrology and Water Quality 131

Section 3.11 Land Use and Planning 140
Section 3.12 Mineral Resources 142
Section 3.13. Noise 144
Section 3.14 Population and Housing 158
Section 3.15 Public Services 161
Section 3.16 Recreation 165
Section 3.17 Transportation 168
Section 3.18 Tribal Cultural Resources 179
Section 3.19 Utilities and Service Systems 182
Section 3.20 Wildfire 186
Section 3.21 Mandatory Findings of Significance 192
Chapter 4 List of Preparers 195
Chapter 5 References 196

Figures

Figure 2-1. Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Grid Index 7

Figure 2-2. Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box A1 8

Figure 2-3. Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box A2 9

Figure 2-4. Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box A3 10

Figure 2-5. Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box A4 11

Figure 2-6. Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box B1 12

Figure 2-7. Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box B2 13

Figure 2-8. Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box B5 14

Figure 2-9. Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box B7 15

Figure 2-10. Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box B8 16

Figure 2-11. Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box C2 17

Figure 2-12. Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box C3 18

Figure 2-13. Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box C5 19

Figure 2-14. Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box C6 20

Figure 2-15. Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box C7 21

Figure 2-16. Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box D3 22

Figure 2-17. Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box D4 23
Figure 2-18. Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box E4 24
Figure 2-19. Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box F4 25
Figure 2-20. Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box F5 26
Figure 2-21. Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box G5 27
Figure 2-22. Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box G6 28
Figure 2-23. Visible aboveground components of a Cathodic Protection Station 30
Figure 2-24. Subsurface components of an anode well at a Cathodic Protection Station would measure approximately one foot in diameter and 250 feet in depth 31
Figure 2-25. Aboveground components of a test station may include a four-foot post with a small test box at the top. 32
Figure 2-26. Aboveground and belowground components of a test station with four-foot post and test box. 33
Figure 2-27. Finished flush-mounted test station. 34
Figure 2-28. Components of a flush-mounted test station. 35
Figure 3.4-1. RR 541+20 Rectifier. Construction activities and indirect impacts areas avoidance measures. 78
Figure 3.4-2. Cathodic Protection Station RR 606+00. Construction activities and temporary impacts within potentially jurisdictional areas. 91

Tables

Table 2-1. Cathodic Protection Project Components Proposed along the Santa Rosa Aqueduct 5
Table 2-2. Cathodic Protection Project Components Proposed along the Russian River to Cotati Aqueduct 6
Table 3.3-1. Summary of Air Quality Monitoring Data for the Proposed Project Area within the North Coast Air Basin (2016–2018) 57
Table 3.3-2. Summary of Air Quality Monitoring Data for the Proposed Project Area within the San Francisco Bay Area Air Basin (2016–2018) 58

Table 3.3-3. North Coast Air Basin Attainment Status for State of California and Federal Air Quality Standards 59

Table 3.3-4. SFBAAB Area Attainment Status for State of California and Federal Air Quality Standards 59

Table 3.3-5. Average Daily Pollutant Emissions (pounds/day)[a] Associated with Construction of the Proposed Project Compared to BAAQMD Thresholds for Construction-related Activities 62

Table 3.3-6. Annual Pollutant Emissions (tons/year)[a] Associated with Construction of the Proposed Project Compared to NSCAPCD Operational Thresholds 62

Table 3.4-1. Proposed Project Sites with Potential for Temporary Impact to California Tiger Salamander (CTS) Migration Habitat 82

Table 3.4-2. Proposed Project Sites with Potential for Temporary Impacts to California Tiger Salamander (CTS) Upland Refuge (Grassland) Habitat 82

Table 3.5-1. Cultural Resources Study Results Summary 98

Table 3.5-2. Estimated Likelihood for Encountering Buried Prehistoric Archaeological Resources at Proposed Cathodic Protection Station and Test Station Locations 99

Table 3.8-1. Project-related Annual Construction GHG Emissions Compared to BAAQMD Thresholds for GHG 123

Table 3.10-1. Proposed Project Sites Located within Mapped FEMA Floodplain..... 134

Table 3.12-2. Santa Rosa City Code 17-16.030 Ambient Base Noise Level Criteria .. 154

Table 3.12-3. Reference Construction Equipment Noise Levels (50 feet from source)155

Table 3.14-1. City of Santa Rosa ABAG Projections 2040 for Population and Households, 2010–2040 159

Appendices

APPENDIX A Aesthetics Resources Site-specific Setting and Potential Impact Tables

APPENDIX B Agriculture and Forest Resources Site-specific Setting and Potential Impact Tables

APPENDIX C Air Quality and Greenhouse Gas Emissions Estimates

APPENDIX D Supporting Information Related to Biological Resources

APPENDIX E Land Use Designations and City Zoning Along the Santa Rosa and Russian River to Cotati Aqueducts

APPENDIX F Transportation Site-specific Setting and Potential Impact Tables

APPENDIX G Notice of Preparation of Initial Study

APPENDIX H Notice of Availability / Notice of Intent to Adopt

Chapter 1 Introduction

Introduction

The Sonoma County Water Agency (Sonoma Water) was created in 1949 by the California Legislature as a special district to provide flood protection and water supply services. The members of the Sonoma County Board of Supervisors are Sonoma Water's Board of Directors. 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 the Sonoma Water's facilities), and the treatment and disposal of wastewater.

Sonoma Water is the project proponent and lead agency in accordance with the California Environmental Quality Act (CEQA) for the proposed Santa Rosa Aqueduct and Russian River to Cotati Aqueduct Cathodic Protection Project (Proposed Project). Sonoma Water staff has prepared this Draft Initial Study and Mitigated Negative Declaration of Environmental Impact (Draft IS/MND) 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 Draft 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 this document, this Draft IS/MND, along with a summary of comments submitted and response, will be brought before Sonoma Water's Board of Directors for their consideration.

Sonoma Water owns, operates, and maintains a 48-inch diameter concrete mortar lined steel water supply pipeline (referred to as the Russian River to Cotati Aqueduct[1]) and a 42-inch steel water supply pipeline (referred to as the Santa Rosa Aqueduct) that provides water from Sonoma Water's production facility to portions of central, southern, and eastern Sonoma County (see Figures 2-1 through 2-28 in Section 2, "Project Description"). The Russian River to Cotati Aqueduct and Santa Rosa Aqueduct provide essential water service to approximately 600,000 residents and businesses within the Sonoma Water's service area in portions of Sonoma and Marin counties.

[1] Also called the Russian River-Cotati Intertie.

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 I) 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:

Candace Messner
Sonoma County Water Agency
404 Aviation Blvd.
Santa Rosa, CA 95403

Or email to: candace.messner@scwa.ca.gov

Summary of Findings

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

- Aesthetics
- Agricultural 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

Potentially significant effects were identified for air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, transportation, and tribal cultural resources. The Proposed Project incorporates measures that would reduce all impacts to a less-than-significant level.

Chapter 2 Project Location and Description

Project Background

Sonoma Water operates several aqueducts as part of its water transmission system throughout its service area. The original system was constructed in the late 1950s and early 1960s, but construction of the transmission system continued through 2006. The Santa Rosa Aqueduct was installed from 1957 to 1959 to provide drinking water from the Russian River to Santa Rosa. The Santa Rosa Aqueduct consists of approximately 83,100 feet (16 miles) of 36-inch and 42-inch diameter concrete mortar lined and coated steel pipe. The aqueduct runs from the Wohler Pumping Plant near the community of Forestville along the Russian River to the Ralphine Tanks Site at Spring Lake Park in Santa Rosa. The Russian River to Cotati Aqueduct was installed from 1975 to 1977 and consists of 95,000 feet (18 miles) of 30-inch to 48-inch diameter concrete mortar lined steel. The aqueduct runs from the Mirabel Pumping Plant near the community of Forestville along the Russian River to the Cotati Tanks Site near West Sierra Road west of Cotati.

Project Purpose and Need

In order to minimize corrosion of the steel content of the aqueducts, a cathodic protection system was installed along each of the aqueducts when the aqueducts were first constructed. The existing cathodic protection system is a galvanic cathodic protection system; galvanic systems include buried anodes, made of a cast magnesium alloy, that are attached to the aqueduct. The anodes provide a material that corrodes more readily than the aqueduct, so the corrosive materials in the soils surrounding the aqueduct degrade the anodes and not the aqueduct. These anodes are referred to as “sacrificial anodes” since they are essentially sacrificed to the corrosive environment to protect the aqueduct. Cathodic test stations, which consist of a wire attached from the aqueduct up to a test station mounted above the ground surface, allow Sonoma Water staff to test the level of cathodic protection on portions of the aqueduct without excavating the aqueduct.

The existing sacrificial anodes included in the existing galvanic cathodic protection system along the Santa Rosa and Cotati aqueducts are depleted and are in need of replacement. Failing to replace the existing anodes could result in corrosion and failure of portions of the aqueducts in the future.

The Proposed Project would replace the existing galvanic system with an impressed current cathodic protection system. Impressed current cathodic protection systems use anode installations combined with a small electrical current to protect a larger portion of the aqueduct (compared with galvanic installations) with a system that has a much smaller footprint and is easier to monitor and maintain. Replacing the galvanic corrosion protection system also cost effectively extends the useful life of the aqueducts.

Project Description

The Proposed Project would include the construction of a total of 31 Cathodic Protection Stations and 49 Test Stations at intervals along the Santa Rosa and Russian River to Cotati aqueducts; vegetation maintenance activities associated with both aqueducts; and vegetation management at one location on the Petaluma Aqueduct. Proposed Project components are listed below:

- Along the Santa Rosa Aqueduct, installation of a total of 15 Cathodic Protection Stations (14 of which would include an anode well and rectifier; one of which would include an anode well and solar power system) and 32 Test Stations;
- Along the Russian River to Cotati Aqueduct, installation of a total of 16 Cathodic Protection Stations (15 of which would include an anode well and rectifier; one of which would include an anode well and solar power system) and 17 Test Stations;
- Vegetation maintenance to maintain access at cathodic protection stations;
- Vegetation management at three locations along the Russian River to Cotati Aqueduct; and
- Vegetation management at one location on the Petaluma Aqueduct.

Project Location

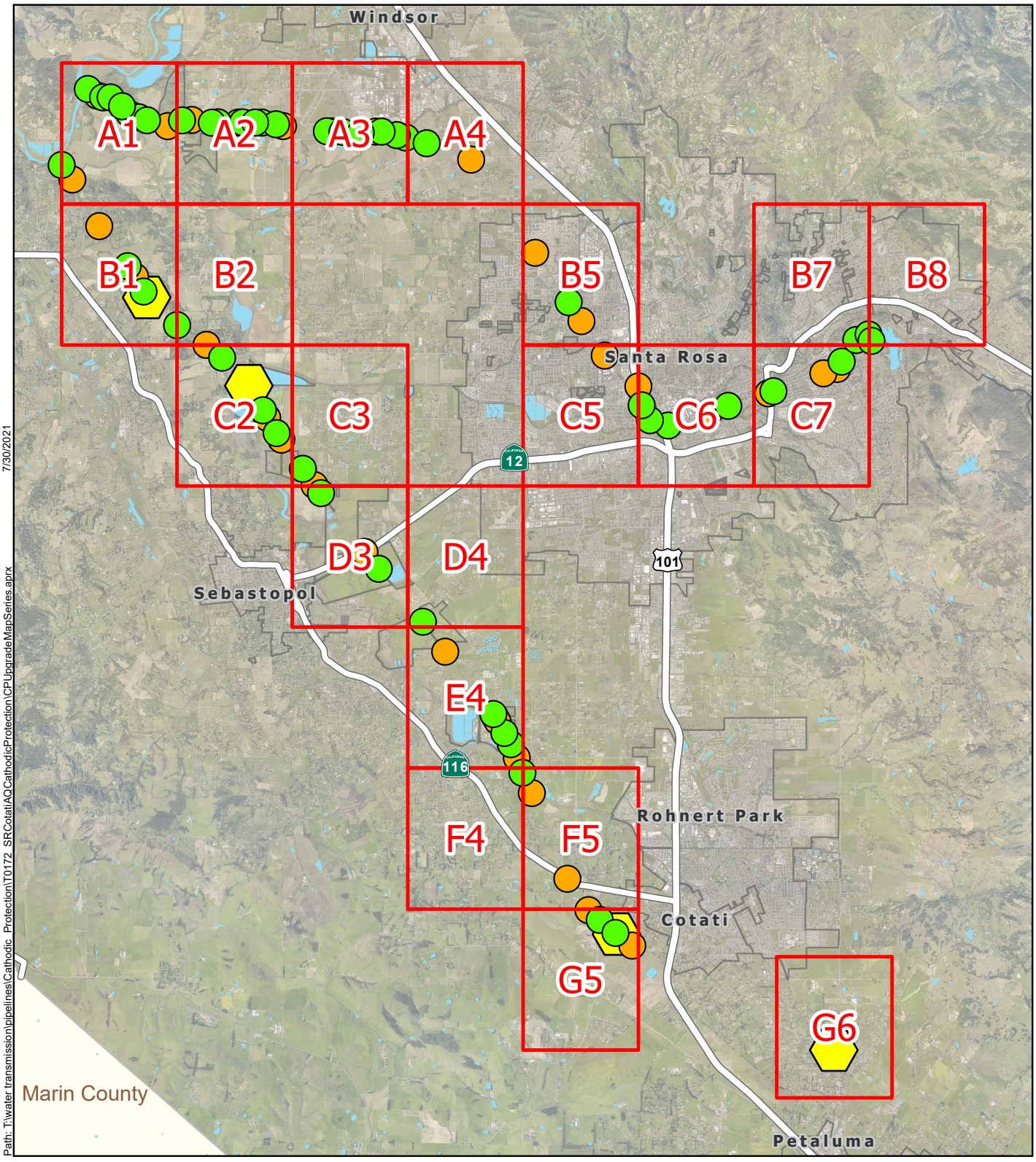
The Proposed Project would be located within unincorporated areas of Sonoma County and areas within the City of Santa Rosa, California. A list of Proposed Cathodic Protection Stations and Test Stations along the Santa Rosa Aqueduct is included in Table 2-1 and along the Russian River to Cotati Aqueduct is included in Table 2-2 below. Additionally, vegetation management would take place at several locations along the Santa Rosa and Russian River to Cotati aqueducts and at one site along the Petaluma Aqueduct located immediately south of Adobe Road in the Penngrove area. Locations of Proposed Project components are provided in Figures 2-1 through 2-28 below.

Table 2-1. Cathodic Protection Project Components Proposed along the Santa Rosa Aqueduct

Station Name	Station Type	Station Name	Station Type
SR 0+00	Test Station	SR 247+94	Test Station
SR 9+66	Cathodic Protection Station	SR 259+60	Test Station
SR 14+28	Test Station	SR 264+00	Test Station
SR 21+00	Test Station	SR 285+50	Test Station
SR 32+00	Test Station	SR 320+52	Cathodic Protection Station
SR 40+50	Test Station	SR 415+50	Cathodic Protection Station
SR 49+00	Test Station	SR 479+70	Test Station
SR 56+00	Test Station	SR 496+95	Cathodic Protection Station
SR 75+00	Cathodic Protection Station	SR 530+00	Cathodic Protection Station
SR 90+00	Test Station	SR 572+67	Cathodic Protection Station
SR 95+00	Cathodic Protection Station	SR 588+00	Test Station
SR 111+00	Test Station	SR 602+00	Test Station
SR 123+43	Test Station	SR 622+70	Test Station
SR 129+09	Test Station	SR 663+89	Cathodic Protection Station
SR 134+83	Test Station	SR 677+00	Test Station
SR 146+50	Test Station	SR 713+80	Cathodic Protection Station
SR 150+03	Test Station	SR 721+40	Test Station
SR 159+61	Test Station	SR 761+00	Cathodic Protection Station
SR 170+00	Cathodic Protection Station (solar)	SR 771+40	Cathodic Protection Station
SR 203+45	Test Station	SR 787+00	Test Station
SR 207+35	Cathodic Protection Station	SR 801+20	Test Station
SR 212+00	Test Station	SR 812+25	Test Station
SR 231+00	Test Station	SR 821+40	Test Station
SR 242+97	Cathodic Protection Station		

Table 2-2. Cathodic Protection Project Components Proposed along the Russian River to Cotati Aqueduct

Station Name	Station Type	Station Name	Station Type
RR 31+22	Test Station	RR 448+00	Test Station
RR 45+00	Cathodic Protection Station	RR 502+27	Test Station
RR 89+99	Cathodic Protection Station	RR 541+20	Cathodic Protection Station
RR 131+00	Test Station	RR 592+00	Test Station
RR 141+58	Cathodic Protection Station	RR 606+00	Cathodic Protection Station
RR 151+50	Test Station	RR 608+00	Cathodic Protection Station (solar)
RR 200+00	Test Station	RR 616+75	Test Station
RR 224+00	Cathodic Protection Station	RR 630+00	Test Station
RR 245+00	Test Station	RR 643+75	Cathodic Protection Station
RR 286+50	Test Station	RR 669+30	Test Station
RR 302+00	Cathodic Protection Station	RR 677+80	Cathodic Protection Station
RR 312+50	Test Station	RR 748+52	Cathodic Protection Station
RR 323+00	Cathodic Protection Station	RR 781+00	Cathodic Protection Station
RR 336+40	Test Station	RR 798+50	Test Station
RR 367+00	Cathodic Protection Station	RR 808+45	Test Station
RR 376+00	Test Station	RR 826+55	Cathodic Protection Station
RR 436+80	Cathodic Protection Station		



Proposed Test Station

Proposed Cathodic Protection Site

Vegetation Maintenance Site

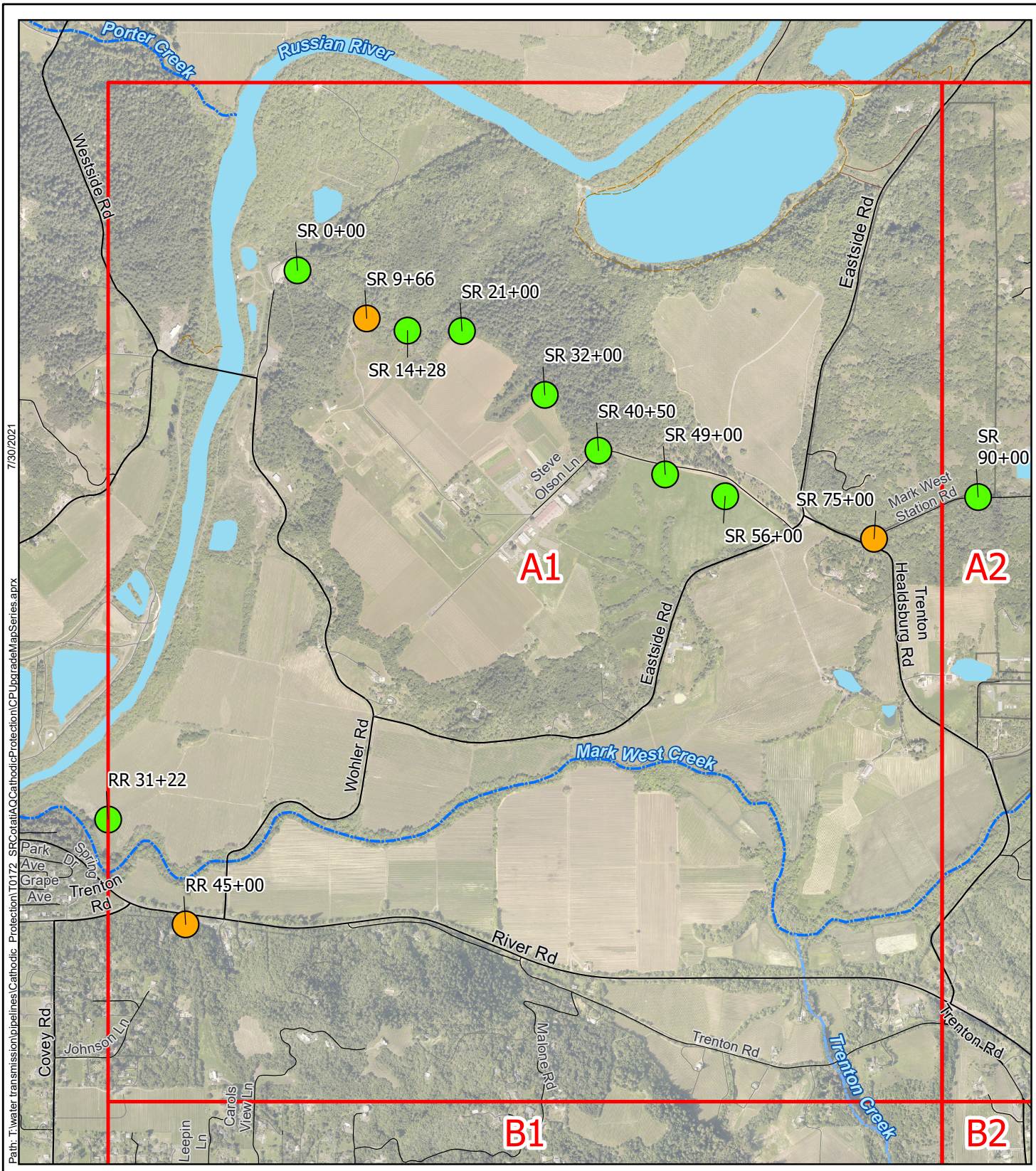
DISCLAIMER
This map document and associated data are distributed for informational purposes only "AS-IS" at the published scale and provided without warranty of any kind expressed or implied. The positional accuracy of the data is approximate and not intended to represent survey map accuracy. The Sonoma County Water Agency assumes no responsibility arising from use of this information.

Figure 2-1 **Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Grid Index**

N W E S

0 0.5 1 Miles

Sonoma Water



Proposed Test Station

Proposed Cathodic Protection Site

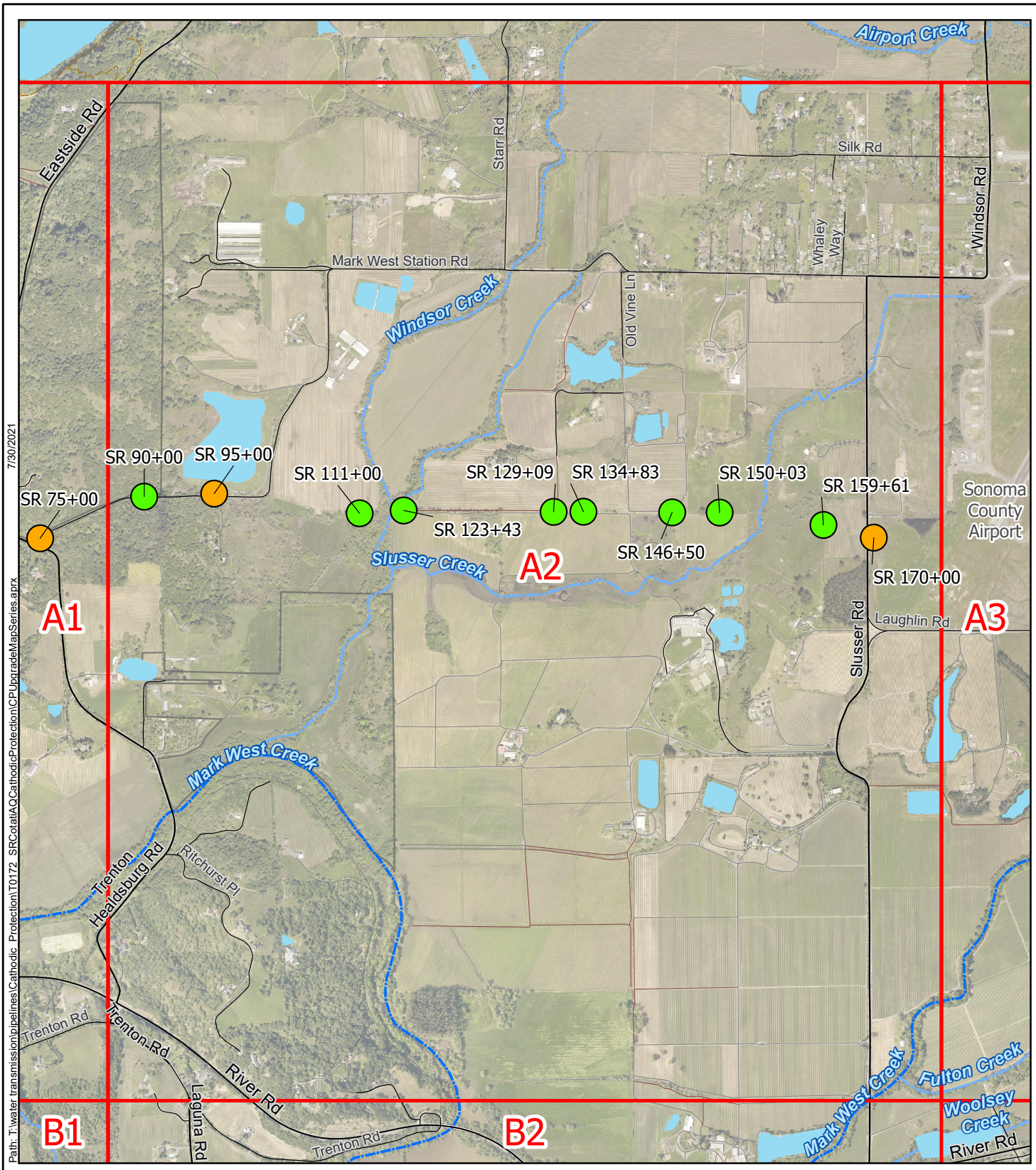
Vegetation Maintenance Site

DISCLAIMER
This map document and associated data are distributed for informational purposes only "AS-IS" at the published scale and provided without warranty of any kind expressed or implied. The positional accuracy of the data is approximate and not intended to represent survey map accuracy. The Sonoma County Water Agency assumes no responsibility arising from use of this information.

Figure 2-2 **Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box A1**

0 500 1,000 Feet

Sonoma Water



Proposed Test Station

Proposed Cathodic Protection Site

Vegetation Maintenance Site

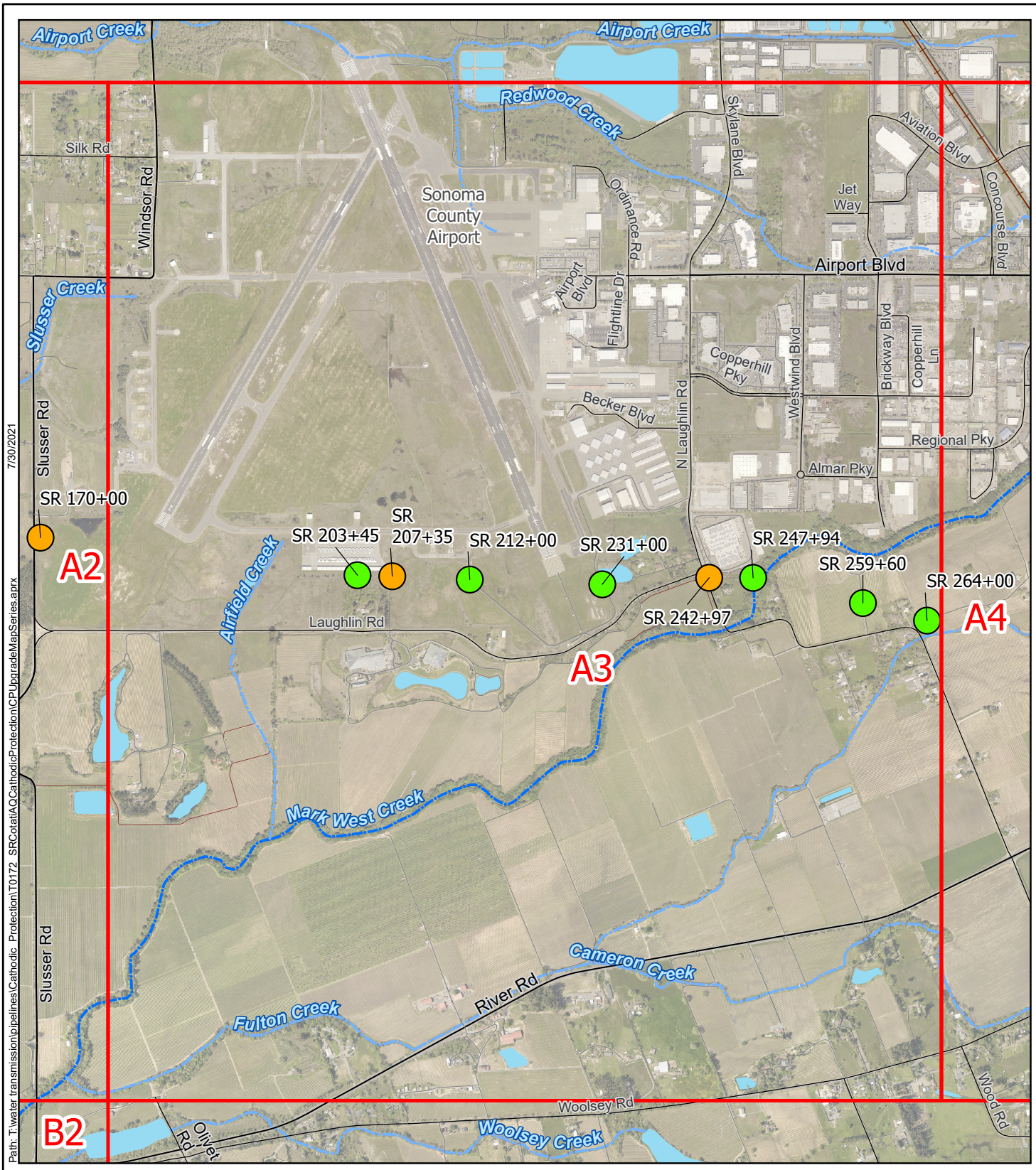
DISCLAIMER
This map document and associated data are distributed for informational purposes only "AS-IS" at the published scale and provided without warranty of any kind expressed or implied. The positional accuracy of the data is approximate and not intended to represent survey map accuracy. The Sonoma County Water Agency assumes no responsibility arising from use of this information.

Figure 2-3 **Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box A2**

N W E S

0 500 1,000 Feet

Sonoma Water



Proposed Test Station

Proposed Cathodic Protection Site

Vegetation Maintenance Site

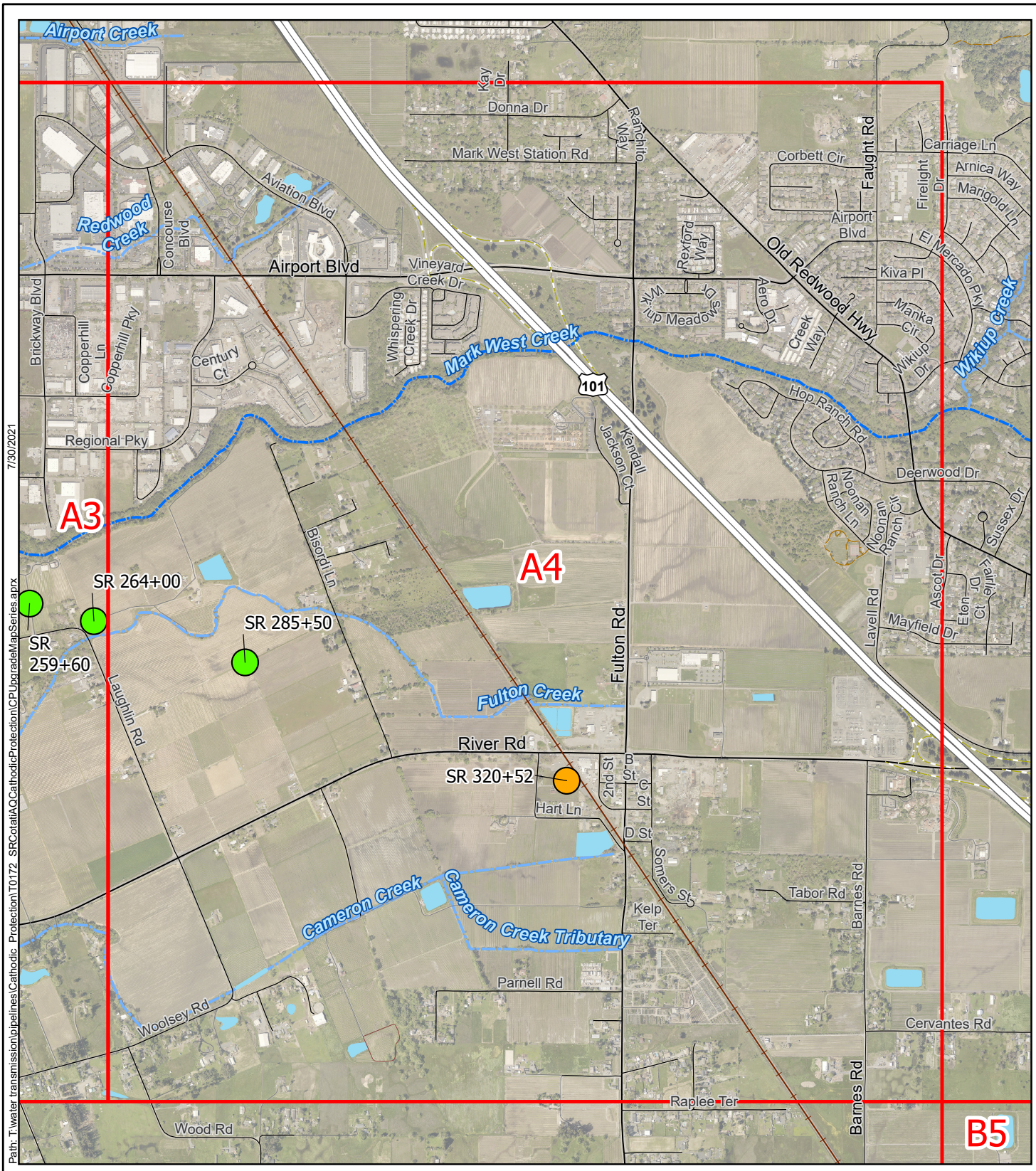
DISCLAIMER
This map document and associated data are distributed for informational purposes only "AS-IS" at the published scale and provided without warranty of any kind expressed or implied. The positional accuracy of the data is approximate and not intended to represent survey map accuracy. The Sonoma County Water Agency assumes no responsibility arising from use of this information.

Figure 2-4 **Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box A3**

N W E S

0 500 1,000 Feet

Sonoma Water



Path: T:\water transmission\pipelines\Cathodic Protection\T0172_SRCotatiAQCathodicProtection\CPUpgradeMapSeries.aprx 7/30/2021

Proposed Test Station

Proposed Cathodic Protection Site

Vegetation Maintenance Site

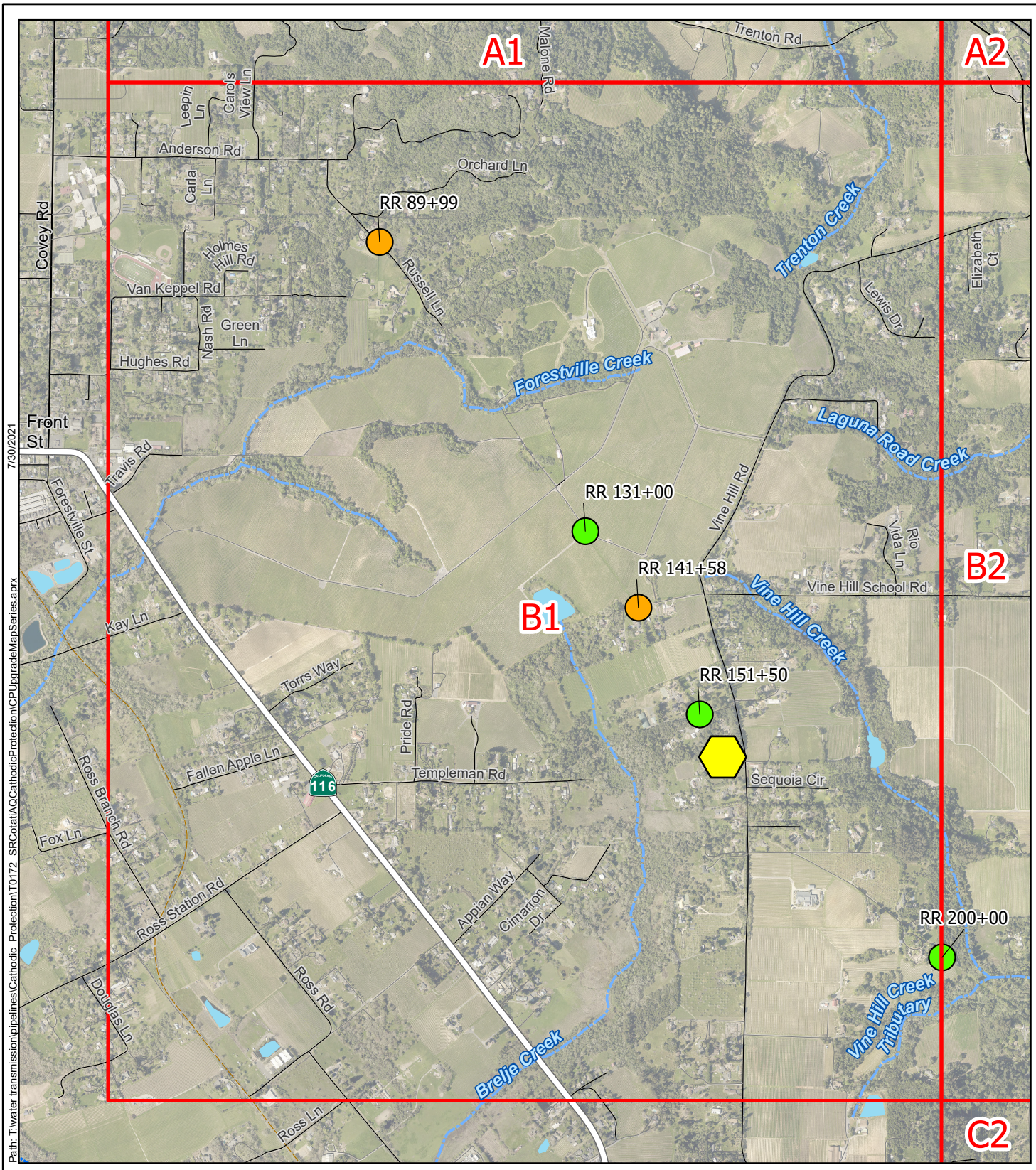
DISCLAIMER
This map document and associated data are distributed for informational purposes only "AS-IS" at the published scale and provided without warranty of any kind expressed or implied. The positional accuracy of the data is approximate and not intended to represent survey map accuracy. The Sonoma County Water Agency assumes no responsibility arising from use of this information.

Figure 2-5 **Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box A4**

N W E S

0 500 1,000 Feet

Sonoma Water



Path: T:\water transmission\pipelines\Cathodic Protection\T0172_SRCotatiAQCathodicProtection\CPUpgradeMapSeries.aprx 7/30/2021

Proposed Test Station

Proposed Cathodic Protection Site

Vegetation Maintenance Site

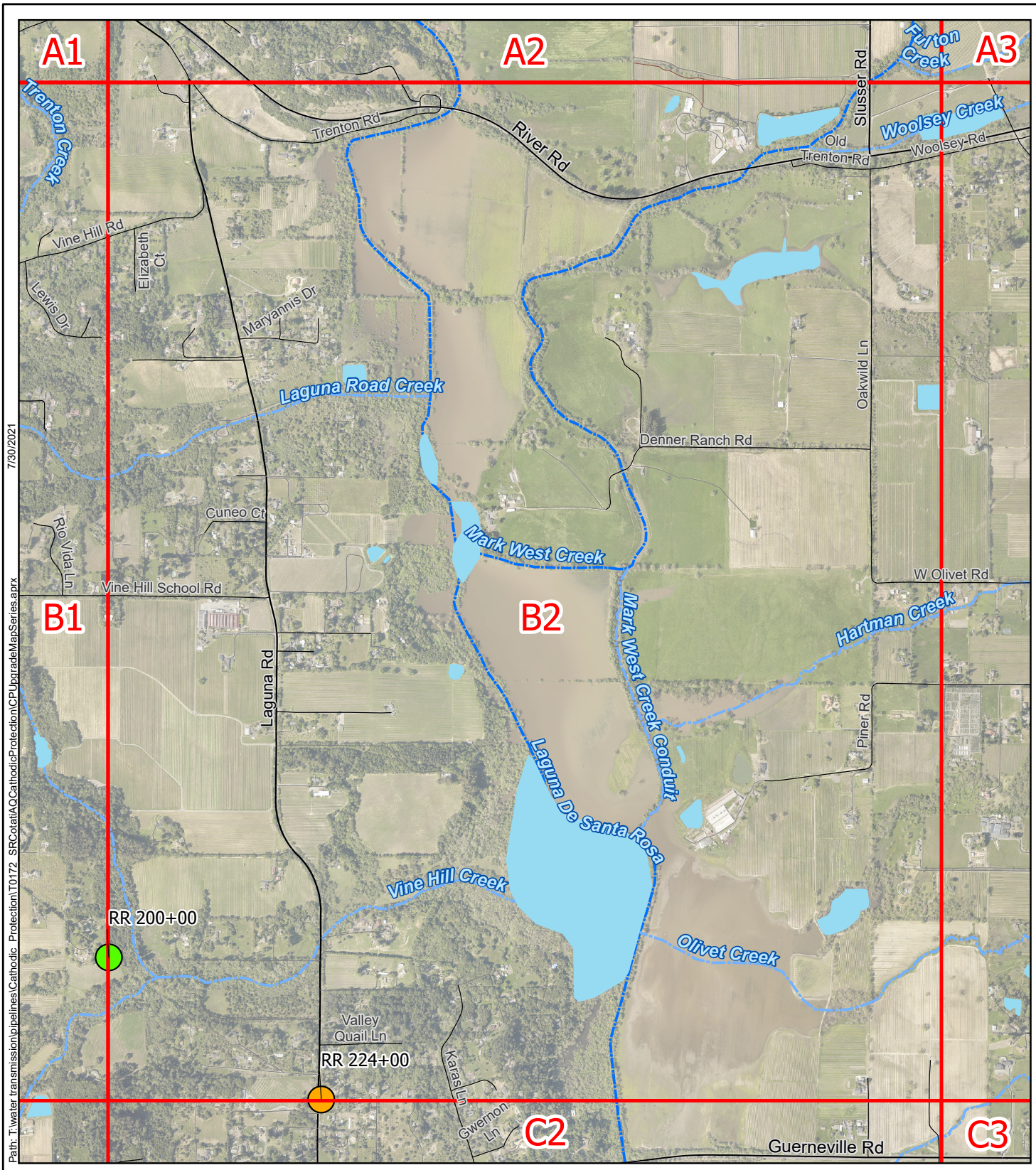
DISCLAIMER
This map document and associated data are distributed for informational purposes only "AS-IS" at the published scale and provided without warranty of any kind expressed or implied. The positional accuracy of the data is approximate and not intended to represent survey map accuracy. The Sonoma County Water Agency assumes no responsibility arising from use of this information.

Figure 2-6 **Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box B1**

N W E S

0 500 1,000 Feet

Sonoma Water



Proposed Test Station

Proposed Cathodic Protection Site

Vegetation Maintenance Site

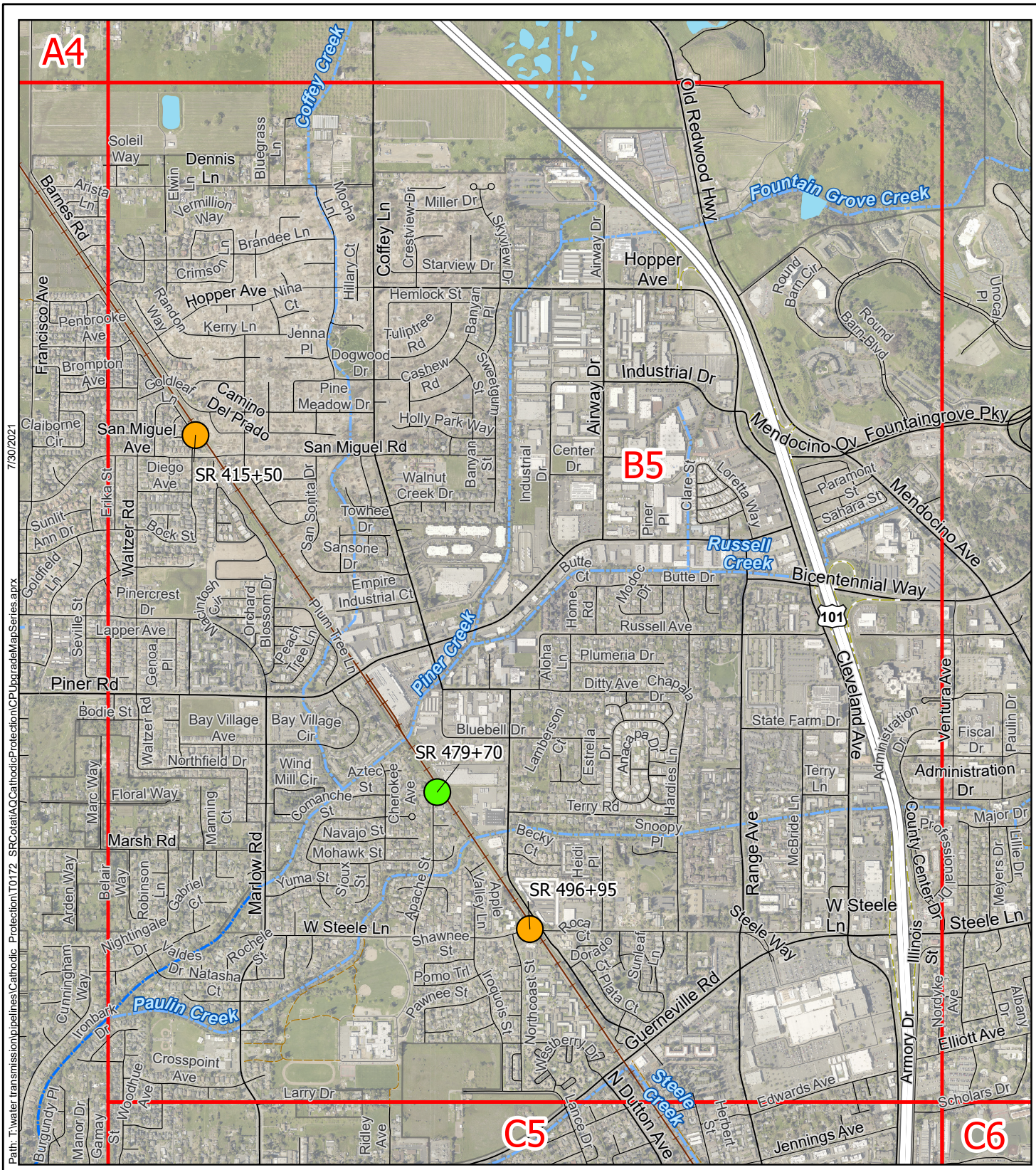
DISCLAIMER
This map document and associated data are distributed for informational purposes only "AS-IS" at the published scale and provided without warranty of any kind expressed or implied. The positional accuracy of the data is approximate and not intended to represent survey map accuracy. The Sonoma County Water Agency assumes no responsibility arising from use of this information.

Figure 2-7 **Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box B2**

N W E S

0 500 1,000 Feet

Sonoma Water



Proposed Test Station

Proposed Cathodic Protection Site

Vegetation Maintenance Site

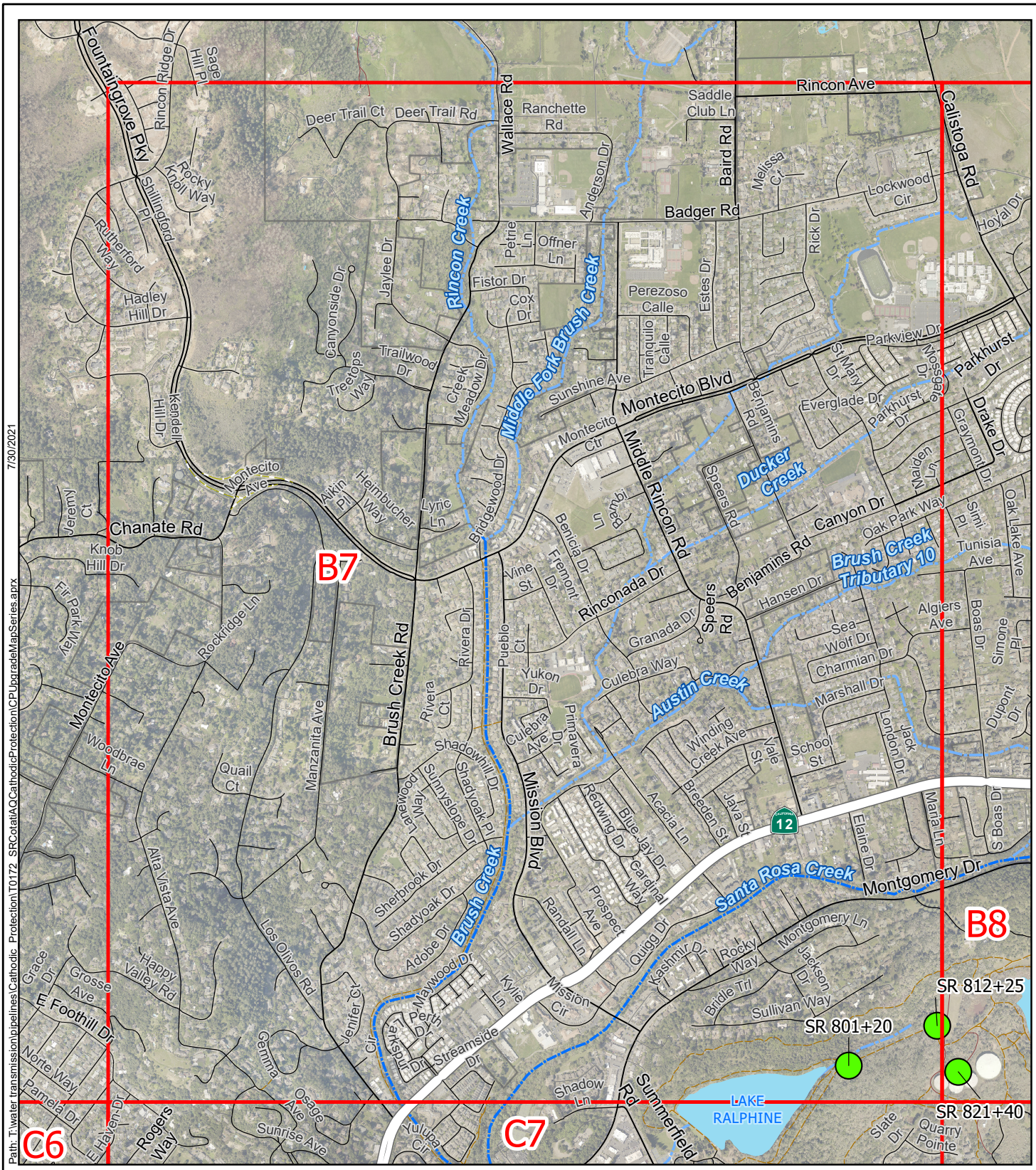
DISCLAIMER
This map document and associated data are distributed for informational purposes only "AS-IS" at the published scale and provided without warranty of any kind expressed or implied. The positional accuracy of the data is approximate and not intended to represent survey map accuracy. The Sonoma County Water Agency assumes no responsibility arising from use of this information.

Figure 2-8 **Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box B5**

N W E S

0 500 1,000 Feet

Sonoma Water



Path: T:\water transmission\pipelines\Cathodic Protection\T0172_SRCotatiAQCathodicProtection\CPUpgradeMapSeries.aprx 7/30/2021

Proposed Test Station

Proposed Cathodic Protection Site

Vegetation Maintenance Site

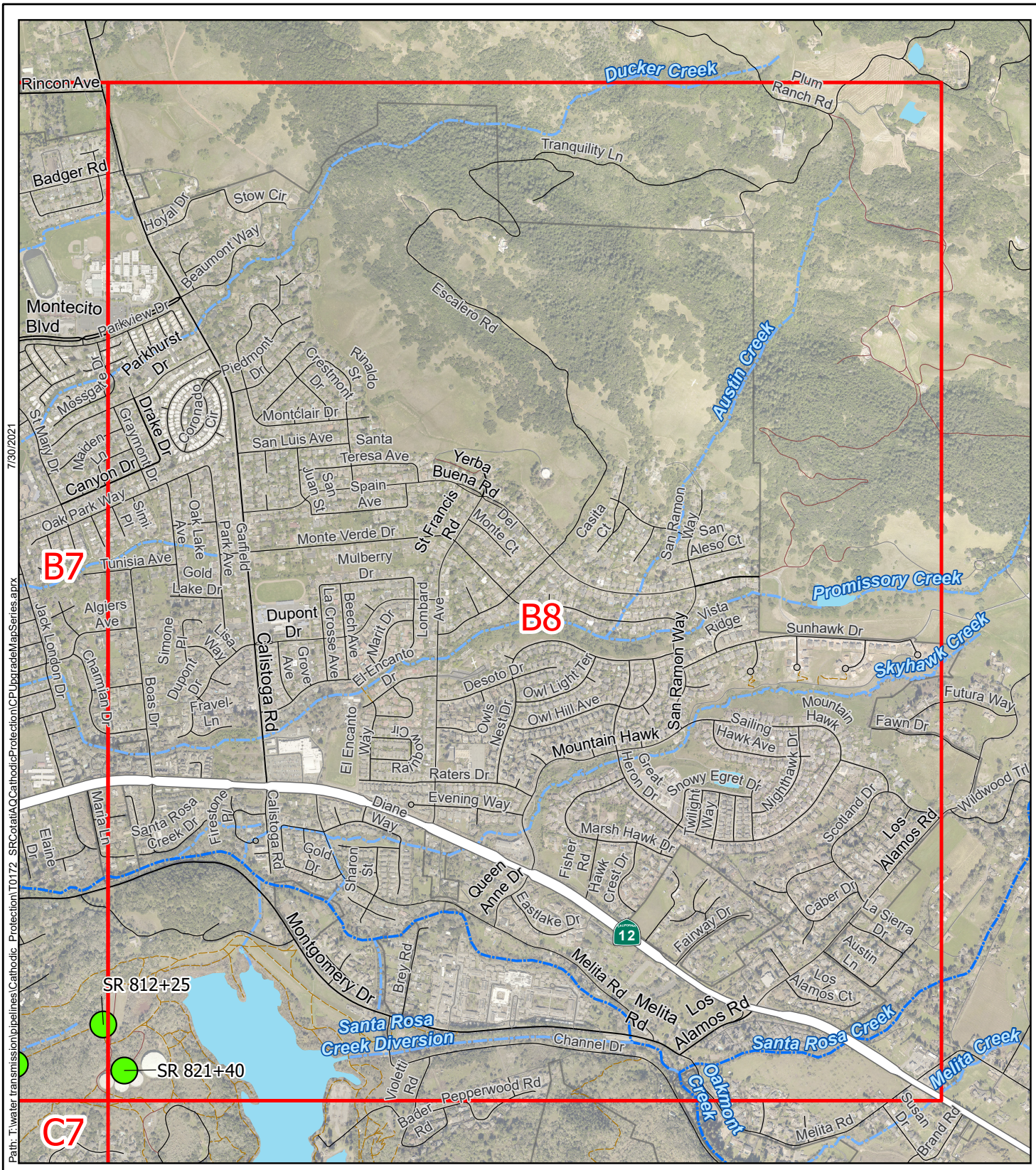
DISCLAIMER
This map document and associated data are distributed for informational purposes only "AS-IS" at the published scale and provided without warranty of any kind expressed or implied. The positional accuracy of the data is approximate and not intended to represent survey map accuracy. The Sonoma County Water Agency assumes no responsibility arising from use of this information.

Figure 2-9 **Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box B7**

N W E S

0 500 1,000 Feet

Sonoma Water



7/30/2021

Path: T:\water transmission\pipelines\Cathodic_Protection\T0172_SRCotatiAQCathodicProtection\CPUpgradeMapSeries.aprx

Proposed Test Station

Proposed Cathodic Protection Site

Vegetation Maintenance Site

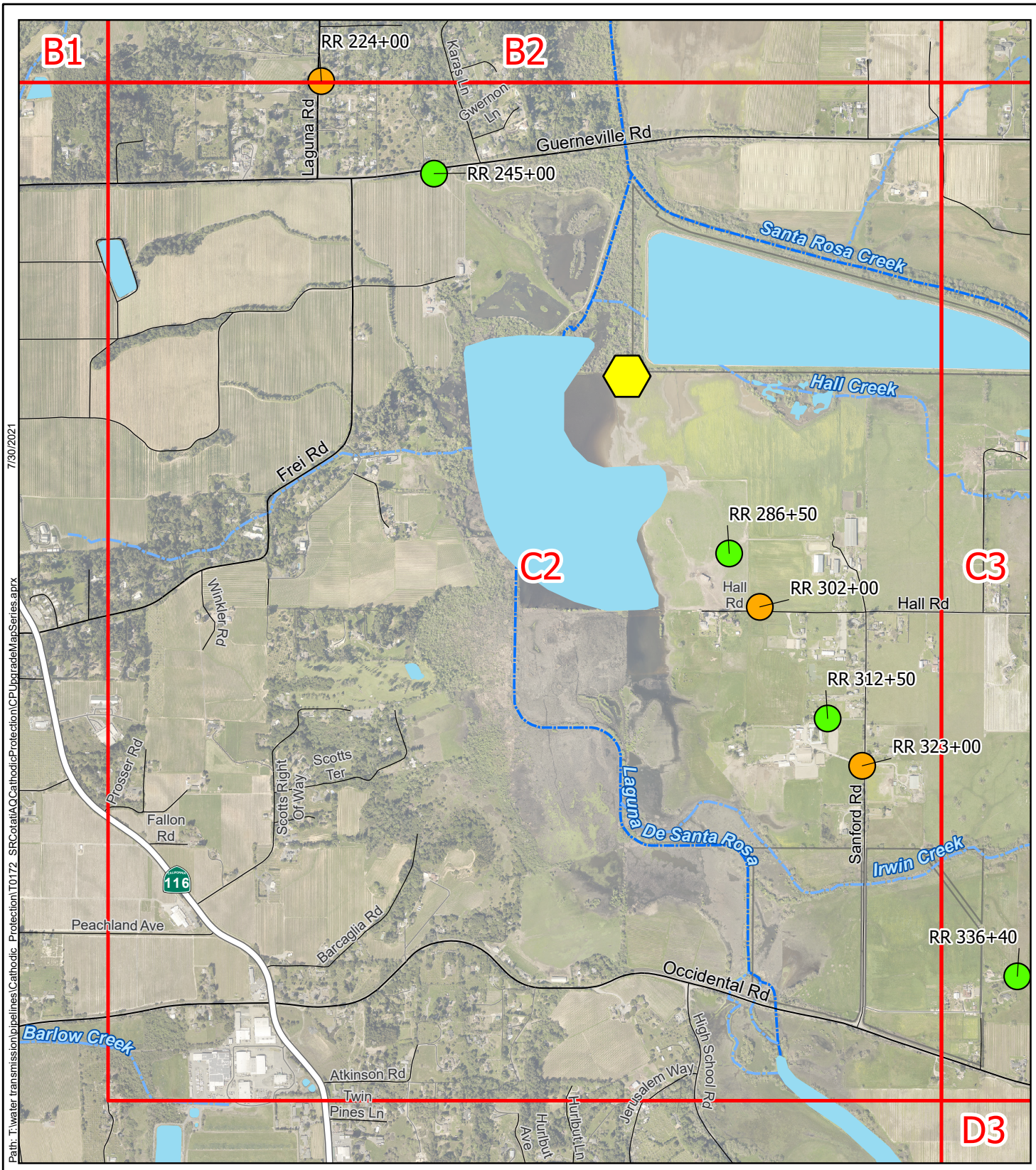
DISCLAIMER
This map document and associated data are distributed for informational purposes only "AS-IS" at the published scale and provided without warranty of any kind expressed or implied. The positional accuracy of the data is approximate and not intended to represent survey map accuracy. The Sonoma County Water Agency assumes no responsibility arising from use of this information.

Figure 2-10 **Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box B8**

N W E S

0 500 1,000 Feet

Sonoma Water



Proposed Test Station

Proposed Cathodic Protection Site

Vegetation Maintenance Site

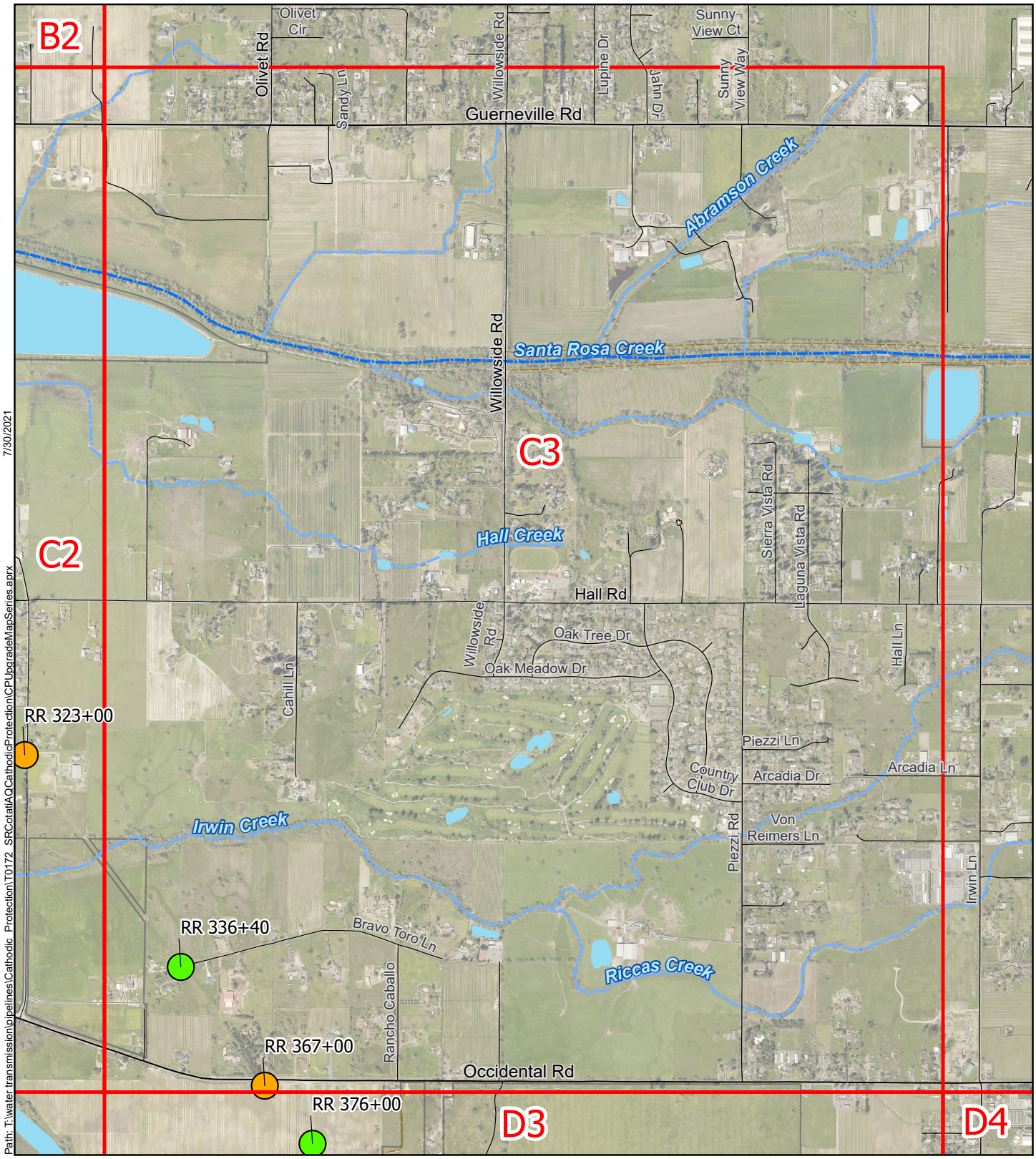
DISCLAIMER
This map document and associated data are distributed for informational purposes only "AS-IS" at the published scale and provided without warranty of any kind expressed or implied. The positional accuracy of the data is approximate and not intended to represent survey map accuracy. The Sonoma County Water Agency assumes no responsibility arising from use of this information.

Figure 2-11 **Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box C2**

N W E S

0 500 1,000 Feet

Sonoma Water



Proposed Test Station

Proposed Cathodic Protection Site

Vegetation Maintenance Site

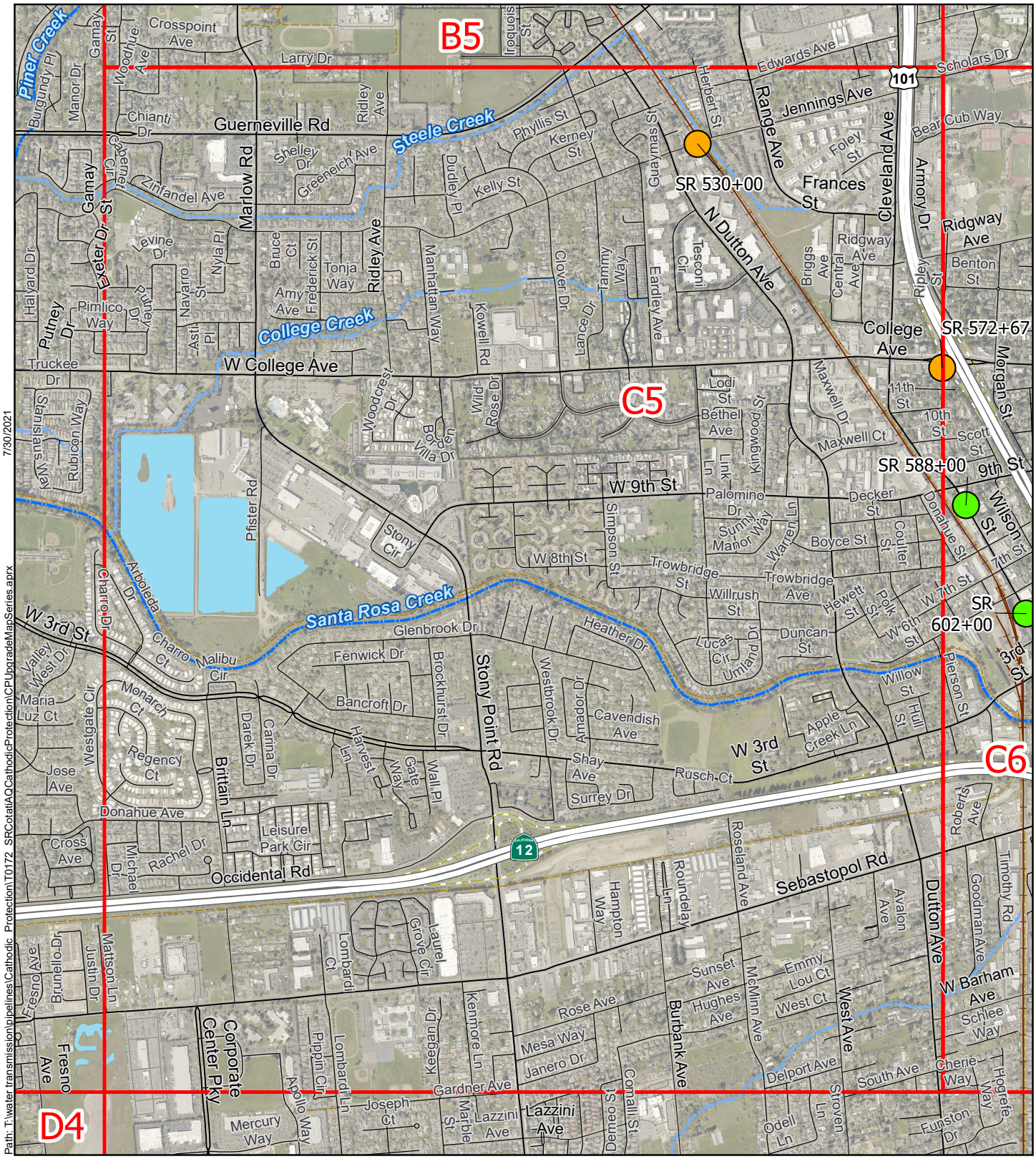
DISCLAIMER
This map document and associated data are distributed for informational purposes only "AS-IS" at the published scale and provided without warranty of any kind expressed or implied. The positional accuracy of the data is approximate and not intended to represent survey map accuracy. The Sonoma County Water Agency assumes no responsibility arising from use of this information.

Figure 2-12 **Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box C3**

N W E S

0 500 1,000 Feet

Sonoma Water



7/30/2021

Path: T:\water transmission\pipelines\Cathodic Protection\T0172_SRCotatiAQCathodicProtectionCPUpgradeMapSeries.aprx

Proposed Test Station

Proposed Cathodic Protection Site

Vegetation Maintenance Site

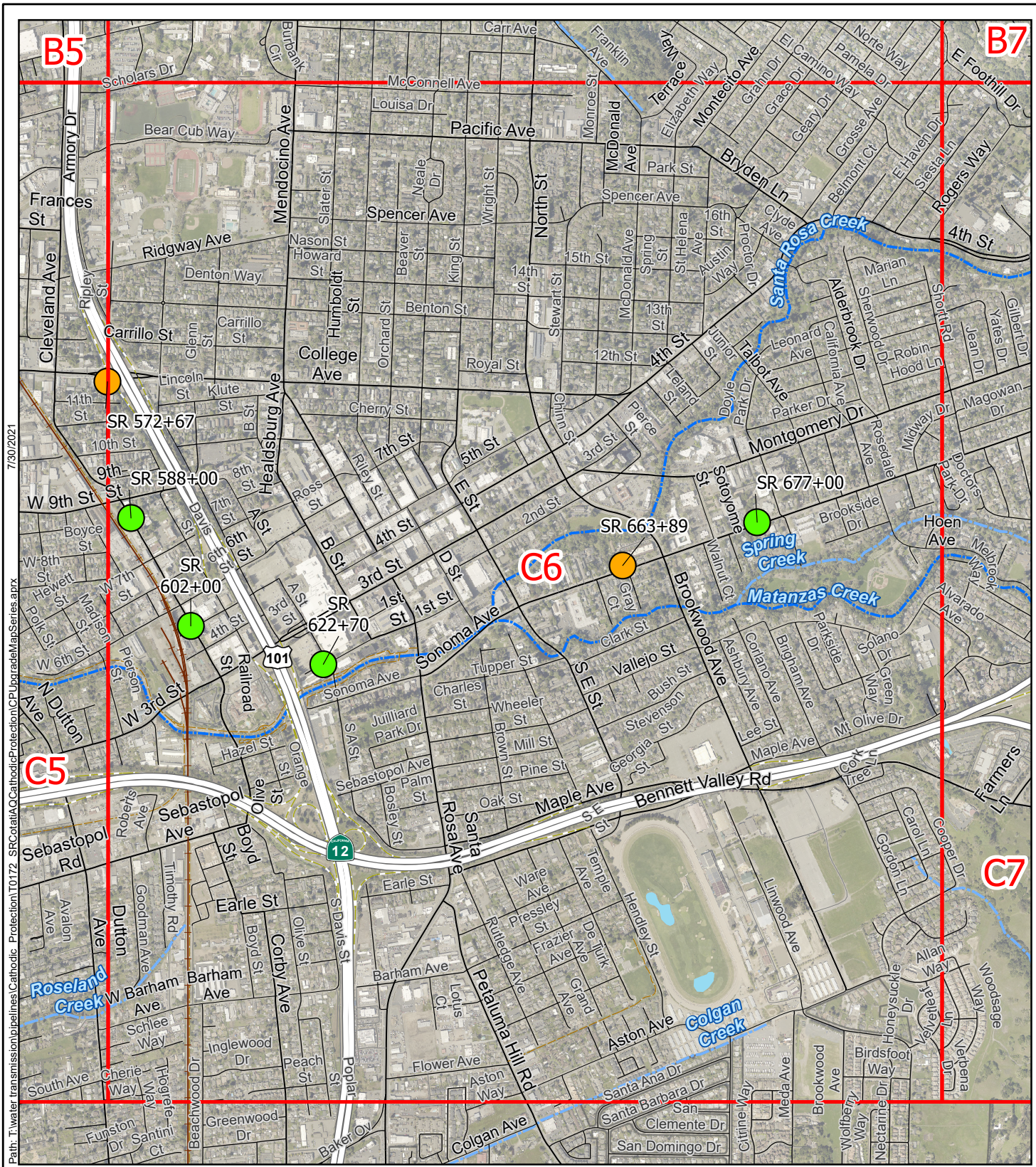
DISCLAIMER
This map document and associated data are distributed for informational purposes only "AS-IS" at the published scale and provided without warranty of any kind expressed or implied. The positional accuracy of the data is approximate and not intended to represent survey map accuracy. The Sonoma County Water Agency assumes no responsibility arising from use of this information.

Figure 2-13 **Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box C5**

N W E S

0 500 1,000 Feet

Sonoma Water



Proposed Test Station

Proposed Cathodic Protection Site

Vegetation Maintenance Site

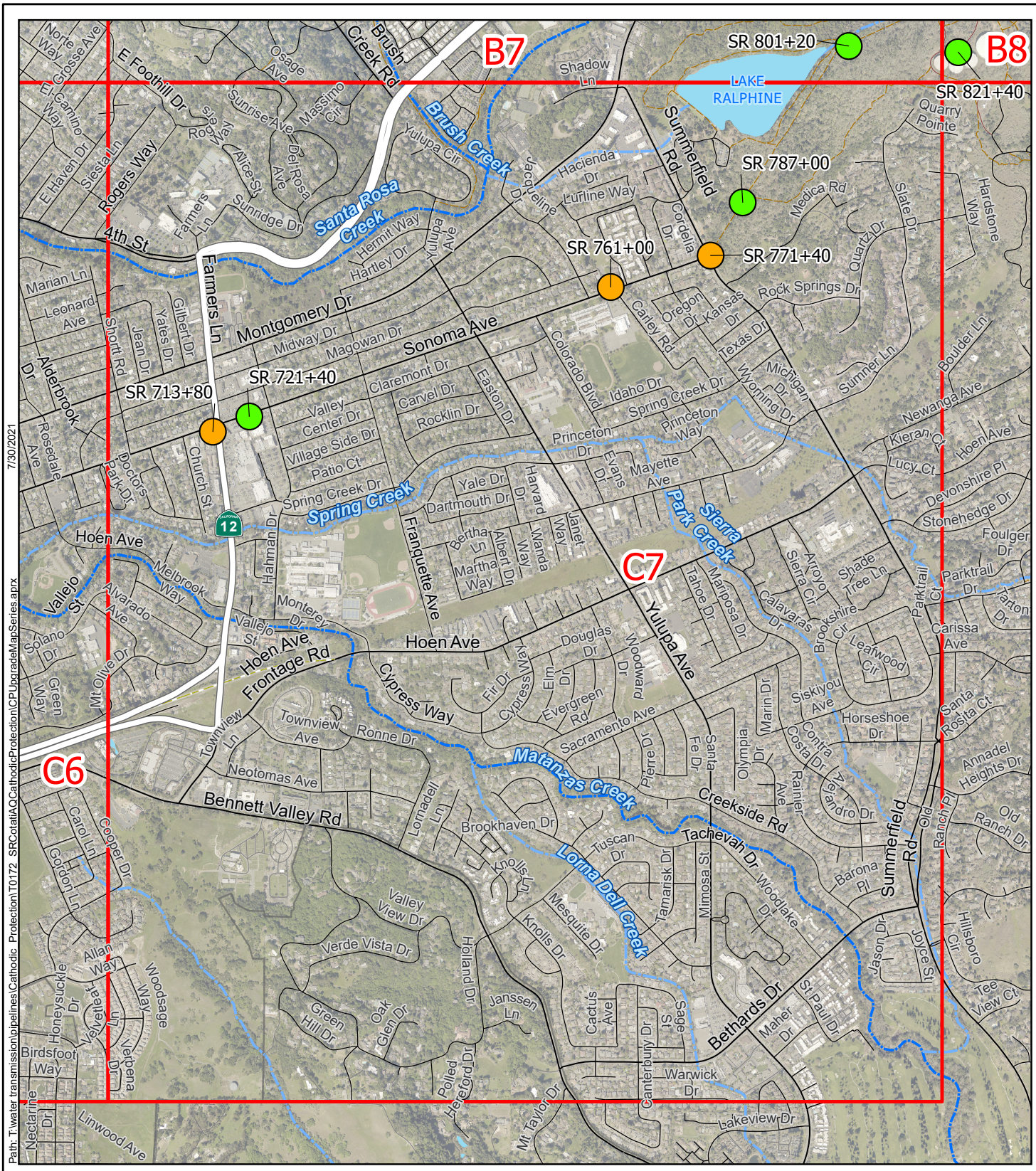
DISCLAIMER
This map document and associated data are distributed for informational purposes only "AS-IS" at the published scale and provided without warranty of any kind expressed or implied. The positional accuracy of the data is approximate and not intended to represent survey map accuracy. The Sonoma County Water Agency assumes no responsibility arising from use of this information.

Figure 2-14 **Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box C6**

N W E S

0 500 1,000 Feet

Sonoma Water



Proposed Test Station

Proposed Cathodic Protection Site

Vegetation Maintenance Site

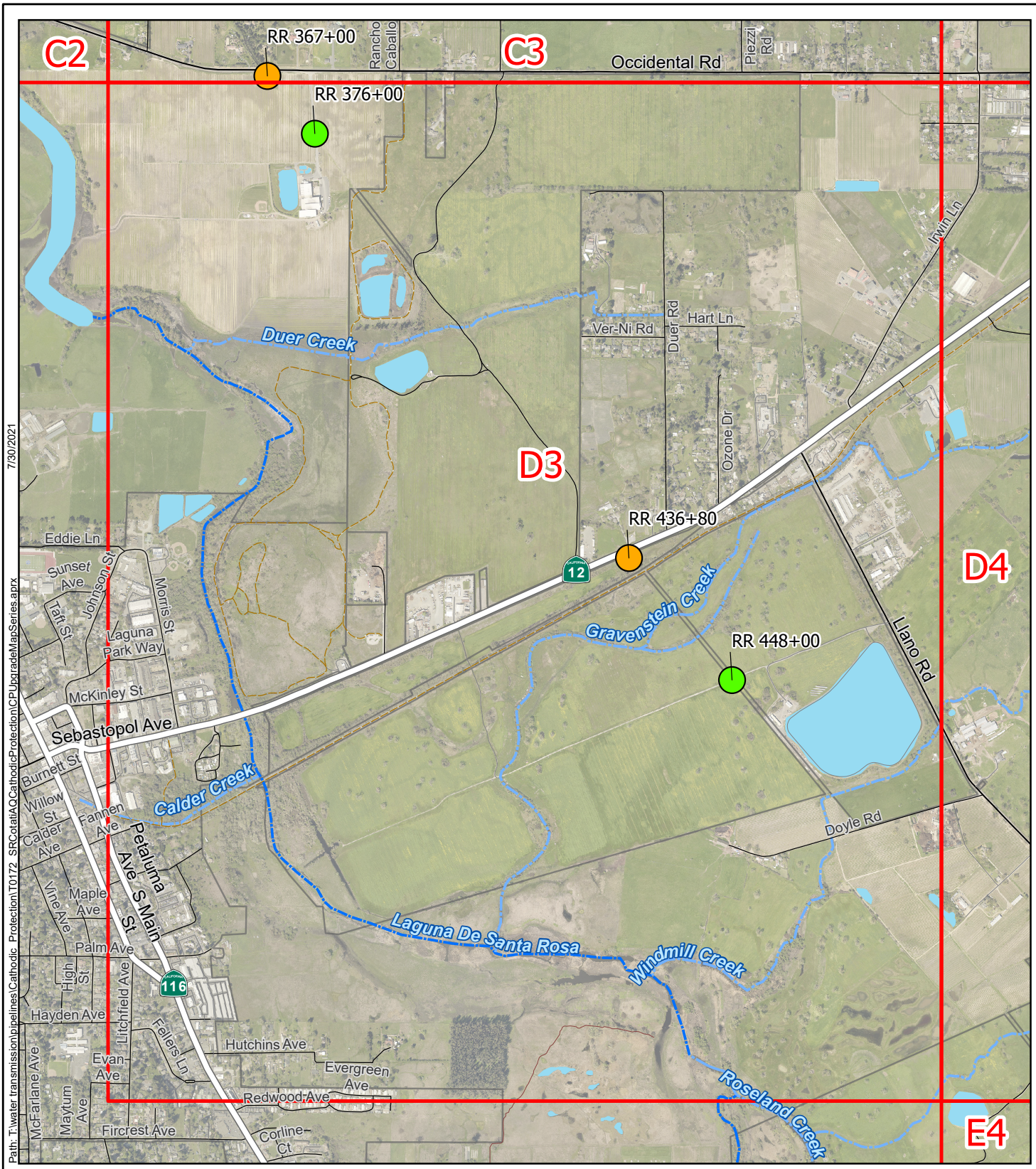
DISCLAIMER
This map document and associated data are distributed for informational purposes only "AS-IS" at the published scale and provided without warranty of any kind expressed or implied. The positional accuracy of the data is approximate and not intended to represent survey map accuracy. The Sonoma County Water Agency assumes no responsibility arising from use of this information.

Figure 2-15 **Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box C7**

N W E S

0 500 1,000 Feet

Sonoma Water



Proposed Test Station

Proposed Cathodic Protection Site

Vegetation Maintenance Site

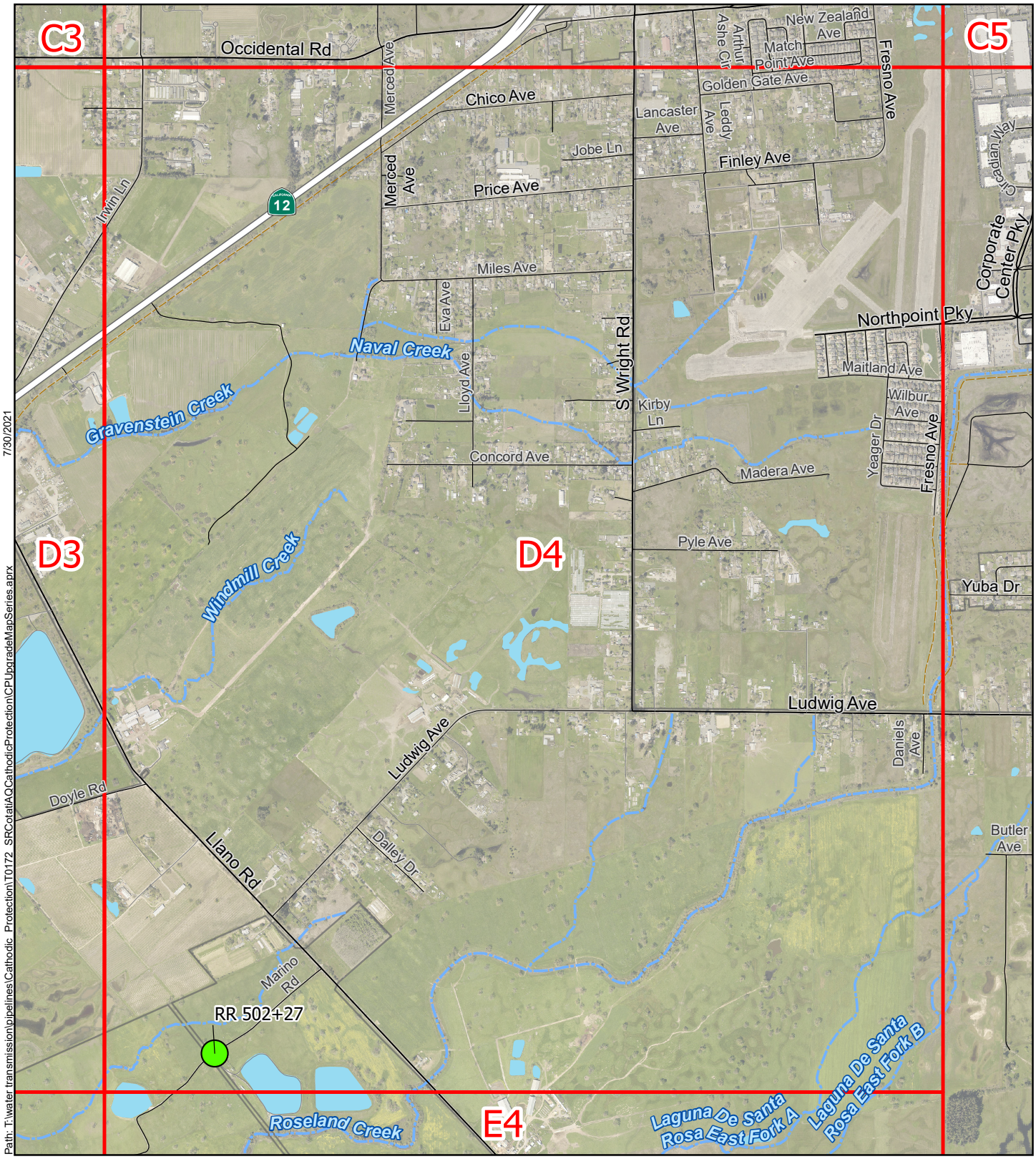
DISCLAIMER
This map document and associated data are distributed for informational purposes only "AS-IS" at the published scale and provided without warranty of any kind expressed or implied. The positional accuracy of the data is approximate and not intended to represent survey map accuracy. The Sonoma County Water Agency assumes no responsibility arising from use of this information.

Figure 2-16 **Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box D3**

N W E S

0 500 1,000 Feet

Sonoma Water



Path: T:\water transmission\pipelines\Cathodic Protection\T0172 SRCotatiAQCathodicProtection\CPUpgradeMapSeries.aprx 7/30/2021

Proposed Test Station

Proposed Cathodic Protection Site

Vegetation Maintenance Site

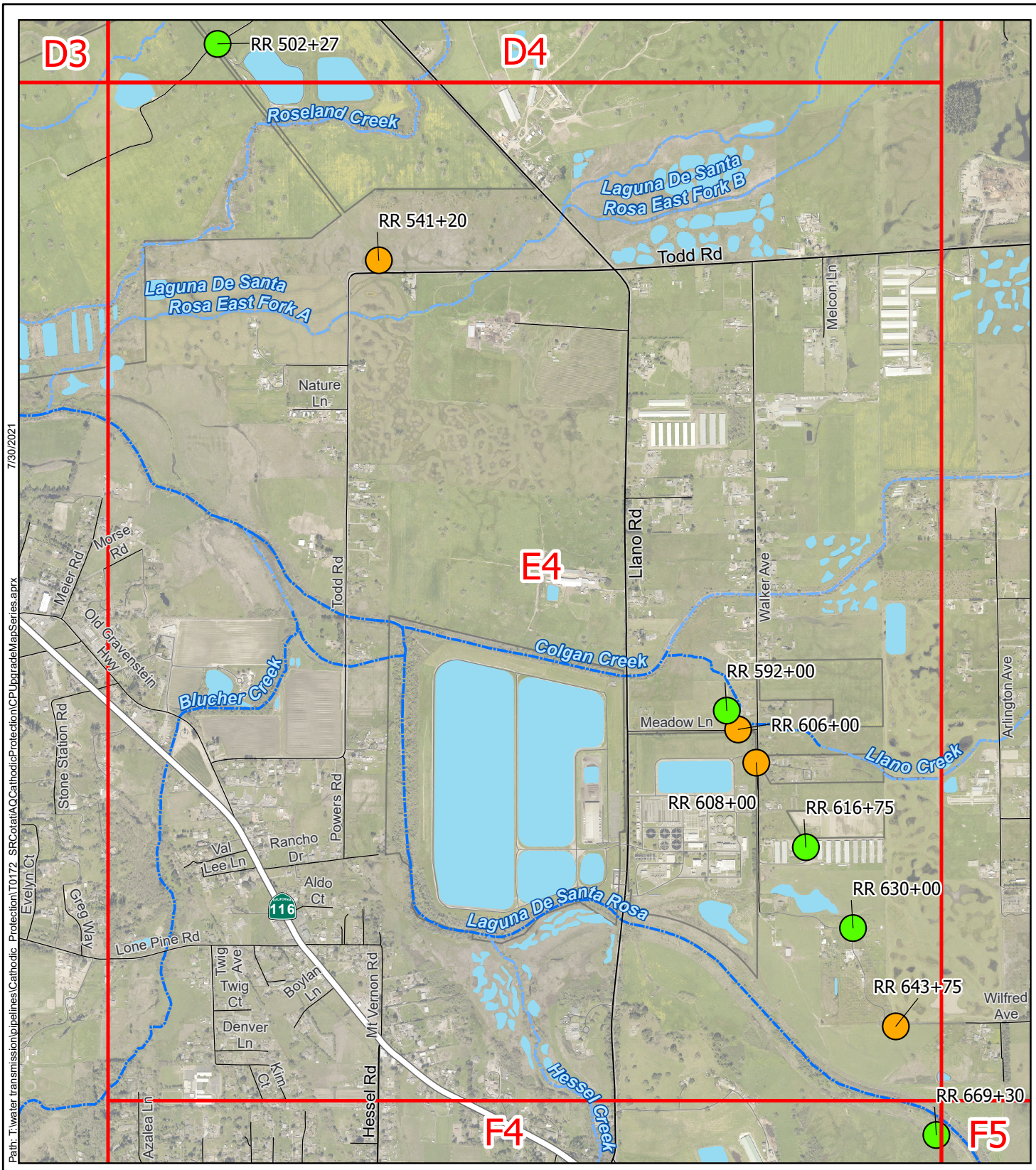
DISCLAIMER
This map document and associated data are distributed for informational purposes only "AS-IS" at the published scale and provided without warranty of any kind expressed or implied. The positional accuracy of the data is approximate and not intended to represent survey map accuracy. The Sonoma County Water Agency assumes no responsibility arising from use of this information.

Figure 2-17 **Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box D4**

N W E S

0 500 1,000 Feet

Sonoma Water



Proposed Test Station

Proposed Cathodic Protection Site

Vegetation Maintenance Site

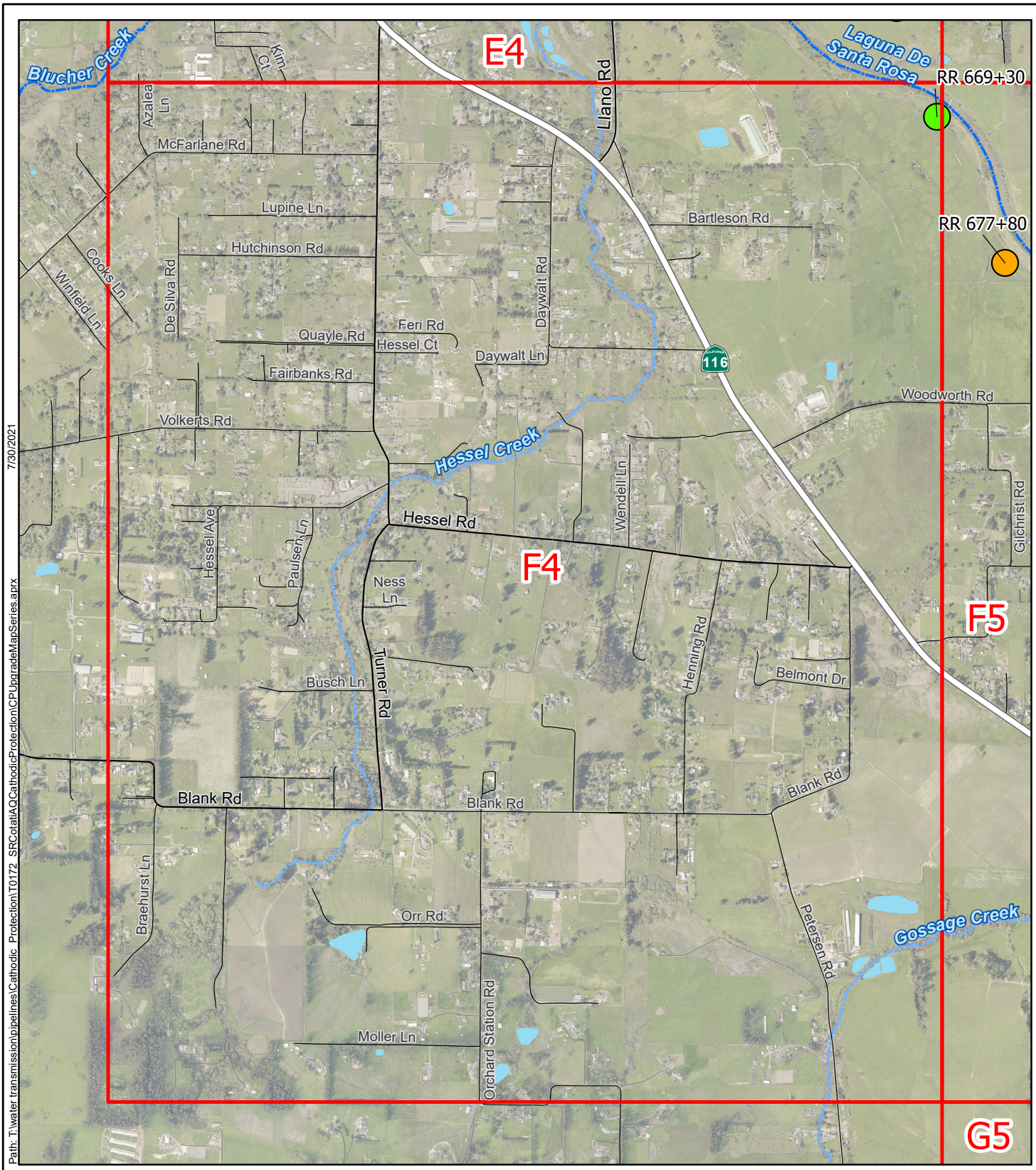
DISCLAIMER
This map document and associated data are distributed for informational purposes only "AS-IS" at the published scale and provided without warranty of any kind expressed or implied. The positional accuracy of the data is approximate and not intended to represent survey map accuracy. The Sonoma County Water Agency assumes no responsibility arising from use of this information.

Figure 2-18 **Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box E4**

N W E S

0 500 1,000 Feet

Sonoma Water



Proposed Test Station

Proposed Cathodic Protection Site

Vegetation Maintenance Site

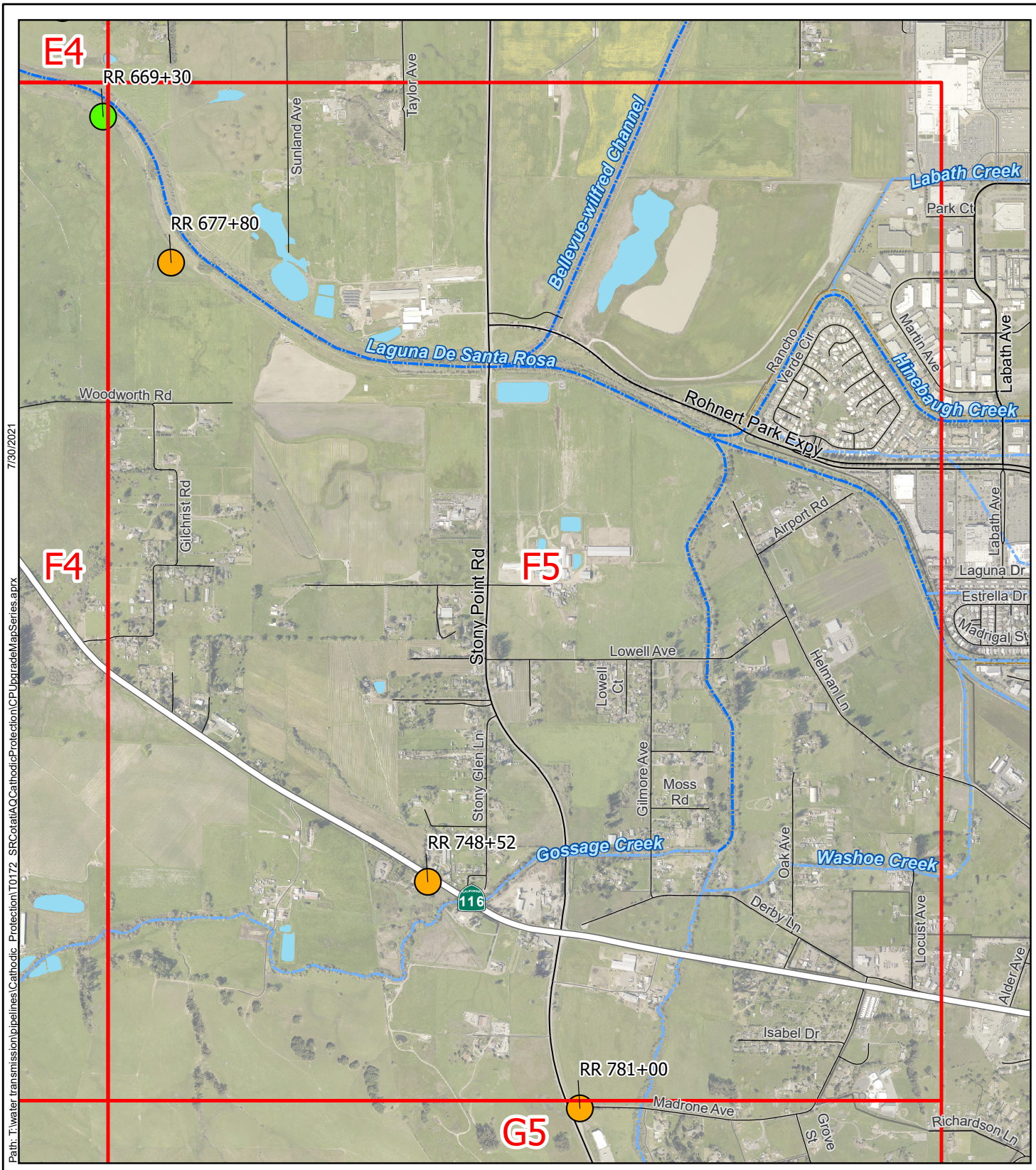
DISCLAIMER
This map document and associated data are distributed for informational purposes only "AS-IS" at the published scale and provided without warranty of any kind expressed or implied. The positional accuracy of the data is approximate and not intended to represent survey map accuracy. The Sonoma County Water Agency assumes no responsibility arising from use of this information.

Figure 2-19 **Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box F4**

N W E S

0 500 1,000 Feet

Sonoma Water



Proposed Test Station

Proposed Cathodic Protection Site

Vegetation Maintenance Site

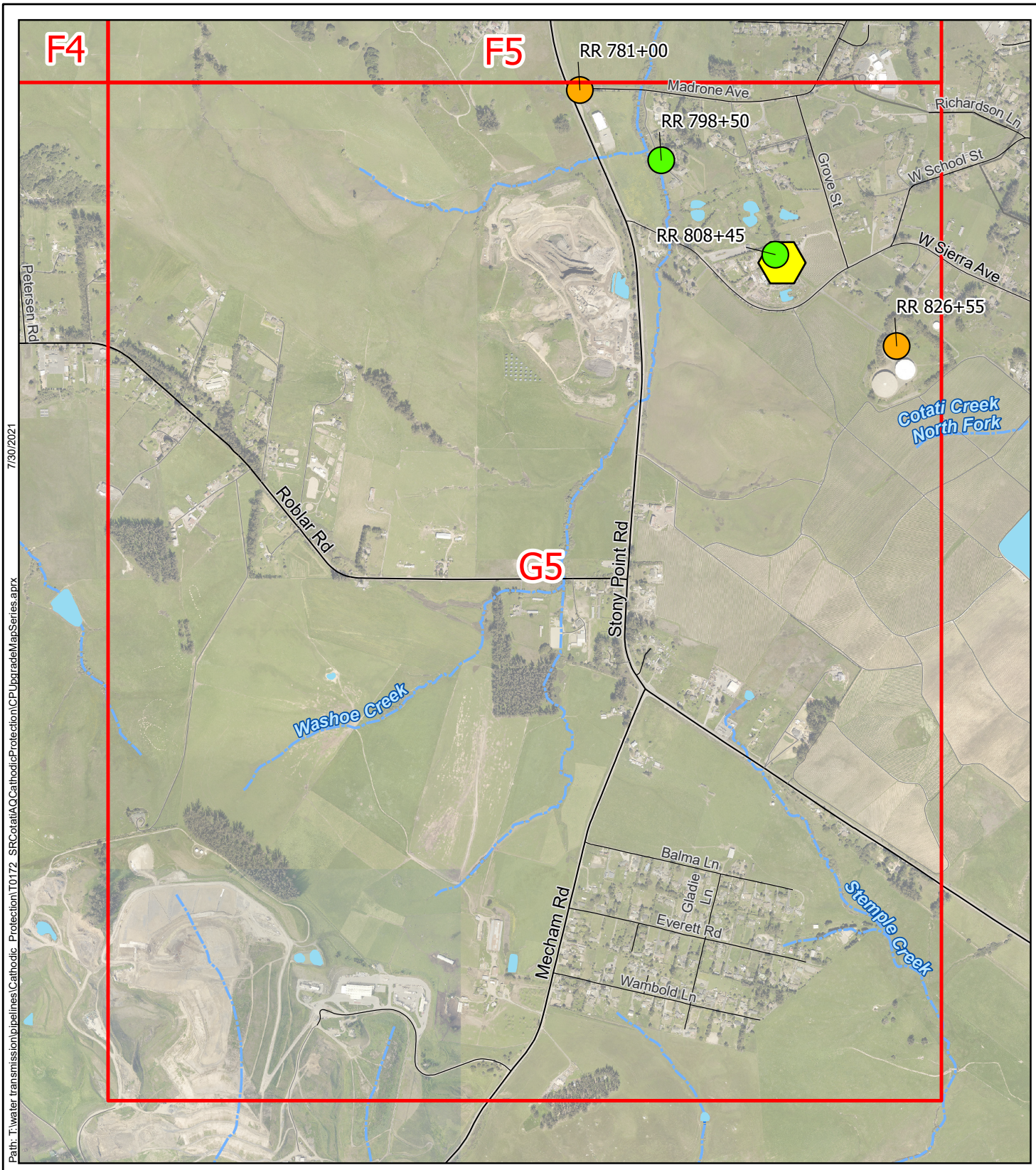
DISCLAIMER
This map document and associated data are distributed for informational purposes only "AS-IS" at the published scale and provided without warranty of any kind expressed or implied. The positional accuracy of the data is approximate and not intended to represent survey map accuracy. The Sonoma County Water Agency assumes no responsibility arising from use of this information.

Figure 2-20 **Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box F5**

N W E S

0 500 1,000 Feet

Sonoma Water



Proposed Test Station

Proposed Cathodic Protection Site

Vegetation Maintenance Site

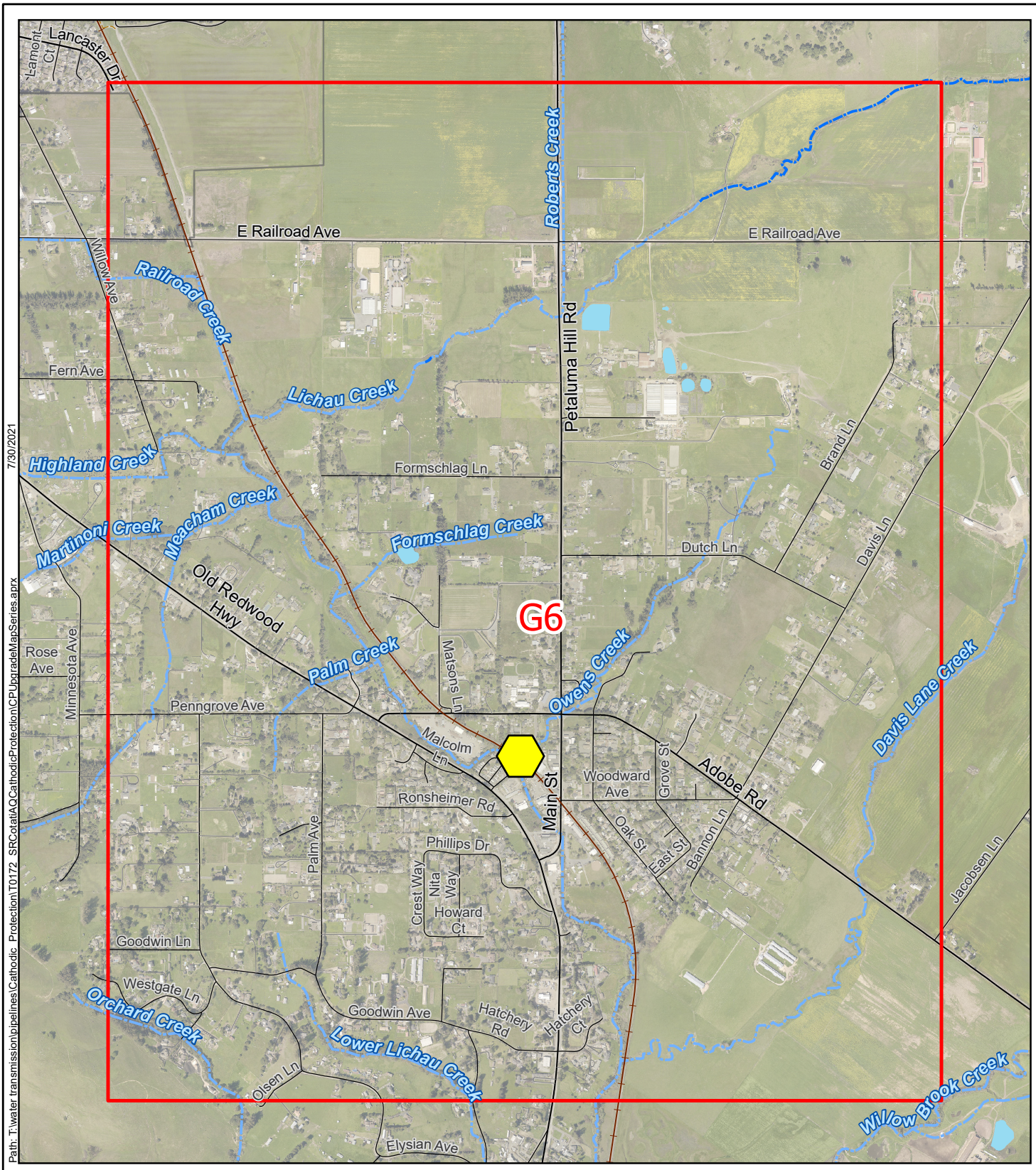
DISCLAIMER
This map document and associated data are distributed for informational purposes only "AS-IS" at the published scale and provided without warranty of any kind expressed or implied. The positional accuracy of the data is approximate and not intended to represent survey map accuracy. The Sonoma County Water Agency assumes no responsibility arising from use of this information.

Figure 2-21 **Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box G5**

N W E S

0 500 1,000 Feet

Sonoma Water



Path: T:\water transmission\pipelines\Cathodic Protection\T0172 SRCotatiAQCathodicProtection\CPUpgradeMapSeries.aprx 7/30/2021

Proposed Test Station

Proposed Cathodic Protection Site

Vegetation Maintenance Site

DISCLAIMER
This map document and associated data are distributed for informational purposes only "AS-IS" at the published scale and provided without warranty of any kind expressed or implied. The positional accuracy of the data is approximate and not intended to represent survey map accuracy. The Sonoma County Water Agency assumes no responsibility arising from use of this information.

Figure 2-22 **Santa Rosa Aqueduct & Russian River to Cotati Aqueduct Cathodic Protection Project: Box G6**

N W E S

0 500 1,000 Feet

Sonoma Water

Project Components and Implementation

In general, construction of Test Stations and Cathodic Protection Stations would occur in the following sequence: site clearing (vegetation or hardscape removal); excavation to depth of pipeline; drilling to the depth of anode wells (at cathodic protection stations); cathodic protection and test station equipment installation; trench backfilling; and surface restoration. During project construction stormwater, groundwater, and spoil management would occur. These project activities are described further in the following sub-sections.

Cathodic Protection Stations

Anode well sites would include both a well and a source of electrical power. The anode well would be comprised of a 1-foot-diameter well drilled to a depth of approximately 250 feet; the top of the well would be flush with the surface of the ground (Figures 2-23 and 2-24). A perforated vent pipe with cast anodes would be installed in each well. The well would be filled with a carbonaceous backfill material referred to as “coke breeze.” This material creates a path for current to flow from the pipeline down to the anodes. The well would then be capped and electrical services provided through either a rectifier or a small solar installation.

A rectifier would be housed in an olive-green structure measuring five feet tall constructed aboveground on a three-foot by five-foot concrete pad (Figure 2-23). A solar power installation would consist of approximately eight three-foot by five-foot solar panels mounted on metal posts. The overall dimensions of the solar panel installation would be approximately 10 feet by 15 feet. Each of the metal posts would be set into the ground at a depth of approximately four feet. Below grade, the posts would be encased in a 24-inch diameter concrete cylinder. The area under the solar panels would be covered in gravel. Near one of the metal posts, a three-foot by five-foot concrete pad would be poured to house cathodic control equipment.

Construction Activities and Equipment for Cathodic Protection Stations

Construction equipment for Cathodic Protection Stations would include a drill rig, backhoe, vacuum truck, water truck, holding tank, passenger vehicles and trucks. Some trenching would be required to connect anode wells, rectifiers, solar installations, and test stations to the adjacent pipeline. Drilling would be required to install anode wells. Construction activities, including equipment staging and vehicle activity, for each anode well would require a footprint measuring approximately 40 feet by 100 feet. Construction techniques are discussed further below.



Figure 2-23. Visible aboveground components of a Cathodic Protection Station. These would include an olive-green cabinet housing the rectifier (above, right), which would measure approximately three feet wide and five feet tall, and the cap of the anode well (above, left). Two of the proposed sites would include a solar array measuring approximately ten feet by fifteen feet in place of a rectifier cabinet.

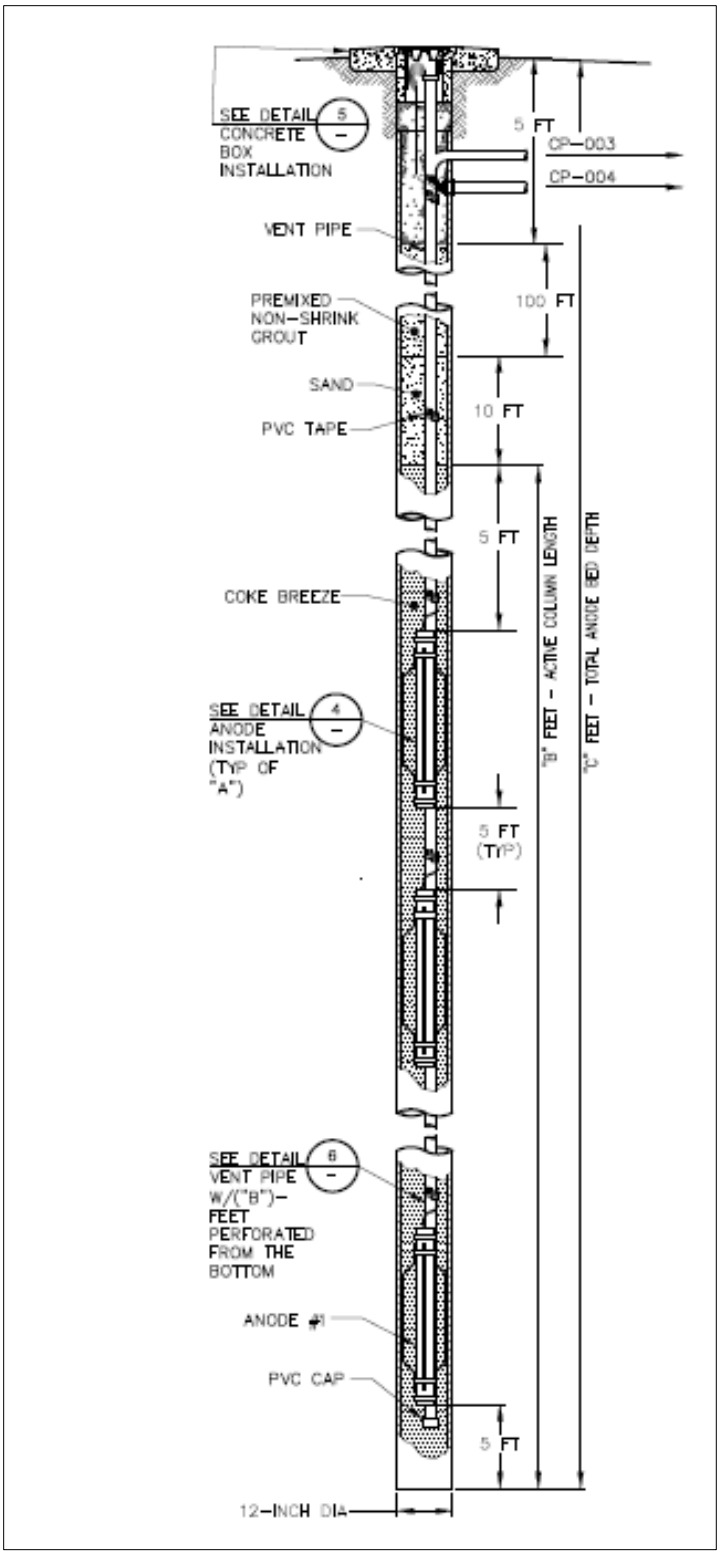


Figure 2-24. Subsurface components of an anode well at a Cathodic Protection Station would measure approximately one foot in diameter and 250 feet in depth.

Test Stations

Test stations could be installed as either posts or flush-mounted, depending on appropriateness for each individual site. In locations that can accommodate aboveground posts, these test stations would include a six-inch diameter steel post filled with concrete that would stand approximately four feet tall surrounded by a concrete encasement that is flush with the ground to a depth of three feet (Figures 2-25 and 2-26). This concrete encasement would measure approximately two feet by two feet. Flush-mounted test stations may be installed in locations where aboveground components could hinder existing vehicle traffic or other activities. Flush-mounted test stations would include the same internal components as other test stations but would be installed flush with the surface of the ground and would measure approximately two feet across (Figures 2-27 and 2-28).



Figure 2-25. Aboveground components of a test station may include a four-foot post with a small test box at the top.

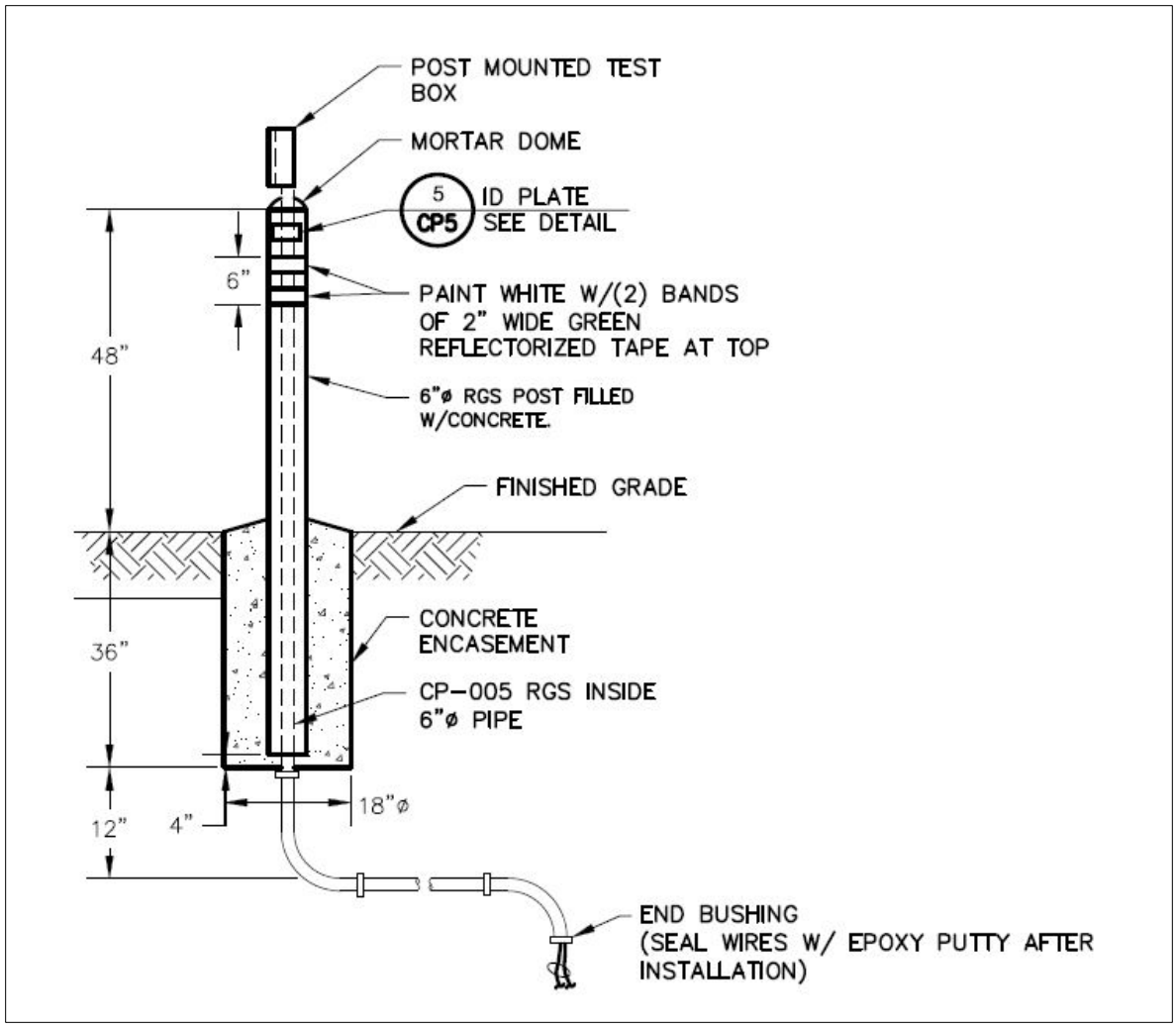


Figure 2-26. Aboveground and belowground components of a test station with four-foot post and test box.



Figure 2-27. Finished flush-mounted test station.

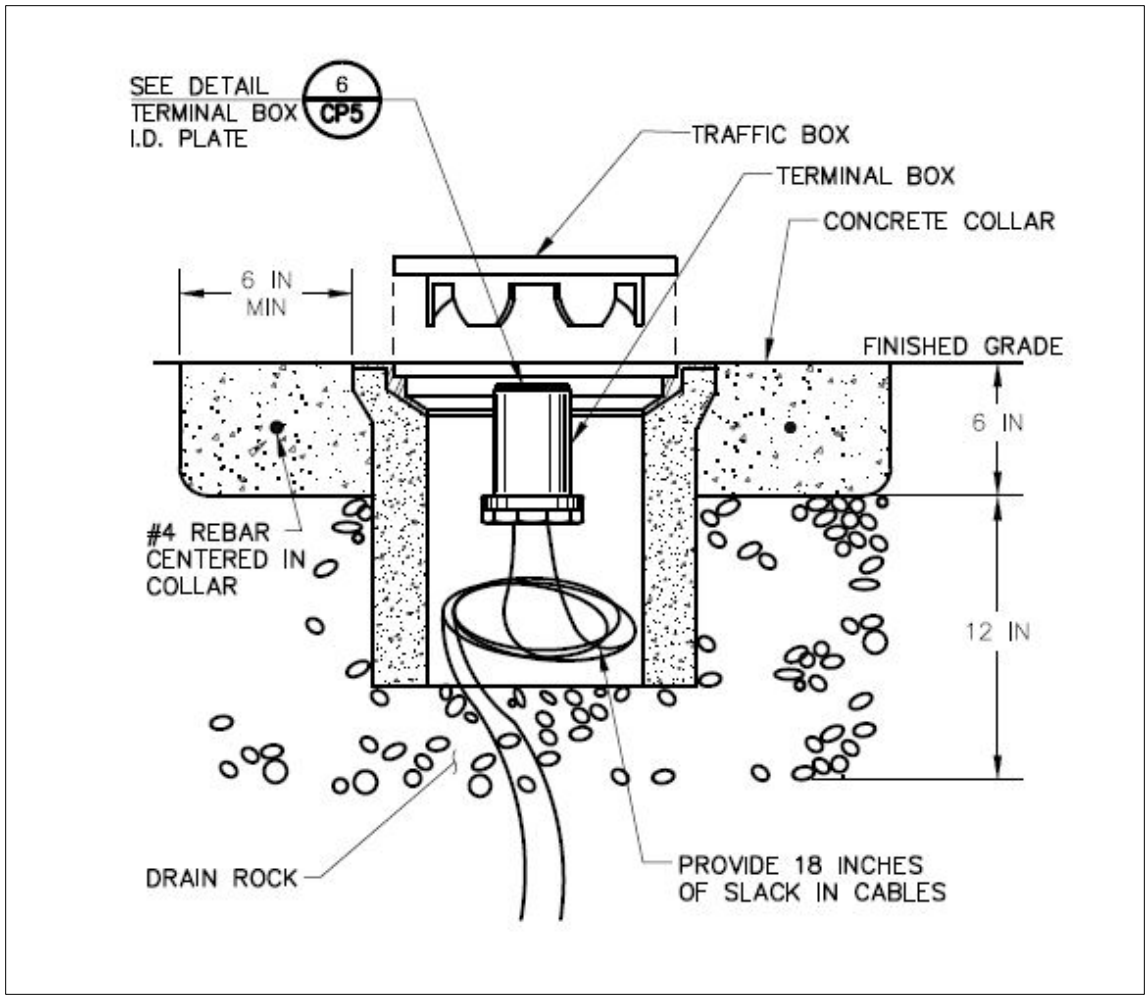


Figure 2-28. Components of a flush-mounted test station.

Construction Activities and Equipment for Test Stations

Construction equipment for test stations would include passenger vehicles, trucks and a backhoe. Construction would include uncovering the pipeline to a depth of four to six feet in most places, but potentially down to ten feet in a few locations, and welding wires from the test station to the pipeline. Construction activities, including equipment staging and vehicle activity, for each test station would require a footprint measuring approximately 30 feet by 50 feet. Construction techniques are discussed further below.

Vegetation and Hardscape Removal

Installation of Test Stations and Cathodic Protection Stations would require removal of grasses and shrubs at some sites and removal and restoration of asphalt, concrete or other hardscape at other sites. Some pruning of trees and shrubs could be required in some locations to improve access for larger equipment.

Open Trenches

Some equipment would be installed using standard cut and cover trenching techniques. Excavations would be structurally shored pursuant to shoring plans as prepared by a California licensed engineer in accordance with OSHA requirements. Construction methods for the trenches would primarily be shored to the entire depth of the excavation allowing an approximately 2-foot-wide trench to access pipelines and install wiring and other equipment or may be opened to full depth without shoring by sloping and benching to reach the final depth in select locations. The depth of the trench varies from approximately four to six feet in most locations to approximately 10 feet below the ground surface.

Trenches would be excavated using a backhoe. Excavated soils would be loaded directly into trucks staged alongside the trench or stockpiled adjacent to the trench, space permitting. Trenches would be backfilled, plated with traffic rated metal plates, or secured with construction fencing around the trench, to prevent entry during non-construction periods of time. Disposal of excess spoils is discussed in the Spoils Management subsection below.

The Proposed Project's construction specifications will 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 by the project construction (Mitigation Measure AIR-1).

Drilling

A drill rig would be used to drill to a depth of 250 feet and a diameter of one foot to install anode wells at 31 Cathodic Protection Station sites. The anode well would be backfilled with an inert material such as "coke breeze." Disposal of excess spoils are discussed in the Spoils Management subsection below.

Spoils Management

The excavated material would be temporarily stockpiled and then backfilled in the trenches after equipment installation. Excess trench spoils would become the property of the contractor, to be disposed of offsite in accordance with all local, state and federal laws and regulations.

Restoration

Following construction activities, disturbed areas would be stabilized to prevent erosion and topsoil loss by reestablishing existing topography, including repaving roadways, and reseeding with a native seed mix (hydroseed) in applicable areas (Mitigation Measure GEO-1). Installation in roadways would require paving when complete. Paved roads that would be impacted by project construction are listed in Appendix F.

Duration of Construction

Construction of the Proposed Project would be conducted in phases. Phase 1 activity would include approximately 35 sites and Phase 2 activity would include approximately 45 sites, for which right-of-way would be acquired prior to construction. Each site would require one to two weeks for construction. Construction activities would take place between 7:00 a.m. and 5:00 p.m. in order to comply with the City of Santa Rosa's Municipal Code 17-16.030 (City of Santa Rosa, 2015) and the County of Sonoma's daytime noise definition as outlined in its General Plan (County of Sonoma, 2012). If necessary, construction may occur on some Saturdays between 7:00 a.m. and 5:00 p.m. to finish the Proposed Project in a timely manner. Some working days and times may have exceptions (as approved by Sonoma Water) as required for encroachment permits, safety considerations or certain construction procedures that cannot be interrupted. With exceptions, advance notification of surrounding residents will occur. Construction activities within the County of Sonoma and City of Santa Rosa rights-of-way would require encroachment permits that may require work to occur at night.

It is anticipated that completion of project construction would take up to two calendar years.

Construction Staging Areas

Staging of equipment will take place onsite within the construction footprints at each site. At Cathodic Protection Stations, these construction footprints will measure approximately 40 feet by 100 feet. At Test Stations, these construction footprints will measure approximately 30 feet by 50 feet. All heavy equipment would be stored within the designated construction staging areas.

Operation and Maintenance

Operation and maintenance activities following project implementation would be similar to existing activities. Maintenance activities associated with the Proposed Project would be minimal and would include: routine maintenance trips, periodic inspections, and vegetation management activities. In addition, Sonoma Water staff would also repair or replace equipment that reaches the end of its useful lifetime, which may require construction activities. Sonoma Water will monitor the anode wells and test stations one to two times per year. Testing will involve taking voltage and amperage readings at the test stations and rectifiers and verifying that the rectifiers are operating properly.

Vegetation maintenance may be necessary at each anode well, test station, and at various locations along the Santa Rosa and Russian River to Cotati aqueducts. Known locations for vegetation maintenance activities include lengths of Sonoma Water's Russian River to Cotati Aqueduct easement west of Vine Hill Road, south of Guerneville

Road, and northeast of West Sierra Avenue. Additionally, vegetation management would take place at one site along the Petaluma Aqueduct located immediately south of Adobe Road in the Penngrove area. Activities would include mowing as well as trimming and removal of shrubs and trees that prevent access to the aqueduct or associated equipment or present risks to infrastructure.

Conformance with General Plans and General Plan Designations

Historical and Present Land Use

The Sonoma Water facilities have been in place and operating since the late 1950s and early 1960s. Property adjacent to the existing facilities include rural and urban residences, vineyards and other agriculture, commercial and business buildings, and public facilities such as regional parklands.

Conformance with the General Plans

The Proposed Project areas are subject to the land use policies and designations adopted in the Sonoma County General Plan 2020 (County of Sonoma, 2012) and the City of Santa Rosa 2035 General Plan (City of Santa Rosa, 2009). The County of Sonoma General Plan 2020 designates the Proposed Project area for the Santa Rosa and Cotati aqueducts as well as the Penngrove Vegetation Maintenance site as Resources and Rural Development, Land Intensive Agriculture, General Commercial, Diverse Agriculture, Public/Quasi Public, and Rural Residential (County of Sonoma, 2014). The City of Santa Rosa 2035 General Plan designates the Proposed Project area for the Santa Rosa Aqueduct as Low and Medium Density Residential, Mobile Homes, Business Park, Transit Village Medium, Retail and Business Services, Transit Village Mixed Use, Public/Institutional, Office, and Parks & Recreation (City of Santa Rosa, 2016). The Proposed Project would not limit or restrict any existing activities that occur in the Proposed Project area.

Rights-of-Way

The Santa Rosa Aqueduct is located within a corridor of easements granted to Sonoma Water for the purposes of the construction, operation, maintenance, upgrade, and repair of the aqueduct. In some cases, the easement rights include access over adjoining property from public roads. The widths of the easements acquired by Sonoma Water for the Santa Rosa Aqueduct vary from 15 feet to 50 feet. The Santa Rosa Aqueduct centerline is commonly located one third of the corridor width from the corridor edge.

The Russian River to Cotati Aqueduct is located primarily within a corridor of land owned by Sonoma Water, which varies in width but is typically 50 feet wide. This aqueduct is

generally centered within the 50-foot wide corridor. Portions of the Russian River to Cotati Aqueduct are located within public roadways owned and maintained by the County of Sonoma. In such cases, Sonoma Water has no ownership of property or easement but, in many cases, holds an agreement with, or permit from, the County of Sonoma. In some locations along the corridor, Sonoma Water has secured access to and from the Russian River to Cotati Aqueduct corridor across adjoining property from public roads.

Activities for the Proposed Project would, in many cases, require additional right-of-way. Construction activities for each anode well and rectifier would require a footprint measuring approximately 40 feet by 100 feet and each test station would require a footprint measuring approximately 30 feet by 50 feet as well as access to and from public roads across adjoining property in some cases. Therefore, in many cases, activities related to access, staging of equipment and materials, construction of anode wells, and potentially test stations, would extend beyond the footprint boundaries of the land or easements owned by Sonoma Water. In many cases, temporary construction easements and/or permanent access easements over adjoining land may be required for the activities listed above as well as long-term vegetation maintenance or other maintenance of the facilities.

Other Public Agencies Whose Approval Is Required

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

1. Bay Area Air Quality Management District (BAAQMD)
2. California Department of Fish and Wildlife (CDFW)
3. City of Santa Rosa
4. National Marine Fisheries Service (NMFS)
5. Northern Sonoma County Air Pollution Control District (NSCAPCD)
6. State Historic Preservation Office (SHPO)
7. San Francisco Bay Regional Water Quality Control Board (Regional Board)
8. Sonoma County Permit and Resources Management Department (Permit Sonoma)
9. Sonoma County Department of Transportation and Public Works
10. United States Army Corps of Engineers (USACE)
11. United States Fish and Wildlife Service (USFWS)

Project Alternatives

Sonoma Water considered a range of alternatives including the No Project Alternative, construction techniques, and project locations. The following project alternatives were

considered by Sonoma Water to upgrade the cathodic protection systems on the Santa Rosa and Russian River to Cotati aqueducts.

No Project Alternative

Under the No Project Alternative, Sonoma Water would continue to use the existing cathodic protection system. With implementation of the No Project Alternative, the depleted cathodic protection system would continue to deteriorate leading to deterioration of the Santa Rosa and Russian River to Cotati aqueducts. Under this alternative, these aqueducts would corrode and eventually require replacement of their entire lengths, which could result in significant direct environmental impacts to biological, cultural, and other resources.

Alternative Protection Systems

A galvanic cathodic protection system was considered as an alternative to the impressed cathodic protection system included as part of the Proposed Project. A galvanic cathodic protection system would provide similar protection to the aqueducts but would require more stations to be built, would need to be replaced sooner, and would be harder to monitor. In order to reduce the overall footprint of the project, extend the lifespan of the project, and improve monitoring of pipeline condition, the Proposed Project includes an impressed cathodic protection system.

Alternative Component Locations

Several potential test station and Cathodic Protection Station alternative locations were considered during project development. Anode well locations are located in areas along the aqueducts that are susceptible to corrosion. Proposed cathodic protection stations are spaced approximately two miles apart in order to avoid gaps in protection. Test station locations are placed in areas that have been identified as optimal locations to monitor corrosion and should ideally be located at intervals of 800 to 1000 feet in order to provide sufficient monitoring capabilities. Therefore, the proposed locations of components are somewhat constrained by these distance requirements but include the flexibility to adjust locations to avoid many of the resources in the Proposed Project area. Many sites were adjusted or outright rejected due to the potential for presence of special-status species, wetlands, or cultural resources. The sites that remain as part of the Proposed Project seek to minimize or avoid these potential impacts.

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.

[redacted] 9.21.21

Signature Date

Name: Grant Davis, General Manager

Chapter 3 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 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 that 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 that 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 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 the Reference section of the document.

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	☐	☒	☐	☐

Section 3.1 Aesthetics

Except as provided in Public Resources Code Section 21099, would the proposal:	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 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?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

Aesthetics Setting

Visual or aesthetic resources are generally defined as both the natural and built features of the landscape that contribute to the public's experience and appreciation of the environment. Depending on the extent to which a project's presence would alter the perceived visual character and quality of the environment, visual or aesthetic impacts may occur. This analysis of potential visual effects is based on review of a variety of data, including project maps and drawings, visual survey of the Proposed Project area, aerial and ground level photographs of the Proposed Project area, and planning documents (County of Sonoma, 2019). The study area for aesthetic resources encompasses the landscapes directly affected by the Proposed Project and the immediate surrounding areas from which the Proposed Project would be visible. Discussion of potential impacts are presented and discussed at the conclusion.

The Proposed Project would include the installation of cathodic protection equipment along the existing aqueducts in 80 locations from the Russian River to Sonoma Water's storage tanks at Spring Lake Park in Santa Rosa and to the storage tanks in Cotati. Proposed locations are relatively flat, ranging in elevation from approximately 50 to 300 feet above mean sea level within viewsheds that include grape vines, mature trees, oak savannah, a public park, mobile homes, apartments, houses, businesses, rural roads, and busy roadways. The Scenic Landscape Units included in or near the Proposed

Project area include River Road, the Laguna de Santa Rosa, and Highway 116. The following text describes the types of aesthetic settings within the Proposed Project area.

Scenic Resources

The Sonoma County General Plan 2020 defines scenic resources under three open space categories: community separators, scenic landscape units, and scenic highway corridors. Community Separators are areas of rural open space, agricultural lands, and various resource lands that are often scenic and serve to separate identifiable cities and other communities. Community Separators experience development pressure but provide a visual relief from continuous development in the landscape. Scenic Landscape Units preserve scenic resources that are important to quality of life for County residents, tourists, and the agricultural economy. They provide visual relief from dense urban development and have little capacity to absorb much development without significant visual impact. Scenic Corridors are rural roads from which the community, as well as tourists, can view the variety and beauty of the many landscapes of Sonoma County including orchards, forested hills, rolling dairy lands, riparian forest, and scenic valleys planted with vineyards (Sonoma County Permit and Resource Management Department, 2008; amended 2016).

No state scenic highways are designated in the Proposed Project area. The closest designated state scenic highway is Highway 116 from State Route 1 to Sebastopol, west of the Proposed Project area.

The County of Sonoma has developed Visual Assessment Guidelines (County of Sonoma, 2019) to assess the impacts of individual projects in both unincorporated and incorporated locations. The City of Santa Rosa does not have its own set of assessment guidelines. These guidelines provide for rating site sensitivity and the visual dominance of the project site, and then using a combination of these ratings to assess the potential for significant impacts. Tables A-3, A-4, and A-5 in Appendix A, “Aesthetic Resources Site-specific Setting and Potential Impact Tables,” describe the visual resources at each Proposed Project site location relative to Scenic Resources identified by the County of Sonoma, and the sensitivity of each site according to the Visual Assessment Guidelines.

Under this methodology, the sensitivity of the Proposed Project sites located within Scenic Landscape Units, Scenic Corridors, and Community Separators would be rated “high”; the sensitivity of Proposed Project sites located in unincorporated lands without a scenic resource designation would generally be considered “moderate”; and the sensitivity of the Proposed Project sites located in developed areas, in particular those within the City of Santa Rosa, would be considered “low.”

The Visual Assessment Guidelines also define a methodology for determining visual dominance of a proposed project. Generally speaking, project elements that are not

visible from the public view are considered “inevident” and project elements that are minimally visible from public view, or can be seen but do not attract attention, would be considered “subordinate.” The vast majority of Proposed Project components would be located below grade. The cabinets associated with rectifiers would be approximately five feet tall and three feet wide and the visible posts associated with test stations would be less than four feet tall and a few inches in diameter and would be considered “inevident” with respect to visual dominance. Two locations will include solar panels but these locations are not visible to the public. In some areas, test station equipment can be installed entirely below ground with a cap that is flush with the ground surface, as indicated in Appendix A. This approach may be taken in locations where the approach is feasible and the finished project would have been visible to the public.

The City of Santa Rosa General Plan 2035 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*

As described in the Aesthetic Setting section above and in Tables A-3, A-4, and A-5 in Appendix A, some Proposed Project components would be installed below grade and, therefore, would not be visible once completed. Other Proposed Project components installed above ground would be located in areas not visible to the public, and therefore would be considered “inevident” under the County of Sonoma’s Visual Assessment Guidelines. Proposed Project components that would be minimally visible or visible to public view would not rise significantly above the landscape or be large enough to attract attention and would be considered “subordinate.” No impacts to adjacent scenic resources are expected in areas with visual sensitivity ratings rated low, moderate, or high, as defined by the County of Sonoma’s Visual Assessment Guidelines, because Proposed Project components are rated as “inevident” and “subordinate” with respect to visual dominance. Therefore, the Proposed Project would not have a substantial adverse effect on a scenic vista and 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 Proposed Project would not be located within or adjacent to a state scenic highway and therefore there would no impact to scenic resources.

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 Impact***

The Proposed Project areas include both non-urbanized and urbanized areas. As described in Section 3.11, “Land Use,” along the Santa Rosa Aqueduct, County land use designations include: Resources Rural Development, Land Intensive Agriculture, Diverse Agriculture, Public/Quasi-Public, and Limited Industrial. City of Santa Rosa zoning includes: Agriculture, Public/Institutional, Business Park, Very Low Residential, Low Residential, Medium Residential, General Industry, Transit Village Medium, Retail, Business Service, Office, and Parks/Recreation. Many of these sites are located within public road right-of-way. Along the Cotati Aqueduct, County land use designations include: Land Intensive Agriculture, Mixed Use, Rural Residential, Diverse Agriculture, and Land Extensive Agriculture. This aqueduct is also adjacent to lands zoned Public/Institutional and Agriculture by the City of Santa Rosa.

In non-urbanized areas, such as those sites within agricultural land uses, construction activities associated with the construction of the Proposed Project and maintenance activities (potential repair and replacement) would result in short-term impacts to the existing visual character and quality of the sites. Construction activities would require the use of heavy equipment and storage of materials at construction sites. During construction activities, excavated areas, stockpiled soils, and other materials within the construction easement and staging areas would contribute negative aesthetic elements in the visual landscape. Potential effects would be temporary and would not significantly impact the long-term visual character of the area. As noted in the Project Description, project implementation would include surface restoration, including repaving of roadways and hydroseeding areas necessary outside of the roadways.

Additionally, in non-urbanized areas, no long-term impacts to aesthetic resources from the construction of the Proposed Project are anticipated as the majority of the Proposed Project components would be installed below grade and those components installed above ground would either be invisible to the public or subordinate to the surrounding features and minimally visible to the public. Therefore, the Proposed Project would not

substantially degrade the quality of the sites and the surroundings in non-urbanized areas.

In urbanized areas, the potential effects of the Proposed Project would be temporary and, because the installed Proposed Project components would be largely underground and would not significantly impact the long-term visual character of the area, would not conflict with applicable zoning and other regulations governing scenic quality.

Because the visual elements of the Proposed Project, once completed, would be mainly underground and only minimally visible to the public (subordinate), the impacts from the Proposed Project to the visual character or quality of the project area would be less than significant. No mitigation is required.

d) ***Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? - No Impact***

The Proposed Project would not require security lighting and permanent infrastructure installed would consist of non-reflective material. No new permanent sources of light and/or glare are proposed as part of operation and maintenance the Proposed Project. For these reasons, there would be no impact.

Section 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?	☐	☐	☐	☒

Agriculture and Forestry Resources Setting

The 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's Farmland Mapping and Monitoring Program (California Department of Conservation, 2019); Land Conservation Act Map: Sonoma County Williamson Act Map produced by the California Department of Conservation (County of Sonoma, 2019); the Sonoma County 2020 General Plan Land Use Map (County of Sonoma, 2019); and the Zoning Map of the City of Santa Rosa (City of Santa Rosa, 2015).

According to the maps and underlying data reviewed, the Proposed Project sites include properties that are currently designated as Unique Farmland, Prime Farmland, Farmland of Statewide Importance, and Farmland of Local Importance. General Plan Land Use Designations include Land Intensive Agriculture, Diverse Agriculture, and Land Extensive Agriculture. The Proposed Project sites are outside of designated Williamson Act Lands as Williamson Act contracts exclude Sonoma Water aqueduct easements and parcels. See Appendix B, "Agriculture and Forestry Resources Site-specific Setting and Potential Impact Tables," for compiled list of designations for all sites. Proposed Project equipment would be installed within Sonoma Water's existing rights-of-way for the Russian River to

Cotati Aqueduct and Santa Rosa Aqueduct. The lands within these rights-of-way currently exclude planted crops or permanent structures such as barns or grape processing facilities. Existing agricultural activities within these rights-of-way are generally limited to movement of vehicles, equipment, and goods as well as grazing and other similar activities.

In addition, the Proposed Project area is not designated as forest land or timberland, and these resources are not discussed further in this document.

Discussion of Potential Impacts

In accordance with CEQA, the Proposed Project could result in potentially significant impacts to Agriculture 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 of the California Resources Agency, to non-agricultural use? - No Impact

Farmland designations for all Proposed Project sites are listed in Appendix B, "Agriculture and Forestry Resources Site-specific Setting and Potential Impact Tables." Current agreements with property owners restrict activities within aqueducts rights-of-way, therefore no wine grape or other significant crops, or agricultural buildings are located within the aqueduct rights-of-way and Proposed Project activities would not result in the removal of vines or other agricultural features and would not result in conversion of land to non-agricultural uses. The Proposed Project includes site restoration activities such as restoring disturbed areas to their pre-construction conditions, replacing any removed topsoil, re-establishing preconstruction contours and drainage patterns, and revegetating the disturbed areas with grasses to minimize erosion. Sonoma Water's existing rights-of-way allow for the operation and maintenance of the Proposed Project and would not alter existing agricultural operations and would not convert Farmland to non-agricultural uses.

The Proposed Project construction activities and staging would require additional temporary right-of-way to accommodate construction equipment and vehicles (approximately 30 feet by 50 feet at Test Station locations and 40 feet by 100 feet at Cathodic Protection Station locations). As described in Section 2, "Project Description," duration of project construction would be up to approximately three weeks per site. Therefore, designated Farmlands would not be permanently affected by the Proposed Project and no impact would occur.

b) ***Conflict with existing zoning for agricultural use or a Williamson Act contract? - No Impact***

The Proposed Project would not result in any changes in land use that would conflict with existing zoning for agricultural use or a Williamson Act contract and, therefore, no impact would occur.

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***

The Proposed Project area is not designated as forest land or timberland. Therefore, the Proposed Project would not conflict with existing zoning, or cause rezoning of forest land, timberland, or timberland zoned Timberland Production. No timber harvest activities are occurring or expected to occur within the Proposed Project area and, therefore, no impact would occur.

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

Please refer to the above Item II c) above. The Proposed Project would not result in the loss of forest land or conversion of forest land to non-forest use and, therefore, no impact would occur.

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? - No Impact

Please refer to the above Item II a) above. The Proposed Project would not result in a change in the existing environment that could result in a conversion of Farmland to non-agricultural use and, therefore, no impact would occur.

Section 3.3 Air Quality

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) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☒	☐	☐
c) 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?	☐	☒	☐	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
e) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Air Quality Setting

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.

Air Basin

The Proposed Project is located within the boundaries of both the North Coast Air Basin (NCAB) and the San Francisco Bay Area Air Basin (SFBAAB). The NCAB includes Del Norte, Humboldt, Trinity, and Mendocino counties, as well as the northern portion of Sonoma County. Three air districts are included in the NCAB: North Coast Unified Air Quality Management District, Mendocino County Air Quality Management District, and the Northern Sonoma County Air Pollution Control District (Northern Sonoma County APCD). The SFBAAB encompasses the nine-county San Francisco Bay Area region, which includes Alameda, Contra Costa, Santa Clara, San Francisco, San Mateo, Marin, and Napa counties, and the southern portions of Solano and Sonoma counties. The SFBAAB is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD).

The complex topography of the SFBAAB and NCAB, including mountain ranges, valleys, and bays, distorts normal wind flow patterns. The climate of the region is a Mediterranean-

type climate characterized by warm, dry summers, and mild, wet winters. A high-pressure system is usually present over the eastern Pacific Ocean off the California Coast and plays an important role in determining the region's climate. During winter, the Pacific high-pressure system shifts southward, allowing more storms to pass through the region reducing air pollution. During summer and early fall, when few storms pass through the region, emissions generated within the region may combine with abundant sunshine under the restraining influences of topography and subsidence inversions to create conditions that are conducive to the formation of photochemical pollutants, such as ozone, and secondary particulates, such as nitrates and sulfates (Bay Area Air Quality Management District, 2017).

Types of Pollutants

Criteria Air Pollutants

Regulation of air pollution is achieved through both the National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CAAQS) as well as emission limits for individual sources of air pollutants. The United States Environmental Protection Agency (EPA) is responsible for implementing programs established under the federal Clean Air Act (CAA). As required by CAA, the EPA has identified criteria pollutants that are a threat to public health and welfare and has set "primary" and "secondary" maximum ambient thresholds to meet specific public health and welfare criteria. Criteria air pollutants include ozone (O3), particulate matter (PM_{10}, $PM_{2.5}$), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead. The California Air Board Resources Board (ARB) and the EPA focus on these criteria pollutants as indicators of ambient air quality. Criteria air pollutants are described in more detail below.

Ozone

Ozone (O_3) is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and that can cause substantial damage to vegetation and other materials. Ozone is not emitted directly into the atmosphere, but is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG) and oxides of nitrogen (NO_x), including nitrogen dioxide (NO_2). ROG and NO_x are known as precursor compounds for ozone. Significant ozone production generally requires ozone precursors to be present in a stable atmosphere with strong sunlight for approximately three hours.

Ozone is a regional air pollutant because it is not emitted directly by sources, but is formed downwind of sources of ROG and NO_x under the influence of wind and sunlight. Ozone concentrations tend to be higher in the late spring, summer, and fall, when the long sunny days combine with regional subsidence inversions to create conditions conducive to the formation and accumulation of secondary photochemical compounds, like ozone.

Particulate Matter

PM_{10} and $PM_{2.5}$ represent fractions of particulate matter that can be inhaled into air passages and the lungs and can cause adverse health effects. Particulate matter in the atmosphere results from many kinds of dust- and fume-producing industrial and agricultural operations, fuel combustion, and atmospheric photochemical reactions. Some sources of particulate matter, such as demolition and construction activities, are more local in nature, while others, such as vehicular traffic, have a more regional effect. Very small particles of certain substances (e.g., sulfates and nitrates) can cause lung damage directly, or can contain absorbed gases (e.g., chlorides or ammonium) that may be injurious to health. Particulates can also damage materials and reduce visibility. Respirable particulate matter with an aerodynamic diameter of 10 micrometers or less is referred to as PM_{10}. A subgroup of PM_{10} with an aerodynamic diameter of 2.5 micrometers or less is referred to as $PM_{2.5}$. Some particulate matter, such as pollen, occurs naturally.

Carbon Monoxide

Carbon monoxide (CO) is a non-reactive pollutant that is a product of incomplete combustion and is mostly associated with motor vehicle traffic. High CO concentrations develop primarily during winter when periods of light winds combine with the formation of ground level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased CO emission rates at low air temperatures. When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces the oxygen-carrying capacity of the blood. This results in reduced oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia.

Oxides of Nitrogen

Nitrogen oxides produce O_3 during photochemical reactions in the atmosphere. Nitric oxide (NO) and nitrogen oxide (NO_2) are the primary compounds produced. Nitrogen oxides (NOX) can produce a brown haze that is visible in the atmosphere. These compounds can increase the risk of acute and chronic respiratory disease.

Sulfur Dioxide

Sulfur dioxide (SO_2) is produced through combustion of sulfur or sulfur-containing fuels such as coal. SO_2 is also a precursor to the formation of atmospheric sulfate and particulate matter (PM_{10} and $PM_{2.5}$) and contributes to potential atmospheric sulfuric acid formation that could precipitate downwind as acid rain.

Lead

Lead is a metal found both naturally in the environment and in manufactured products. Mobile and industrial sources have historically been the major sources of lead emissions but mobile source emissions have been greatly reduced as a result of the phase-out of

leaded gasoline. The phase-out of leaded gasoline has resulted in decreasing levels of atmospheric lead. Currently, metal processing is the primary source of lead emissions but recycling facilities are another source. Lead exposure affects the nervous system, kidney function, immune system, reproductive and developmental systems as well as the cardio vascular system.

Toxic Air Contaminants

Toxic Air Contaminants (TACs) are airborne substances that are capable of causing short-term (acute) and/or long-term (chronic or carcinogenic, i.e., cancer-causing) adverse human health effects (i.e., injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. The current California list of TACs includes nearly 200 compounds, including Diesel Particulate Matter (DPM) emissions from diesel-fueled engines.

Sensitive Receptors

For the purposes of air quality and public health and safety, sensitive receptors are generally defined as people that would be particularly susceptible to disturbance from dust and air pollutant concentrations, or other disruptions associated with construction activities associated with the construction of the Proposed Project and maintenance activities (potential repair and replacement). Sensitive receptors generally include children, the elderly, asthmatics, and the infirmed at schools, day care centers, libraries, hospitals, residential care centers, parks, and churches and others who are more susceptible to respiratory distress and other air quality-related health problems than the general public (California Air Resources Board, 2020). 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. The nearest residences are approximately 20-50 feet from the Proposed Project area.

Existing Air Quality

The NSCAPCD and the BAAQMD are responsible for attaining and maintaining NAAQS and CAAQS in the jurisdictions. The NSCAPCD has jurisdiction over northern Sonoma County, including Guerneville, Forestville, Geyserville, Healdsburg, and Cloverdale. The BAAQMD has jurisdiction over southern Sonoma County, including Santa Rosa, Sebastopol, Sonoma, and Petaluma. Both air districts maintain a regional monitoring

network that measures the ambient concentrations of criteria pollutants in their respective air basins. Ambient air quality measurements from air monitoring stations help to determine the level of air quality in the local area. Within the NCAB, the closest air quality monitoring stations are located in Guerneville (PM_{10}), Healdsburg Municipal Airport (O_3), Ukiah (O_3 and $PM_{2.5}$), and Eureka-Jacobs (NO_2). Within the BAAQMD jurisdiction, the closest air quality monitoring stations include Sebastopol (O_3, NO_2, and $PM_{2.5}$), San Rafael (PM_{10}). Tables 3.3-1 and 3.3-2 show a 3-year summary (2016 through 2018), the most recent available data, of ozone, NO_2, PM_{10} and $PM_{2.5}$ data monitored at these locations. The data are compared to the CAAQS and NAAQS.

Attainment Status

The NCAB is classified as unclassified or in attainment for Federal and State standards. The SFBAAB is classified as a non-attainment area for the State 1-hour and 8-hour ozone standards as well as the Federal 8-hour ozone standard. The SFBAAB is also a non-attainment area relative to the State and Federal $PM_{2.5}$ standards, and the State PM_{10} standard. For all other criteria pollutants, Sonoma County is classified as either unclassified or as in attainment with respect to State and Federal standards (Bay Area Air Quality Management District, 2017). Refer to Tables 3.3-3 and 3.3-4 for the current attainment status of the Proposed Project area.

Air District Rules, Regulations, and CEQA Guidelines

The NSCAPCD was established by the State of California legislature in 1972 and is responsible for rulemaking, permitting, and enforcement activities related to stationary sources in northern Sonoma County. Rules and regulations are enacted by the Board of Directors, including two members of the Sonoma County Board of Supervisors (Districts 4 and 5) and city council members from Healdsburg, Cloverdale, and Windsor.

The BAAQMD was established in 1955 and is the regional agency responsible for rulemaking, permitting and enforcement activities affecting stationary sources in the Bay Area. The BAAQMD Board of Directors includes up to 24 locally elected representatives from nine Bay Area counties.

Specific rules and regulations adopted by these air districts limit the emissions that can be generated by various stationary sources and identify specific pollution reduction measures that must be implemented in association with various activities. These rules regulate not only emissions of the six criteria air pollutants, but also TAC emission sources, which are subject to these rules are regulated through the air districts' permitting processes and standards of operation. Through this permitting process, stationary source emissions are monitored and this information is used in developing air quality plans. Both Federal and State ozone plans rely heavily upon stationary source control measures set forth in BAAQMD's Rules and Regulations. The Proposed Project would not introduce any new

Table 3.3-1. Summary of Air Quality Monitoring Data for the Proposed Project Area within the North Coast Air Basin (2016–2018)

Pollutant	Applicable Standard	Number of Days Standards Were Exceeded and Maximum Concentrations Measured[a]		
		2016	2017	2018
Ozone – Healdsburg Municipal Airport				
Days 1-hour State Std. Exceeded	>0.09 ppm	0	0	0
Max. 1-hour Conc. (ppm)		0.072	0.083	0.075
Days 8-hour National and State Std. Exceeded	>0.070 ppm	0	0	0
Max. 8-hour Conc. (ppm)		0.066	0.066	0.061
Nitrogen Dioxide (NO_2) – Eureka-Jacobs				
Days 1-hour State Std. Exceeded	>0.18 ppm	0	0	0
Days 1-hour National Std. Exceeded	>0.10 ppm	0	0	0
Max. 1-hour Conc. (ppm)		0.048	0.022	0.058
Annual Average Conc. (ppm)		0.002	0.002	0.002
Respirable Particulate Matter (PM_{10}) – Guerneville, Church and 1st				
Estimated Days Over 24-hour National Std.[d]	>150 µg/m^3	0	0	2.0
Estimated Days Over 24-hour State Std.[d]	>50 µg/m^3	ND	7.3	13.4
Max. 24-hour Conc. National/State (µg/m^3)		43.2/45.0	102.3/106.1	216.4/234.3
State Annual Average (µg/m^3)	>20 µg/m^3	ND	15.4	16.6
Fine Particulate Matter ($PM_{2.5}$) – Ukiah, County Library				
Estimated Days Over 24-hour National Std.[d]	>35 µg/m^3 [c]	0	6.0	20.3
Max. 24-hour Conc. National (µg/m^3)		17.9	127.3	263.2
National Annual Average (µg/m^3)	>12.0 µg/m^3	6.4	9.4	11.3

Notes:
The Bold value is in excess of the applicable standard. “NA” indicates that data are not available.
Std. = Standard; Conc. = concentration; ppm = parts per million; ppb = parts per billion; µg/m3 = micrograms per cubic meter; ND = No data available or insufficient data.
SOURCE: (California Air Resources Board, 2018)

Table 3.3-2. Summary of Air Quality Monitoring Data for the Proposed Project Area within the San Francisco Bay Area Air Basin (2016–2018)

Pollutant	Applicable Standard	Number of Days Standards Were Exceeded and Maximum Concentrations Measured[a]		
		2016	2017	2018
Ozone – Sebastopol – 103 Morris Street				
Days 1-hour State Std. Exceeded	>0.09 ppm	0	0	0
Max. 1-hour Conc. (ppm)		0.073	0.087	0.071
Days 8-hour National and State Std. Exceeded	>0.070 ppm	0	1	0
Max. 8-hour Conc. (ppm)		0.064	0.071	0.053
Nitrogen Dioxide (NO_2) – Sebastopol – 103 Morris Street				
Days 1-hour State Std. Exceeded	>0.18 ppm	0	0	0
Days 1-hour National Std. Exceeded	>0.10 ppm	0	0	0
Max. 1-hour Conc. (ppm)		0.032	0.035	0.065
Annual Average Conc. (ppm)		4	4	4
Respirable Particulate Matter (PM_{10}) – San Rafael				
Estimated Days Over 24-hour National Std.[d]	>150 µg/m^3	0	NA	6.1
Estimated Days Over 24-hour State Std.[d]	>50 µg/m^3	0	NA	12.2
Max. 24-hour Conc. National/State (µg/m^3)		26.6/27.0	91.5/94.0	166.0/166.0
State Annual Average (µg/m^3)	>20 µg/m^3	13.8	NA	18.9
Fine Particulate Matter ($PM_{2.5}$) – Sebastopol – 103 Morris Street, SFBAAB				
Estimated Days Over 24-hour National Std.[d]	>35 µg/m^3 [c]	0	4.0	13.1
Max. 24-hour Conc. National (µg/m^3)		18.7	81.8	175.3
National Annual Average (µg/m^3)	>12.0 µg/m^3	4.6	8.0	8.3

Notes:
The Bold value is in excess of the applicable standard. “NA” indicates that data are not available.
Std. = Standard; Conc. = concentration; ppm = parts per million; ppb = parts per billion; µg/m3 = micrograms per cubic meter; ND = No data available or insufficient data.
SOURCE: (California Air Resources Board, 2018)

Table 3.3-3. North Coast Air Basin Attainment Status for State of California and Federal Air Quality Standards

Pollutant	Federal	State
Ozone (one-hour standard)	---[1]	Attainment
Ozone (eight-hour standard)	Unclassified/Attainment	Attainment
Carbon Monoxide (CO)	Unclassified/Attainment	Unclassified
Nitrogen Dioxides (NO_2)	Unclassified/Attainment	Attainment
Respirable Particulate Matter (PM_{10})	Unclassified	Attainment
Fine Particulate Matter ($PM_{2.5}$)	Unclassified/Attainment	Attainment

NOTES:
[1]The federal 1-hour standard of 12 ppm was in effect from 1979 through June 15, 2005.
SOURCE: (California Air Resources Board, 2018)

Table 3.3-4. SFBAAB Area Attainment Status for State of California and Federal Air Quality Standards

Pollutant	Federal	State
Ozone (one-hour standard)	---[1]	Nonattainment
Ozone (eight-hour standard)	Nonattainment	Nonattainment
Carbon Monoxide (CO)	Attainment	Attainment
Nitrogen Dioxides (NO_2)	Attainment	Attainment
Respirable Particulate Matter (PM_{10})	Unclassified	Nonattainment
Fine Particulate Matter ($PM_{2.5}$)	Nonattainment	Nonattainment

NOTES:
[1]The federal 1-hour standard of 12 ppm was in effect from 1979 through June 15, 2005.
SOURCE: (Bay Area Air Quality Management District, 2017)

stationary emission sources, and would not be subject to the NSCAPCD and BAAQMD rules and regulations for stationary sources.

With respect to construction and maintenance activities associated with the Proposed Project, applicable NSCAPCD and BAAQMD regulations relate to portable equipment (e.g., gasoline- or diesel-powered engines used for power generation, pumps, compressors, and cranes), architectural coatings and paving materials. Equipment used during construction activities may be subject to the requirements of NSCAPCD Regulation 1, Chapter 2 (Permits) and BAAQMD Regulation 2 (Permits), Rule 1 (General Requirements) with respect to portable equipment unless exemptions apply.

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 Impact*

Short-term emissions would result from construction and maintenance activities associated with the Proposed Project. Operation activities of the Proposed Project would not result in emissions other than minor use of electricity. The Proposed Project is located within the NCAB and SFBAAB. The Northern Sonoma County portion of the NCAB is currently designated as an attainment area for State and Federal standards for nitrogen dioxides, ozone, and respirable particulate matter and unclassified for carbon monoxide. No applicable air quality plans exist for jurisdiction of the NSCAPCD. The SFBAAB is currently designated as a nonattainment area for state and national ozone standards, state particulate matter (PM_{10} and $PM_{2.5}$) and federal particulate matter ($PM_{2.5}$) standards. The BAAQMD's 2017 Clean Air Plan (CAP) is the applicable clean air plan to address nonattainment issues in the SFBAAB (Bay Area Air Quality Management District, 2019) (Bay Area Air Quality Management District, 2017).

The BAAQMD *CEQA Air Quality Guidelines* revision identifies a three-step methodology for determining a project's consistency with the current CAP (Office of Environmental Health Hazard Assessment, 2015). If the responses to these three questions can be concluded in the affirmative and those conclusions are supported by substantial evidence, then BAAQMD considers the project consistent with air quality plans prepared for the SFBAAB.

1) "*Does the project support the goals of the air quality plan?*" The BAAQMD-recommended measure for determining project support for these goals is to assess whether the project emissions would exceed the BAAQMD thresholds of significance. Specifically, if a project would not result in significant and unavoidable air quality impacts after the application of all feasible mitigation measures, the project would be considered consistent with the goals of the 2017 CAP. As indicated in the following discussion with regard to air quality impact Criterion III b) and c), activities associated with the construction of the Proposed Project and maintenance activities (potential repair and replacement) of the project would result in a less than significant air quality impact. Therefore, the Proposed Project would be considered to support the goals of the 2017 CAP and, therefore, it would be consistent with the 2017 CAP.

2) *"Does the project include applicable control measures from the clean air plan?"* The 2017 CAP contains 85 control measures aimed at reducing air pollution in the Bay Area. Projects that incorporate all feasible and applicable air quality plan control measures are considered consistent with the 2017 CAP. Two of the 2017 CAP stationary source control measures are applicable to operation of the Proposed Project: WR1 (Limit Greenhouse gas (GHGs) from POTWs [Publicly-

Owned Treatment Works]) and WR2 (Support Water Conservation). Since the Proposed Project would result in the increased lifespan of the existing drinking water aqueduct and would not result in a substantial increase in GHG emissions (see Section 3.8, "Greenhouse Gas Emissions"), the construction activities associated with the construction of the Proposed Project, and maintenance activities (potential repair and replacement) of the Proposed Project, would not hinder the implementation of the 2017 CAP measures.

3) *"Does the project disrupt or hinder implementation of any control measures from the clean air plan?"* As previously discussed, the Proposed Project would not create any barriers or impediments that would hinder implementation of the 2017 CAP control measures.

The responses to all three of the questions with regard to plan consistency are affirmative and the Proposed Project would not conflict with or obstruct implementation of the 2017 CAP. This is a less than significant impact.

b) *Violate any air quality standard or contribute substantially to an existing or projected air quality violation?* (*Less than Significant Impact with Mitigation)*

The Northern Sonoma County portion of the NCAB is currently designated as an attainment area for State and Federal standards for carbon monoxide, nitrogen dioxides, ozone, and respirable particulate matter. The Bay Area experiences occasional violations of ozone and particulate matter (PM_{10} and $PM_{2.5}$) standards. Construction activities associated with the construction of the Proposed Project and maintenance activities (potential repair and replacement) would involve use of equipment and materials that would emit ozone precursor emissions (i.e., ROG and NO_x). Construction activities would also result in the emission of other criteria pollutants from equipment exhaust, construction-related vehicular activity, and construction worker automobile trips. Emission levels for these activities would vary depending on the number and type of equipment, duration of use, operation schedules, and the number of construction workers. Criteria pollutant emissions of ROG and NO_x from these emission sources would incrementally add to the regional atmospheric loading of ozone precursors during project development. Emissions were estimated using the Road Construction Emissions Model (Version 9.0.0) and are depicted below in Tables 3.3-5 and 3.3-6. Air quality modeling details can be found in Appendix C, "Air Quality and Greenhouse Gas Emissions Estimates."

Table 3.3-5. Average Daily Pollutant Emissions (pounds/day)[a] Associated with Construction of the Proposed Project Compared to BAAQMD Thresholds for Construction-related Activities

	ROG	NO_x	Exhaust PM_{10}[b]	Exhaust $PM_{2.5}$[b]
Average Daily Construction Emissions (pounds/day)	4.03	40.26	2.11	1.85
*BAAQMD Construction Threshold**	54	54	82	54
Over Threshold?	No	No	No	No

NOTES:
[a]Emissions were modeled using Sacramento Metropolitan Air Quality Management District (SMAQMD) Road Construction Emissions Model (Version 9.0.0). Modeling details can be found in Appendix C.
[b]BAAQMD's proposed construction-related significance thresholds for PM_{10} and $PM_{2.5}$ apply to exhaust emissions only and not to fugitive dust.
SOURCE:* (Bay Area Air Quality Management District, 2017)

Table 3.3-6. Annual Pollutant Emissions (tons/year)[a] Associated with Construction of the Proposed Project Compared to NSCAPCD Operational Thresholds

	ROG	NO_x	PM_{10}	CO
Construction Emissions (tons/year)[b]	0.01	0.06	0.00	0.05
*NSCAPCD Threshold**	40	40	15	100
Over Threshold?	No	No	No	No

NOTES:
[a]Emissions were modeled using Sacramento Metropolitan Air Quality Management District (SMAQMD) Road Construction Emissions Model (Version 9.0.0). Modeling details can be found in Appendix C.
[b]Per NSCAPCD staff direction, emissions are amortized over lifetime of project (DePrimo, Personal Communication, 2019).
SOURCE:* (Bay Area Air Quality Management District, 2017)

Mitigation Measure AIR-1: Dust management, exhaust control, and air quality protection related to construction and maintenance activities.

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

The Proposed Project would not generate construction emissions that would exceed the NSCAPCD or BAAQMD thresholds. However, due to the non-attainment status of the SFBAAB with respect to ozone, PM_{10}, and $PM_{2.5}$, the BAAQMD recommends that projects implement the following set of Basic Construction Mitigation Measures, which are modified to reflect conditions related to the Proposed Project and current drought conditions and included below:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered at least two times per day on days with no precipitation and breezes at or above 10mph.

2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
4. All vehicle speeds on unpaved roads shall be limited to 15 mph.
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.
6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be routinely checked by a certified mechanic and determined to be running in proper condition.

The Proposed Project activities are not anticipated to result in air quality impacts as construction and maintenance activities would not result in emissions above BAAQMD thresholds and because the Proposed Project will incorporate Mitigation Measure AIR-1 (Dust Management, Exhaust Control and Air Quality Protection) as described above. These practices and procedures protect air quality by avoiding or minimizing potential adverse impacts to air quality thresholds that could be violated during construction and maintenance activities, which minimize impacts to less than significant.

Operation of the Proposed Project would not result in additional emissions. Maintenance activities for the Proposed Project would likely remain consistent with existing ongoing maintenance activities of the existing aqueducts with the addition of the use of hand tools to manage vegetation along specified portions of the aqueduct. Maintenance activities could include occasional repair or replacement of components installed as part of the Proposed Project. However, because the projected life of components installed is anticipated to be 30 or more years, emissions resulting from maintenance activities during this time period are likely to be minor in comparison to construction activities. Therefore, there would be no net change in long-term conditions as a result of the Proposed Project compared to the baseline conditions. There would be no long-term air quality impacts associated with operational or maintenance activities.

c) *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? -Less than Significant Impact with Mitigation*

According to the BAAQMD, no single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. In addition, according to the BAAQMD *CEQA Air Quality Guidelines*, if a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality (Bay Area Air Quality Management District, 2017). Alternatively, if a project does not exceed the identified significance thresholds, then the project would not be considered cumulatively considerable and would result in less than significant air quality impacts. As discussed for Criteria III b) above, although the Proposed Project would not generate construction emissions that would exceed the BAAQMD thresholds, due to the non-attainment status of the air basin with respect to ozone, PM_{10}, and $PM_{2.5}$, the BAAQMD recommends that projects implement a set of Basic Construction Mitigation Measures as best management practices regardless of the significance determination. The Proposed Project activities are not anticipated to result in air quality impacts as construction activities would incorporate Mitigation Measure AIR-1 (Dust Management, Exhaust Control and Air Quality Protection), as described above. These practices and procedures protect air quality by avoiding or minimizing potential adverse impacts during construction activities, which minimize impacts to less than significant. The implementation of Mitigation Measure AIR-1 (Dust Management, Exhaust Control and Air Quality Protection) would ensure that temporary construction-related emissions of particulates would not be considered cumulatively considerable. These practices and procedures protect air quality by avoiding or minimizing potential adverse impacts during construction activities, which minimize potential impacts to less than significant.

d) *Expose sensitive receptors to substantial pollutant concentrations? - Less than Significant Impact with Mitigation*

Construction and maintenance activities associated with the Proposed Project would result in short-term diesel exhaust emissions (DPM), which are TACs, from on-site heavy-duty equipment. The use of diesel equipment required during construction activities associated with the construction of the Proposed Project and maintenance activities of the Proposed Project would generate DPM emissions. Exposure of sensitive receptors, such as those located at nearby residences, schools, and churches, is the primary factor used to determine health risk. Exposure is a function of the concentration of a substance or substances in the environment and the extent of exposure of that person to the substance. A longer exposure period would result in a higher exposure level. Thus, the risks estimated for a maximally exposed individual are higher if a fixed exposure occurs over a longer period of time.

Construction activities would last one to three weeks per site. Two construction seasons would be required to complete construction of the Proposed Project. Maintenance activities associated with the Proposed Project will be intermittent and short term, however potential repairs and replacement of equipment may occur. Due to the uncertainty in assessing cancer risks from very short-term exposures, the Office of Environmental Health Hazard Assessment (OEHHA) does not recommend assessing cancer risk for projects lasting less than two months (Office of Environmental Health Hazard Assessment, 2015). Construction at each site would not last longer than one to three weeks. Due to this relatively short period of exposure, TACs generated during construction activities would not be expected to result in concentrations that could cause significant health risks. Activities associated with the construction and maintenance of the Proposed Project would result in less than significant impacts associated with construction-related health risks. In addition, the Proposed Project activities are not anticipated to result in air quality impacts associated with DPM exhaust emissions, as construction activities would incorporate Mitigation Measure AIR-1 (Dust Management, Exhaust Control and Air Quality Protection) as described above. These practices and procedures protect air quality by avoiding or minimizing potential adverse impacts during construction activities, which minimize potential impacts to less than significant.

The long-term emissions related to operation of the Proposed Project would not result in any sources of TAC emissions. As a result, existing residential sensitive receptors and workers at the project site would not be exposed to substantial TAC emissions from operation of the Proposed Project. There would be no impact associated with Project operations.

e) ***Create objectionable odors affecting a substantial number of people? - Less than Significant Impact***

The operation of the Proposed Project would not create objectionable odors affecting a substantial number of people. However, diesel equipment used during construction activities associated with the construction of the Proposed Project and maintenance activities (potential repair and replacement of equipment) may emit objectionable odors associated with combustion of diesel fuel. However, these emissions would be temporary and intermittent in nature, thus odor impacts associated with diesel combustion during construction and maintenance activities would be less than significant.

Section 3.4 Biological Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	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 California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local regional, or state habitat conservation plan?	☐	☐	☐	☒

Biological Resources Setting

Plant Communities and Habitat Types

Grasslands

Many of the Proposed Project areas are within grassland habitat and are dominated by native and non-native annual and perennial grasses and lesser amounts of forbs and other herbaceous species. Many of the Proposed Project sites are adjacent to gravel or paved roadways, contain existing appurtenances associated with the Santa Rosa, Russian River to Cotati, or Petaluma aqueducts, and have a high proportion of invasive,

ruderal vegetation. Grassland plant species composition can vary in the lowland Santa Rosa Plain and surrounding foothills, although the nonnative Italian ryegrass (*Festuca perennis*) is ubiquitous throughout the Proposed Project area. In foothill areas, plant species composition typically includes slender oat (*Avena barbata*), dogtail grass (*Cynosurus echinatus*), big rattlesnake grass (*Briza maxima*), vetch (*Vicia* spp.), silvery hairgrass (*Aira caryophyllea*), hairy cat's ear (*Hypochaeris radicata*), and Italian thistle (*Carduus pycnocephala*). For sites within the Santa Rosa Plain, species composition is typically dominated by Harding grass (*Phalaris aquatica*), wild radish (*Raphanus sativuus*), wild teasel (*Dipsacus fullonum*), bristly ox-tongue (*Helminthotheca echioides*), poison hemlock (*Conium maculatum*), as well as dominant species characteristic of the surrounding foothills. For all grassland areas, small groups of sapling or mature coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata*), and coyote brush (*Baccharis pilularis*) are common. On the Santa Rosa Plain, shallow depressions often form microhabitats that support wetland vegetation such as tall flatsedge (*Cyperus eragrostis*), pennyroyal (*Mentha pulegium*), and rushes (*Juncus* spp.). Grasslands may be suitable habitat for many special-status plant species; however, grasslands within Proposed Project sites are often degraded and dominated by invasive species that preclude the establishment of special-status plants.

Riparian Forests and Woodlands

Riparian forests and woodlands in the Proposed Project area occur along Mark West Creek and the Laguna de Santa Rosa. The riparian forest along Mark West Creek in the vicinity of the Proposed Project is dominated by mature California bay (*Umbellularia californica*) and valley oak. Red willow (*Salix laevigata*) and arroyo willow (*Salix lasiolepis*) occur as part of the midstory and closer to the active channel of Mark West Creek. The understory is dominated by dense poison oak (*Toxicodendron diversilobum*), Himalayan blackberry (*Rubus armeniacus*), and periwinkle (*Vinca major*). Coyote brush is intermittently present along the canopy edge. Riparian forest and woodland along the Laguna de Santa Rosa at the Proposed Project Laguna Vegetation Maintenance site is dominated by Oregon ash (*Fraxinus latifolia*), valley oak, with lesser amounts of Fremont cottonwood (*Populus fremontii*). The site and work area occur within an opening, mostly lacking canopy and midstory structure. Understory is dominated by dense poison oak and California wild rose (*Rosa californica*), with large areas of bare soil and ruderal herbaceous species, especially tall flatsedge and pennyroyal. Riparian forest and woodland near the Laguna de Santa Rosa are frequently inundated for long periods during the winter.

Oak Woodlands

Oak-dominated woodlands are found within and adjacent to some Proposed Project sites. These sites are single-species stands or have a mixed-oak composition, with coast live oak, valley oak, California black oak (*Quercus kelloggii*), and Oregon white oak (*Quercus*

garryana). Lesser amounts of Douglas fir (*Pseudotsuga menziesii*), gray pine (*Pinus sabiniana*), and California bay occur in this habitat. Understory is often shrub dominated with manzanita (*Arctostaphylos* spp.), coyote bush, poison oak, and wild rose present in varying densities. Proposed Project sites within oak woodlands are often disturbed and consist of non-native ruderal grasses and forbs, with few mature trees in the construction footprint.

Mixed-Conifer Woodland

The Vine Hill Vegetation Management site included in the Proposed Project is comprised of diverse conifer species including incense cedar (*Calocedrus decurrens*), Monterey pine (*Pinus radiata*), Douglas fir, and gray pine, as well as California black oak and coast live oak. Himalayan blackberry and poison oak form a dense understory, with open patches composed of a mix of native non-native grasses and forbs. The diverse assemblage of tree species appears to be due a combination of landscaping activities as well as natural recruitment.

Agricultural Fields

Agricultural fields within or adjacent to Proposed Project sites include irrigated pasture, hayfields, and vineyards. For irrigated pasture and hay fields, species composition includes several nonnative species such as Italian ryegrass, filaree (*Erodium* spp.), bristly ox-tongue, Bermuda grass (*Cynodon dactylon*), and bindweed (*Convolvulus arvensis*). Vineyards consists of cultivated grapes and a sparse cover of ruderal plants listed above. Agricultural fields typically do not provide suitable habitat for special-status species.

Roads and Developed Areas

Many of the Proposed Project construction footprints and staging areas occur along private vineyard, public, or Sonoma Water access roads. Often sites are characterized as compacted bare ground and graveled road, but can be asphalt paved. Roadside ditches can form depressions that may support wetland-associated vegetation (as described in the Grasslands section above), but are mostly outside of the Proposed Project construction and staging footprints and do not meet criteria to be considered protected wetlands. Common plant species include Bermuda grass, wild radish, Italian ryegrass, mustard (*Hirschfeldia incana*), coyote brush, and other common ruderal species. Additionally, many sites contain existing appurtenances associated with the Proposed Project's aqueducts, including those installed on the ground as well as on a concrete slab.

Seasonal Wetlands and Vernal Pools

Most Proposed Project areas do not contain seasonal wetlands or vernal pools. The exceptions are the Laguna Vegetation Maintenance, Penngrove Vegetation Maintenance, and Cathodic Protection Station RR 606+00 sites. Seasonal wetlands are sites in which soil remains saturated or inundated for a long enough duration to support

wetland vegetation, and often include features such as swales, shallow depressions, and roadside ditches. Seasonal wetlands are typically dry by early to late June in a normal rainfall year. Vegetation in wetlands in the Proposed Project vicinity are commonly tall flatsedge, California semaphore grass (*Pleuropogon californicus*), pennyroyal, spikerush (*Eleocharis macrostachya*), or emergent wetland vegetation such as tule (*Schoenoplectus acutus* var. *occidentalis*), bur reed (*Sparganium* sp.), cattail (*Typha* spp.), and dock (*Rumex* sp.). A series of interconnected vernal pools are present throughout the Santa Rosa Plain. Species composition includes species listed above, but not usually emergent vegetation that require longer inundation periods. Vernal pools are also suitable habitat for many special-status species including Sonoma alopecurus (*Alopecurus aequalis* var. *aequalis*), Sebastopol meadowfoam (*Limnanthes vinculans*), Burke's goldfields (*Lasthenia burkei*), Sonoma sunshine (*Blennosperma bakeri*), and dwarf downingia (*Downingia pusilla*).

Special-status Plants, Fish and Wildlife

Special-status species are plants and animals that are protected or identified by the federal and state Endangered Species Acts, California Fish and Game Code, other resource agency lists, and California Native Plant Society (CNPS). A review of special-status species that may occur in the Proposed Project area was conducted. A list of federally endangered and threatened species that may occur in the Project area was obtained from the U.S. Fish and Wildlife Service (USFWS). The California Natural Diversity Database (CNDDB) and CNPS databases were also queried. Information on each species' included habitat requirements, Critical Habitat (if designated), and the likelihood of occurring in the Proposed Project area. In evaluating the potential occurrence of special-status plant and animal species in the Proposed Project area, relevant literature, knowledge of regional biota, and observations made during the field investigations were applied as analysis criteria. The potential for special-status species or their habitats to occur in the Proposed Project area was evaluated according to the following criteria: Unlikely, Low, Moderate, and High. This analysis may be found in Appendix D, Tables D-1 and D-2, as well as in the impact analysis below.

Santa Rosa Plain Conservation Strategy

The Santa Rosa Plain Conservation Strategy (Conservation Strategy) is a long-term conservation program to mitigate for impacts to several vernal pool-dependent special-status species from future development on the Santa Rosa Plain. Specifically, the Conservation Strategy focuses on CTS Burke's goldfield, Sonoma sunshine, Sebastopol meadowfoam and the many-flowered navarretia and calls for preserves to be established and managed in perpetuity to protect these species and their habitats. The Conservation Strategy requires development projects to mitigate for impacts to CTS resources by avoiding and minimizing impacts onsite, and/or conserving habitats offsite (USFWS, 2005).

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 modification, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. - Less than Significant Impact with Mitigation***

A total of 108 special-status species may occur in the vicinity of the Proposed Project consisting of 59 plants (Appendix D, Table D-1) and 49 fish and wildlife species (Appendix D, Table D-2). There are 88 special-status species (49 plants and 39 animals) that have low or no potential to occur because their required habitat is not present in the project area. Examples include the green turtle, a marine species, and several plant species that are endemic to dry serpentine environments. There are ten plant, one amphibian, six bird, and three mammal species that have moderate to high potential to occur at some of the Proposed Project sites. These species are discussed in detail below.

Special-status Plants

Most Proposed Project sites are unsuitable for special-status plants because they are located in developed and/or highly disturbed areas, such as roadways and agricultural lands. However, eleven special-status plant species have a moderate potential to occur in the vicinity of the Proposed Project based upon proximity to extant or historical occurrences, or the presence of suitable habitat (Appendix D, Table D-1). No special-status plants were observed within the construction footprints of any Proposed Project sites during two years of botanical surveys of the Proposed Project sites (Sonoma County Water Agency, 2020). For additional information regarding site-specific habitat and potential sites see Appendix D, Tables D-3, D-4, and D-5. Below is a description of these ten plant species and their potential to occur in the Proposed Project sites.

Congested hayfield tarweed (*Hemizonia congesta* ssp. *congesta*) is a rare (CNPS Rank 1B.2) annual herb endemic to California. Suitable habitat includes coastal scrub, valley and foothill grassland, and fallow fields. This species is relatively tolerant of human disturbance, such as mowing, minor and infrequent ground disturbance, as such marginal habitat may occur along roadsides and partially developed areas. There are 25 Proposed Project sites on the Santa Rosa Plain (13 sites between SR 14+28 and SR 247+94, and 12 sites between RR 224+00 and RR 826+55) with grasslands that may contain marginal habitat for the tarweed. These sites are mainly degraded due to prior construction and/or maintenance activities and presence of hardscape and existing facilities. There are no known occurrences of the tarweed in the vicinity of the project areas. Hayfield tarweed

was not detected during appropriately timed plant surveys conducted in 2018 and 2019. Due to marginal and degraded habitat onsite and the absence of this plant during focused surveys, the Proposed Project would have a less than significant impact on this plant species and no mitigation is needed.

Fragrant fritillary (*Fritillaria liliaceae*) is a rare (CNPS Rank 1B.2) perennial herb endemic to California and found along the central coast and slightly inland. Habitat includes grassy areas underlain by clay within coastal scrub, valley and foothill grassland, coastal prairie, and cismontane woodland. This species is associated with, but not restricted to, serpentine soils. There are known occurrences of fragrant fritillary at Howarth Park and Spring Lake Regional Park. These occurrences are within two miles of Test Stations SR 787+00, SR 801+20, SR 812+25, and SR 821+40, which provide marginal, non-serpentine, oak woodland habitat for the fritillary. No fragrant fritillary was detected at these stations during appropriately timed plant surveys conducted in 2018 and 2019. Due to marginal and degraded habitat onsite and the absence of this plant during focused surveys, the Proposed Project would have a less than significant impact on fragrant fritillary and no mitigation is needed.

Jepson's leptosiphon (*Leptosiphon jepsonii*) is a rare (CNPS Rank 1B.2) perennial herb endemic to California and mostly concentrated in Sonoma and Napa counties. Habitat includes open to partially shaded grassy slopes on volcanic or periphery of serpentine soils, within chaparral or occasionally cismontane woodland. Known occurrences of Jepson's leptosiphon are located in Annadel State Park within two miles of Proposed Project sites at SR 787+00, SR 801+20, SR 812+25, and SR 821+40. These stations contain oak woodlands and soils that provide marginal habitat for this plant. Jepson's leptosiphon was not detected during appropriately timed plant surveys conducted in 2018 and 2019. Soils present at these sites include those of the Goulding series which, due to marginal and degraded habitat onsite and the absence of this plant during focused surveys, the Proposed Project would have a less than significant impact on this plant species and no mitigation is needed.

Narrow-anthered brodiaea (*Brodiaea leptandra*) is a rare (CNPS Rank 1B.2) perennial herb native to California and found in Sonoma and Napa counties. Suitable habitat includes broadleaf upland forest, chaparral, and lower montane coniferous forest at an elevation of 355 – 2,975 feet. The Proposed Project near Spring Lake at Test Stations SR 787+00, SR 801+20, and SR 812+25 are in close proximity to historical occurrences of the brodiaea, which was last seen in 1976 and may be extirpated due to development (California Department of Fish and Wildlife, 2019). These project sites contain marginal oak woodland habitat due to disturbance from existing pavement and frequent on- and off-trail foot traffic. This brodiaea was not detected within Proposed Project areas during appropriately timed plant surveys conducted in 2018 and 2019. Due to marginal and degraded habitat onsite and the absence of this plant during focused surveys, the

Proposed Project would have a less than significant impact on the narrow-leaved brodiaea and no mitigation is needed.

Sonoma alopecurus (*Alopecurus aequalis* var. *sonomensis*) is listed as endangered under the federal Endangered Species Act. No critical habitat has been established for this species. Suitable habitat includes perennial freshwater wetlands and riparian scrub. Currently, a single known extant population exists within Sonoma County in Annadel State Park (CNDDB 2019). A single historical population was last observed in 1974 within a half mile of Cathodic Protection Station RR 606+00. Construction for this site would overlap a perennially moist roadside ditch dominated by ruderal vegetation. This ditch does not exhibit vernal pool hydrology and does not provide habitat for vernal pool plant species. During two years of appropriately timed surveys in 2018 and 2019, no special-status plant species, including *A. aequalis* var. *sonomensis*, were observed within the project site. This species is perennial and would have been observed during surveys if it were present. Because this site is degraded and dominated by ruderal vegetation and because this species was not detected during two years of appropriately timed surveys, the Proposed Project would have no impact to this plant species and no mitigation is needed.

Two-fork clover (*Trifolium amoenum*) is a rare (CNPS Rank 1B.1) low-growing annual herb endemic to California. Suitable habitat includes open areas in swales in coastal scrub or valley and foothill grassland, often in but not restricted, to seasonal wetland areas. The most recent known occurrence of this clover in the vicinity of the Proposed Project is recorded from 1945 and no occurrences are recorded in the project area since then. Marginal non-wetland grassland habitat adjacent to known historical occurrences is present at RR 781+00, RR 808+45, and RR 826+55. The two-fork clover was not detected during appropriately timed plant surveys conducted in 2018 and 2019. Due to marginal and degraded habitat onsite, age of historic recorded occurrences, and the absence of this plant during focused surveys, the Proposed Project would have a less than significant impact on this plant species and no mitigation is needed.

Vine Hill clarkia (*Clarkia imbricata*) is listed as endangered under the state and federal Endangered Species Acts (ESA). This plant is an annual herb endemic to the Vine Hill area in Sonoma County. Critical habitat has not been designated for this species. Habitat includes chaparral, and valley and foothill grassland on acidic sandy soils, particularly in full sun. According to the federal recovery plan for Vine Hill clarkia, this species is known from three locations in Sonoma County, all three of which are likely extirpated, and the species likely only persists on a preserve managed by the California Native Plant Society (CNPS) (USFWS, 2015).

The Proposed Project's Vine Hill Vegetation Management site is located directly adjacent to properties with the above-mentioned historic occurrences (last seen in 1997 and are

likely extirpated) and approximately 1,000 feet southwest of the above-mentioned preserve. Habitat at this project site consists of mixed-conifer woodland with a dense understory of Himalayan blackberry and small openings that support ruderal herbaceous species. Soils at the proposed project site are appropriate for the Vine Hill clarkia. This clarkia was not detected during appropriately timed plant surveys in 2018 and 2019. Dense vegetation currently present within the vegetation management area is likely too dense to support Vine Hill clarkia, but the Proposed Project activities within the vegetation maintenance area include removal of shrubby vegetation, such as Himalayan blackberry, which could enhance habitat for the Vine Hill clarkia. These activities are similar in nature to some management activities at the CNPS preserve intended to encourage Vine Hill clarkia and other native species (CDFW, 2021). Due to the overgrown and degraded habitat in the project area, absence of this plant during focused surveys, likely extirpation of nearby populations, and no project-related ground disturbance at the Vine Hill Vegetation Management site, the Proposed Project would have a less than significant impact on the Vine Hill clarkia. While reestablishment of the Vine Hill clarkia within the proposed project management area is unlikely due to the age of the historic occurrences and the tree canopy at the vegetation management site, this species could potentially benefit from invasive plant removal at the Vine Hill Vegetation Management site. No impact is anticipated and no mitigation is needed.

Vernal Pool Plant Species

Vernal pools occur throughout the Santa Rosa Plain. The majority of Proposed Project sites avoid these wetlands; however, due to the proximity of some construction areas to wetlands, special-status species that require these habitats have a moderate potential to occur within or immediately adjacent to Proposed Project sites. Three federal- and state-endangered annual herbs and one rare annual herb that occur within vernal pools have the potential to occur within or adjacent to Proposed Project sites, including Sonoma sunshine (*Blennosperma bakeri*), Burke's goldfields (*Lasthenia burkei*), Sebastopol meadowfoam (*Limnanthes vinculans*), and Baker's navarretia (*Navarretia leucocephala* ssp. *bakeri*). These species are found at isolated occurrences throughout the Santa Rosa Plain.

Baker's navarretia (*Navarretia leucocephala ssp. bakeri*) is a rare (CNPS List 1B.1) annual herb endemic to California. It is distributed in multiple counties, including Sonoma County. It is found in cismontane woodland, vernal pools, and valley and foothill grasslands. Throughout the Santa Rosa Plain, the habitat suitability is largely restricted to vernal pools. Similar to other vernal pool plant species, urbanization and conversion of land to agriculture have likely reduced or extirpated populations of this species. Occurrences in the vicinity of proposed project sites were last observed in the late 1970's, and were non-specifically mapped in areas where no populations were detected during recent surveys or no longer provide habitat to support this species. Baker's navarretia is

an annual plant and conspicuously blooms with white flowers from April through July (CNPS, 2021).

Burke's goldfields (*Lasthenia burkei*) is a state and federally listed endangered species. This species occurs in vernal pools and swales in the Santa Rosa Plain but also Napa, Lake, and Mendocino counties. This small annual herb is limited in distribution due to specific requirements for climate, substrate, hydrology, and topography. Urbanization and conversion of land to agriculture have reduced populations of this and other vernal pool species. Frequent disking of land and introduction of competing plant species presents further risks. Burke's goldfields is an annual plant that blooms with yellow flowers from April through June (CDFW, 2014).

Sebastopol meadowfoam (*Limnanthes viculans*) is a state and federally listed endangered species. This species occurs in the Santa Rosa Plain but also in Napa County. This small annual plant is limited in distribution due to specific requirements for climate, substrate, hydrology, and topography. Urbanization and conversion of land to agriculture have reduced populations of this and other vernal pool species. Frequent disking of land and introduction of competing plant species presents further risks. Sebastopol meadowfoam is an annual plant that blooms with white flowers from April through May (CDFW, 2014).

Sonoma sunshine (*Blennosperma bakeri*) is a state and federally listed endangered species. This species occurs in vernal pools and wet grasslands in the Sonoma Valley and Santa Rosa Plain and is limited in distribution due to specific requirements for climate, substrate, and topography. Urbanization and conversion of land to agriculture have reduced populations of this and other vernal pool species. Sonoma sunshine is an annual plant that blooms with yellow flowers from February through April (CDFW, 2014).

Known occurrences of these species located within one-half mile of Proposed Project sites are listed in Table D-6 of Appendix D. This table includes an assessment of the Proposed Project's likelihood of impacting these special-status vernal pool plants. Focused botanical surveys were conducted in 2018 and 2019 at these sites but no special-status species or vernal pool habitat were detected within the Proposed Project footprints. One Proposed Project site located at a Sonoma Water facility at Todd Road is located adjacent to vernal pools as well as an extant population of Sebastopol meadowfoam and are discussed in more detail below. Sites that overlap wetland areas are also discussed below. Additional information about botanical resources in the project area is available in Appendix D.

Most Proposed Project sites are located within disturbed areas such as ranch or vineyard roads, existing Sonoma Water facilities, developed areas, or roadside vegetation that are unlikely or have low potential to support special-status plant species. Overall, Proposed

Project activities are not anticipated to impact any of the ten special-status plant species potentially occurring in the project area. Project construction sites are very small, partially or completely developed, most disturbances would be temporary, and existing habitat within Proposed Project construction footprints are degraded. Sites were chosen in order to avoid sensitive resources. Site assessments and two years of appropriately-timed botanical surveys found no special-status species within any Proposed Project sites or their associated access routes. Sites with the potential to directly or indirectly impact special-status plants are described in detail below.

Cathodic Protection Station RR541+20

Cathodic Protection Station RR 541+20 is located at an existing Sonoma Water facility on Todd Road.

The Sonoma Water facility at Todd Road, which is within the aqueduct right of way, but within the boundary of the neighboring Todd Road Ecological Reserve, which is managed by the California Department of Fish and Wildlife. This reserve contains wetlands, including vernal pools, and populations of California tiger salamander, Sebastopol meadowfoam, Sonoma sunshine, Burke's goldfields, and Baker's navarretia.

There is a vernal pool with a population of Sebastopol meadowfoam located within the existing fence line of the Sonoma Water facility but not within the Proposed Project site. Sonoma Water biologists have performed a number of botanical surveys at the facility for the Proposed Project as well as for past projects. Botanical surveys have repeatedly detected Sebastopol meadowfoam in the vernal pool located within the fenced Sonoma Water facility. This vernal pool is often used as a reference site for Sonoma Water botanists to determine when Sebastopol meadowfoam is flowering in the area. Sonoma sunshine, Burke's goldfields, and Baker's navarretia have never been detected in this vernal pool. Botanical surveys for the Proposed Project were performed in 2018 and 2019 at this site. Proposed Cathodic Protection Station RR 541+20 is located at the Sonoma Water facility but is confined to hardscape and does not overlap the potentially jurisdictional wetland or the adjacent vernal pool containing an existing population of Sebastopol meadowfoam.

While no construction activities are planned within the vernal pool and existing population of Sebastopol meadowfoam, potential indirect impacts to Sebastopol meadowfoam could occur during construction activities at Cathodic Protection Station RR 541+20 without protections in place. For example, impacts could occur if vehicular traffic or equipment staging overlap the vernal pool, or if sediment from construction activities enter the vernal pool. Implementation of Mitigation Measures AIR-1 (Dust Management, Exhaust Control, and Air Quality Protection), HAZ-1 (Spill Prevention and Response), HAZ-3 (Vehicle and Equipment Maintenance and Fueling), GEO-1 (Erosion and Sedimentation), in addition to Mitigation Measures BIO-1 (Worker Environmental Awareness Training) and BIO-2

(Protective Measures for Sebastopol meadowfoam) described below would avoid potential indirect impacts to the adjacent vernal pool and associated population of Sebastopol meadowfoam and this impact would remain less than significant with mitigation. These mitigation measures minimize the potential for hazardous materials, sediment, or other materials to impact habitat for Sebastopol meadowfoam.

Mitigation Measure BIO-1: Worker Environmental Awareness Training

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

1. Prior to beginning construction activities, all personnel involved in the activities will 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 five years of academic training and professional experience in biological sciences and related resource management activities with a minimum of two years conducting surveys for each species that may be present within the project area. Sonoma Water may also utilize appropriately experienced and/or trained environmental staff. Resumes will be submitted to California Department of Fish and Wildlife and/or U.S. Fish and Wildlife Service, as appropriate, for approval prior to commencement of biological surveys. This training will include instruction on how to identify bird nests, recognize and identify special-status species (Sebastopol meadowfoam, California tiger salamander) and sensitive habitats, species habitat requirements, regulatory protections, and the appropriate protocol if any special species or nests are found during project implementation.
2. Personnel who miss the first training session must participate in a make-up session before conducting construction activities.

Mitigation Measure BIO-2: Protective measures for Sebastopol meadowfoam at the Cathodic Protection Station RR541+20.

1. A qualified biologist or designated trained monitor shall monitor construction activities at the Cathodic Protection Station RR541+20. The qualified biologist or designated trained monitor shall notify the onsite construction inspector to stop any work that may result in take of Sebastopol meadowfoam and shall be onsite during initial ground disturbing activities. A qualified biologist (including those specializing in botany, wildlife, and fisheries) is an individual who shall have a minimum of five years of academic training and professional experience in biological sciences and related resource management activities with a minimum of two years conducting surveys for each species that may be present

within the project area. Sonoma Water may also utilize appropriately experienced and/or trained environmental staff. Resumes will be submitted to California Department of Fish and Wildlife and/or U.S. Fish and Wildlife Service, as appropriate, for approval prior to commencement of biological surveys and monitoring.

2. Silt fencing shall be installed according to Figure 3.4-1 and the CalTrans Temporary Sediment Control BMP SC-1 (Caltrans, 2017) and under supervision of a qualified biologist, or designated trained monitor, to define the construction areas for the Cathodic Protection Station RR541+20 in order to prevent vehicular traffic, equipment staging, and sediment movement within potential habitat for Sebastopol meadowfoam.

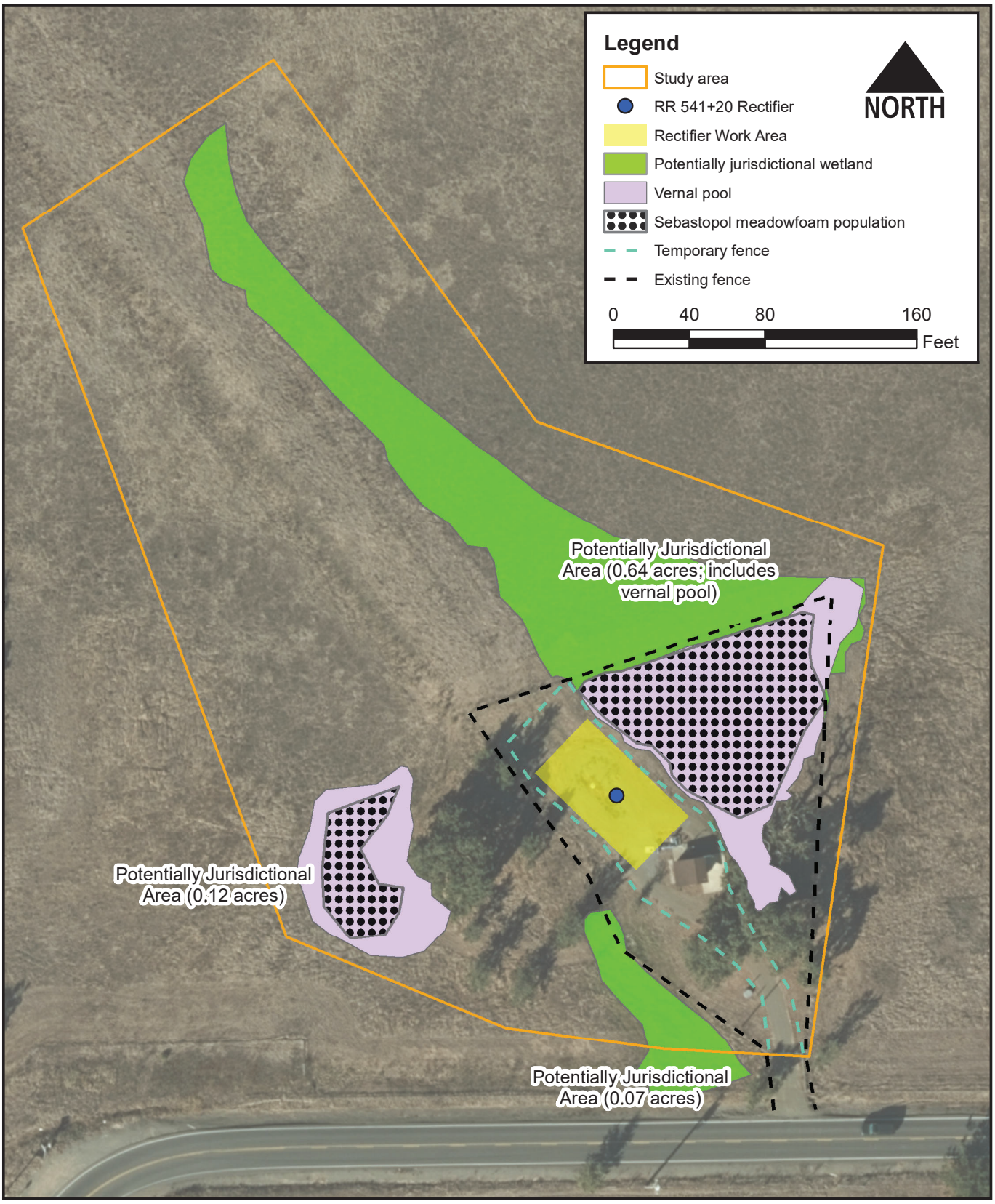
Special-status Amphibian

The California tiger salamander (*Ambystoma californiense*; CTS) is a federally endangered and state threatened species. The range and critical habitat for CTS in Sonoma County is restricted to the Santa Rosa Plain and adjacent lowlands north of Petaluma (USFWS, 2011). CTS inhabit uplands consisting of valley and foothill grasslands and the grassy understory of open woodlands. CTS require seasonal wetlands for breeding that are near upland (grassland) refuge and unimpaired movement between these sites. Adults spend most of their life underground inhabiting the tunnels of small fossorial mammals, such as the pocket gopher (*Thomomys* sp.) and, occasionally, in cracks in the ground. Adults emerge during early winter rainfall and migrate up to 1.3 miles to a breeding site, although most migration distances are likely less than 2,200 feet (USFWS, 2005). Typically, breeding sites in Sonoma County consist of fishless vernal pools that fill with winter rainfall. These pools must hold water until mid- to late-spring to allow aquatic larvae to grow and metamorphose into terrestrial salamanders.

There are 35 Proposed Project sites on the Santa Rosa Plain within the range of CTS that may be located in areas of potential habitat for the species (Sonoma County Water Agency, 2020). This includes 34 cathodic protection stations and test stations in addition to the West Sierra Avenue Vegetation Management site (RR 808+00). Potential temporary impacts to migration/dispersal, grassland (upland), and breeding habitats are discussed below. The West Sierra Vegetation Maintenance site is omitted from the discussion below as no ground disturbing activities are proposed as part of the project and no impacts would occur. Overall, no permanent impacts to any CTS habitat are proposed as part of the Proposed Project.

Temporary Impact to Winter Migration Habitat

There are 18 Proposed Project sites that provide potential winter migration habitat and no suitable upland refuge habitat. CTS can move over one mile as adults during winter migration to a breeding pool and as dispersing subadults during early spring. Although there



Created by: Patrick Lei, SCWA

Figure 3.4-1. RR 541+20 Rectifier. Construction activities and indirect impacts avoidance measures.

DISCLAIMER
This map document and associated data are distributed for informational purposes only "AS-IS" at the published scale and provided without warranty of any kind, expressed or implied. The positional accuracy of the data is approximate and not intended to represent survey map accuracy. The Sonoma County Water Agency assumes no responsibility arising from the use of this information.

Sonoma Water

are no known CTS breeding pools within 1,500 feet of these Proposed Project sites, construction activities could affect migrating or dispersing salamanders if construction work is conducted during November 1 to April 15. Salamanders could be entrapped in open pits or injured if hiding under staged equipment. Implementation of Mitigation Measure BIO-3 would avoid this potential impact to migrating CTS at project sites by scheduling construction during the dry season from April 16 to October 31. If work in the winter and spring cannot be avoided, open pits would be sealed at the end of each work day and a qualified biological monitor would inspect the staging and construction area daily for CTS before work begins. If CTS are found in the staging or construction area, CTS will be removed by the biological monitor and translocated as described in Section 4.7.2 of the Santa Rosa Plain Conservation Strategy (USFWS, 2005).

Temporary Impact to Upland Refuge (Grassland) Habitat

Upland refuge (grassland) habitat within the range of CTS occurs at 16 sites in the Proposed Project. However, at 16 of these sites grasslands in the project area are degraded from existing land use practices, are located far from known CTS occurrences, and are unlikely to be used by CTS. Project sites are located adjacent to existing development, such as gravel roads or vineyards, are small in area (< 0.03 ac), and are greater than 1,500 feet from known California Natural Diversity Data Base (CNDDB) CTS occurrences. Temporary disturbance to grassland habitat will occur during project construction and staging activities. In most instances only a portion of the defined construction area consists of grassland, while the other area is typically hardscape, such as a gravel road. Although the potential presence of CTS in grasslands located in the project sites is very low, implementation of Mitigation Measure BIO-3 would minimize disturbance to grassland upland refuge habitat at the 16 project sites by restricting construction to fenced areas. If construction is conducted during the winter migration period (November 1 - April 15) an exclusionary fence buried at the bottom would be installed to prevent the potential for CTS to enter the construction area. After construction is complete, disturbed sites should be recontoured to preexisting conditions, covered with straw, and revegetated with native grass and forb seeds.

Temporary Impact to CTS Breeding Habitat

CTS breed in vernal pools and other seasonal wetlands, including roadside ditches. Rectifier Station RR 606+00 along Meadow Lane contains a roadside ditch with wetland vegetation that provides potential CTS breeding habitat and adjacent grasslands that are potential CTS upland refuge habitat. There are no CNDDB reports of CTS occurring onsite at Station RR 606+00 and the closest known CNDDB occurrence is at the Hazel and Walker Mitigation Sites approximately 2,100 feet to the east. Project staging and construction would temporarily disturb the ditch (approximately 150 square feet of potentially jurisdictional wetlands, or 0.003 acre) and adjacent grassland and impact potential CTS breeding and upland refuge habitat. See “Temporary Impact to Upland

Refuge (Grassland) Habitat" above for measures that would avoid and minimize impacts to grassland habitat. Mitigation Measure BIO-3 (Avoid, Minimize, and Compensate for Temporary Impacts to CTS) would avoid and minimize disturbance to wetlands along the ditch, as follows. The construction area should be bordered with a fence and disturbance restricted within the fenced area. Construction should be scheduled outside of the winter migration period (November 1 to April 15) to avoid encountering adults and juveniles. This will also avoid impacts to the egg and larval life stages that could be present in the roadside ditch during winter and spring. After construction is complete, the disturbed ditch area should be recontoured to preexisting conditions, covered with straw, and revegetated with native wetland plants. In addition, Sonoma Water staff will consult with state and federal resource agencies to determine if additional compensation for temporal disturbance to a potential CTS breeding site is required, including habitat enhancement off-site and/or acquisition of credit from an approved CTS mitigation bank.

In summary, the Proposed Project was designed to avoid, to the extent feasible, areas with sensitive habitats and the potential occurrence of special-status species, including CTS. However, temporary impacts to CTS winter migration, upland, and breeding habitats may occur at the Proposed Project sites listed in Tables 3.4-1 and 3.4-2. Implementation of Mitigation Measure AIR-1 (Dust Management, Exhaust Control, and Air Quality Protection), Mitigation Measures HAZ-1 (Spill Prevention and Response), HAZ-3 (Vehicle and Equipment Maintenance and Fueling), GEO-1 (Erosion and Sedimentation), and BIO-1 (Worker Awareness Training), in addition to Mitigation Measure BIO-3 (Avoid, Minimize, and Compensate for Temporary Impacts to CTS) described below would reduce this impact to a less-than-significant level.

Mitigation Measure BIO-3: Avoid, minimize, and compensate for temporary impacts to California tiger salamander winter migration, upland refuge, and breeding habitats.

1. The project may impact the federally and state listed California tiger salamander (CTS) and require compliance with the federal and state Endangered Species Acts (ESA). Because the project would impact wetlands subject to the authority of the US Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act, Sonoma Water, through the USACE, shall be required to consult with the U.S. Fish and Wildlife Service (USFWS) in compliance with Section 7 of the federal ESA. Through this consultation process the USFWS will define the necessary mitigation to compensate for unavoidable impacts to CTS and its migration, upland, breeding habitats and issue its findings in a Biological Opinion (BO) for the project. Following the provisions of Section 2080.1 of the California Fish and Game Code (California ESA), the California Department of Fish and Wildlife (CDFW) will review the incidental take statement in the BO and determine if it is consistent with the

requirements of the California ESA (CESA). If CDFW determines that the federal authorization is not consistent with the CESA, the project proponent (Sonoma Water) shall apply for a State Incidental Take Permit under section 2081(b) of the California Fish and Game Code.

2. Mitigation for impacts to CTS migration, upland refuge, and breeding habitats shall be consistent with the CTS mitigation identified in the Santa Rosa Plain Conservation Strategy (2005) and the Programmatic Biological Opinion (USFWS, 2007). If applicable to the Proposed Project, the appropriate mitigation ratio shall be negotiated with the USFWS and CDFW (agencies), and shall be 0.1:1 to 2:1 based on habitat type and distance from known CTS occurrences. Under the Santa Rosa Plain Conservation Strategy, the agencies concluded that compliance with the interim mitigation guidelines is sufficient to mitigate significant effects to listed species.

3. The following measures are recommended to avoid and minimize the possible "take" of CTS during construction activities, as defined by the federal and state ESA. These measures are based on the Santa Rosa Plain Conservation Strategy and the Programmatic Biological Opinion and have been modified to address specific concerns of the Proposed Project regarding the three habitat types or conditions that may temporarily impact CTS or their habitat during construction. Prior to project construction, a CTS exclusionary fence plan shall be submitted to the USFWS and CDFW for approval as specified below for the three habitat types.

    a. <u>Temporary Impact to Winter Migration Habitat</u>
    The 18 project sites with potential winter migration habitat, listed in Table 3.4-1, shall be scheduled for construction during the dry season from April 16 to October 31. If work from November 1 through April 15 cannot be avoided, open pits would be sealed at the end of each work day. No gaps between the plate and ground shall be allowed. A qualified biological monitor, approved by the USFWS and CDFW, shall inspect the staging and construction area daily for CTS before work begins.

    A qualified biologist (including those specializing in botany, wildlife, and fisheries) is an individual who shall have a minimum of five years of academic training and professional experience in biological sciences and related resource management activities with a minimum of two years conducting surveys for each species that may be present within the project area. Sonoma Water may also utilize appropriately experienced and/or trained environmental staff. Resumes will be submitted to California Department of Fish and Wildlife and/or U.S. Fish and Wildlife

Service, as appropriate, for approval prior to commencement of biological surveys and monitoring.

Table 3.4-1. Proposed Project Sites with Potential for Temporary Impact to California Tiger Salamander (CTS) Migration Habitat

	Proposed Project Sites within CTS Migration Habitat
Santa Rosa Aqueduct	SR 129+09, SR 134+83, SR 146+50, SR 170+00, SR 207+35, SR 259+60, SR 264+00, SR 285+50, SR 320+52
Russian River to Cotati Aqueduct	RR 367+00, RR 376+00, RR 436+80, RR 448+00, RR 502+27, RR 541+20, RR 616+75, RR 630+00, RR 798+50

b. Temporary Impact to Upland Refuge (Grassland) Habitat

The 16 project sites with potential CTS upland habitat, listed in Table 3.4-2, shall minimize disturbance to grassland habitat by fencing the limits of the construction areas. No ground disturbing activities shall occur outside of the fenced area. If construction is conducted during the winter migration period (November 1 to April 15) an exclusionary fence buried at the bottom and at least three feet high shall be installed to prevent the potential for CTS to enter the construction area. After construction is complete, disturbed sites shall be recontoured to preexisting conditions, covered with straw, and revegetated with native grass and forb seeds.

Table 3.4-2. Proposed Project Sites with Potential for Temporary Impacts to California Tiger Salamander (CTS) Upland Refuge (Grassland) Habitat

	Proposed Project Sites with Potential for Temporary Impacts to CTS Upland Refuge (Grassland) Habitat
Santa Rosa Aqueduct	SR 150+03, SR 159+61, SR 203+45, SR 212+00, SR 231+00
Russian River to Cotati Aqueduct	RR 312+50, RR 592+00, RR 606+00, RR 608+00, RR 643+75, RR 669+30, RR 677+80, RR 748+52, RR 781+00, RR 808+00, RR 826+55

c. Temporary Impact to CTS Breeding Habitat

The roadside ditch at Rectifier Station RR 606+00 along Meadow Lane provides potential CTS breeding habitat that would be temporarily impacted during construction. The construction area shall be bordered with a fence and disturbance restricted within the fenced area. No ground disturbing activities shall occur outside of the fenced area. Construction shall be scheduled outside of the winter migration period (November 1 to April 15) to avoid encountering adults and juveniles. This will also avoid impacts to the egg and larval life stages that could be present in the roadside ditch during winter and spring. If construction must be conducted during the winter migration period (November 1 to April 15) an exclusionary fence buried at the bottom and at least three high shall be installed to prevent the potential for CTS to enter the construction area. After construction is complete, the disturbed ditch area shall be recontoured to preexisting conditions, covered with straw, and revegetated with native wetland plants. Fencing shall be installed and maintained during construction as described in item b, Temporary Impact to Upland Refuge (Grassland) Habitat, above.

d. In addition, the following minimization measures shall be implemented during the initial ground disturbing activities at project sites within CTS habitat.

i. A duly trained monitor shall be present during the initial ground disturbing activities at each site within CTS migration, upland refuge, and breeding habitats. The monitor should remain onsite until the top several feet of soil have been removed and stockpiled. Thereafter, an onsite person shall be designated to monitor compliance with all applicable minimization measures. The USFWS- and CDFW-approved biologist shall ensure that this individual receives training consistent with that outlined in the Biological Opinion issued for the project.

ii. If a CTS is observed within a project site by a worker, the worker shall immediately inform the monitor. The monitor shall notify the biologist immediately. All work shall halt and machinery turned off within 100 feet of the animal until a biologist can capture and remove the CTS from the work area. Biologists approved by the USFWS and CDFW are the only personnel allowed to handle CTS. CTS found in the work area shall be relocated to pre-approved areas no more than one hour after capture.

iii. The monitor and biologist have the authority to halt work activities at any time to prevent harming special-status species or when any of these protective measures have been violated. Work shall only commence when authorized by the monitor or biologists.

iv. Before the start of work each morning, the monitor shall check for animals under any equipment, such as vehicles and stored pipes.

v. At the end of each work day during the CTS migration season (November 1 to April 15), open pits or excavated areas will be sealed and inspected by a qualified biologist or designated, trained construction monitor.

vi. Before the start of work each morning, the monitor shall check all excavated steep-walled holes or trenches greater than one foot deep for any wildlife. Wildlife shall be removed; the biologist will be notified if CTS are found.

vii. A record of all CTS observed and the outcome of that observation shall be kept by the biologist and submitted to the USFWS and CDFW.

viii. All foods and food-related trash items, such as lunch bags, plastic sandwich bags, fast food containers, food of any type, candy wrappers, chip packages, drink bottles and cans, etc., shall be enclosed in sealed trash containers and removed from the site regularly. Food items could attract predators into the work area.

Special-status Birds

Breeding birds and raptors, and their nest and eggs are protected under Sections 3503 and 3503.5 of California Fish and Game Code. Additionally, Section 3513 of the Code, as well as the federal Migratory Bird Treaty Act (16 USC, 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.

There are six special-status bird species that may forage, migrate, and/or nest in the Proposed Project areas, including oak titmouse (*Baeolophys inornatus*), olive-sided flycatcher (*Contopus cooperi*), white-tailed kite (*Elanus leucurus*), Nuttall's woodpecker (*Picoides nuttallii*), Allen's hummingbird (*Selasphorus sasin*) and California thrasher (*Toxostoma redivivum*) (Appendix D, Table D-2). These species are described below. In addition, areas within or surrounding the Proposed Project include potential nesting habitat for numerous common bird species. No permanent impacts to special-status or common

bird foraging or migration habitat would occur from the Proposed Project. However, construction activities could result in potentially significant temporary impact to nesting birds because they would include clearing grassland and shrubs at project sites where birds could nest. Maintenance of shrubs and herbaceous plants within proposed vegetation maintenance sites could also impact active nests. These activities would also generate short-term noise that could impact nesting behavior in adjacent areas. Disturbance to nesting birds would be avoided by conducting construction and maintenance outside of the nesting season or minimized by conducting pre-construction nesting surveys as described in Mitigation Measure BIO-4 (Nesting Bird Protection Measures). If active nests are found, a buffer would be established around the nest and maintained until the young have fledged or work postponed until a nest is no longer active. Mitigation Measure BIO-1 (Worker Environmental Awareness Training) would further minimize potential impacts to nesting birds. Implementation of Mitigation Measure BIO-4 (Nesting Bird Protection Measures) described below would reduce the impact to nesting birds to less than significant.

Allen's hummingbird (*Selasphorus sasin*) is currently included on the USFWS "Birds of Conservation Concern" list. The species is a common summer resident and migrant along most of coastal California. Migrants occur in a variety of woodland and scrub habitats. Breeding takes place more often in coastal scrub, valley foothill hardwood, and valley foothill riparian habitats (Green 1999). While the species generally does not occur more than 20 miles from the coast, Allen's Hummingbirds have been confirmed nesting in inland Sonoma County including in the project area (Madrone Audubon Society, 2020). Suitable habitat is located within vegetation maintenance sites.

California thrasher (*Toxostoma redivivum*) is included on the USFWS "Birds of Conservation Concern" list. This species nests and forages in chaparral as well as open woodlands of the chaparral transition zones with underbrush and heavy leaf litter (Parmeter, 2002). Possible, probable, and confirmed nesting activity in interior Sonoma County, including along the Russian River and eastern hills (Madrone Audubon Society, 2020). No suitable habitat is located within Proposed Project sites but potential habitat is located along the Russian River and in Howarth Park and Spring Lake Regional Park.

Nuttall's woodpecker (*Picoides nuttallii*) is currently included on the USFWS "Birds of Conservation Concern" list. This species lives in oak woodlands year-round but also use wooded suburban areas and woodlands near streams with cottonwoods, willows, and sycamores (Parmeter, 2002). It is a fairly common resident throughout much of Sonoma County and confirmed nests have been recorded within the project area (Madrone Audubon Society, 2020). Suitable habitat is located adjacent to some Proposed Project sites.

Oak titmouse (*Baeolophus inornatus)* is included on the USFWS "Birds of Conservation Concern" list (USFWS, 2008). This species nests and forages in warm, open oak or oak-pine woodlands. Nests are located in natural or sometimes woodpecker-excavated cavities in trees, fenceposts, or other similar locations (Parmeter, 2002). Nesting has been confirmed throughout much of Sonoma County, including the project area (Madrone Audubon Society, 2020). Suitable breeding and foraging habitat is located within and adjacent to Proposed Project sites.

Olive-sided flycatcher (*Contopus cooperi*) is currently included on the USFWS list of "Birds of Conservation Concern" (USFWS, 2008) and is categorized by CDFW as a "State Species of Special Concern" (CDFW, 2008). This species is a regular, if not common, summer resident from April to September of coniferous forest and broadleaf forests with a coniferous component (Parmeter, 2002). A small number of probable and possible nesting observations have been recorded in the portion of Sonoma County in which the Proposed Project is located (Madrone Audubon Society, 2020). Suitable breeding and foraging habitat in mixed conifer and oak woodland exists in areas adjacent to project sites near the Russian River, Howarth Park, and Spring Lake Regional Park.

White-tailed kite (*Elanus leucurus*) is not listed under the Federal or State Endangered Species Acts, but is considered a fully protected species by the state of California. White-tailed kite occupy nearly all areas of California up to the western Sierra Nevada foothills and southeast deserts, inhabiting low elevation, open grasslands, savannah-like habitats, but are rarely found away from agricultural areas (Polite, 2005). In Sonoma County, it is considered a fairly common permanent resident and fall migrant with numbers peaking in the winter as birds arrive from other areas (Parmeter, 2002). Foraging occurs in undisturbed, open grasslands, meadows, farmlands, and emergent wetlands. Nests are placed near the top of a dense oak, willow, or other tree stand and consist of loosely piled sticks and twigs, lined with grass, straw, or rootlets (Polite, 2005). Suitable nesting and foraging habitat is found through much of the project area.

Mitigation Measure BIO-4: Nesting Bird Protection Measures.

1. If construction or maintenance activities must be scheduled during the nesting season (February 15 through August 15 for most birds), a qualified biologist, familiar with the species and habitats in the area, will 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 within one week before initiation of construction or maintenance activities. If no active nests are detected during surveys, activities may proceed. Vegetation removal activities will be conducted under the guidance of a qualified biologist or designated trained monitor. A qualified biologist (including those specializing in botany,

wildlife, and fisheries) is an individual who shall have a minimum of five years of academic training and professional experience in biological sciences and related resource management activities with a minimum of two years conducting surveys for each species that may be present within the project area. Sonoma Water may also utilize appropriately experienced and/or trained environmental staff. Resumes will be submitted to California Department of Fish and Wildlife and/or U.S. Fish and Wildlife Service, as appropriate, for approval prior to commencement of biological surveys.

2. 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 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 will remain in place until a qualified biologist determines that the young have successfully fledged, or nests have been otherwise abandoned.

Special-status Mammals

There are three special-status mammal species, consisting of two bat species and the American badger, documented as potentially occurring in the vicinity of the Proposed Project. The western red bat (*Lasiurus blossevillii*) and pallid bat (*Antrozous pallidus*) are CDFW Species of Concern and have a low to moderate potential to occur at Proposed Project sites near Vine Hill, Laguna de Santa Rosa, and Russian River. Also, pallid bats may occur in the Howarth Park area (Appendix D, Tables D-3, D-4, and D-5). The western red bat is relatively uncommon in Sonoma County. The red bat is solitary and roosts in the foliage of trees in edge habitats adjacent to streams or open fields. Individuals prefer trees with an adequate, spreading canopy and lack of lower branches, presumably reducing the potential for predation and allowing open space for free flight below trees (California Department of Fish and Game, 1988). Pallid bats can be locally common in California, and prefers open, dry habitats with rocky areas suitable for nesting. They are known to occasionally nest in tree cavities. Females form nursery colonies when raising young (California Department of Fish and Game, 1988). The western red bat and pallid bat may infrequently forage in areas within or adjacent to many Proposed Project sites, but no roosting habitat is present within these sites. The closest recently documented occurrence of these bat species is approximately two miles from the nearest Proposed Project site, south of the Russian River (California Department of Fish and Wildlife, 2019).

Project-related activities are not anticipated to impact roosting sites, nursery sites, or foraging habitat for western red bats or pallid bats. Therefore, this impact would be less than significant, and no mitigation is needed.

American badger (*Taxidea taxus*) is a CDFW Species of Concern. This small carnivore inhabits grasslands and is widespread but uncommon in Sonoma County. The nearest known badger occurrence to the Proposed Project is approximately one mile from the Sonoma Water facility at Todd Road (California Department of Fish and Wildlife, 2019). Due to small construction footprints, frequent disturbance associated with the existing facility, and presence of existing appurtenances, badgers are unlikely to occupy Proposed Project areas, but may infrequently forage in the Proposed Project areas.

No permanent impact to badger habitat would occur as a result of Proposed Project activities and no impact to foraging activity is anticipated. This potential impact to American badger habitat would be less than significant and no mitigation is required.

b) ***Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. - Less than Significant Impact with Mitigation***

Portions of the Proposed Project are within the jurisdiction of the Sonoma County General Plan 2020 (Sonoma County Permit and Resource Management Department, 2016) and City of Santa Rosa General Plan 2035 (City of Santa Rosa, 2009). These plans require that natural communities and/or special-status species be identified and protected. Relevant goals and objectives include:

Sonoma County General Plan 2020

- *Objective OSRC-7.1:* Identify and protect native vegetation and wildlife, particularly occurrences of special-status species, wetlands, sensitive natural communities, woodlands, and areas of essential habitat connectivity.
- *GOAL OSRC-8:* Protect and enhance Riparian Corridors and functions along streams, balancing the need for agricultural production, urban development, timber and mining operations, and other land uses with the preservation of riparian vegetation, protection of water resources, flood control, bank stabilization, and other riparian functions and values.

City of Santa Rosa General Plan 2035

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

Also, woodlands, forests, riparian, and wetland habitats within and adjacent to Proposed Project sites are considered sensitive natural communities described by the CDFW list of

California Sensitive Natural Communities (California Department of Fish and Wildlife, 2019).

Santa Rosa Plain Conservation Strategy

The Santa Rosa Plain Conservation Strategy (Strategy Plan) is a long-term conservation program to mitigate impacts to several vernal pool-dependent special-status species from future development on the Santa Rosa Plain. Specifically, the Strategy Plan focuses on CTS, Burke's goldfield, Sonoma sunshine, Sebastopol meadowfoam and the many-flowered navarretia and calls for preserves to be established and managed in perpetuity to protect these species and their habitats. The Strategy Plan requires development projects to mitigate for impacts to CTS resources by avoiding and minimizing impacts onsite, and/or conserving habitats offsite (USFWS, 2005).

The Proposed Project avoids riparian habitat with the exception of vegetation maintenance activities within the aqueduct rights of way at the Laguna and Penngrove vegetation maintenance sites. Vegetation trimming would be performed in wetland and riparian areas at the Laguna and Penngrove vegetation maintenance sites. Proposed Project activities include thinning of understory vegetation and minor pruning of trees to maintain access to appurtenances on the site. No trees would be removed and trimming of branches would be minimal. No ground disturbing or discharge activities would occur, and no vehicles would be allowed within seasonal wetlands or riparian areas during Proposed Project activities. Vegetation maintenance activities would take place within riparian areas at these sites and would be subject to Section 1602 of the California Fish and Game Code and may require a Lake and Streambed Alteration Agreement through CDFW. This potential impact to riparian areas would be reduced to less-than-significant with incorporation of Mitigation Measure BIO-5 (Wetlands, Waters, and Riparian Habitat) described below. This potential impact would be less than significant with mitigation.

The Proposed Project would be consistent with the County of Sonoma General Plan 2020 and City of Santa Rosa General Plan 2035 goals, objectives, and policies outlined above because the project would protect sensitive biological resources by avoiding or minimizing potential adverse impacts during construction and maintenance activities. The project description includes restricting vegetation disturbance, constructing during summer when fish and wildlife activity is low, and a revegetation plan to stabilize and revegetate disturbed areas with native plant species. The following mitigation measure would further protect sensitive biological resources: BIO-1 (Worker Awareness Training), BIO-2 (Protective Measures for Sebastopol meadowfoam), BIO-3 (Compensate for Impacts to CTS Habitat), and BIO-4 (Protective Measures for Nesting Birds). Implementation of Mitigation Measure BIO-5 (Avoid, Minimize, or Compensate for Impacts to Jurisdictional Wetlands and Other Protected Waters) (see Section 3.4c below for details) and Mitigation

Measure GEO-1 (Erosion and Sedimentation) would minimize the potential for significant adverse effects to aquatic resources. These actions would minimize disturbance to riparian and wetland habitats during 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, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? - Less than Significant Impact with Mitigation***

At most proposed Test Station and Cathodic Protection sites, impacts to protected wetlands are avoided. However, the Proposed Project would require construction activities and temporary discharge of fill into a seasonal wetland at Cathodic Protection Station RR 606+00 (Figure 3.4-2). The wetland at this site is likely under the jurisdiction of the U.S. Army Corps of Engineers (USACE), North Coast Regional Water Quality Control Board (Regional Board), and CDFW.

The majority of construction activities at Proposed Project Station RR 606+00 would occur in pavement and upland areas (Figure 3.4-2). However, trenching would be required that would cross a seven-foot-wide roadside ditch, which is a seasonal wetland dominated by ruderal vegetation. The trenching work area is 0.003 acre and would temporarily disturb the roadside ditch wetland. After construction is complete the ditch would be recontoured to preexisting conditions. Potential impacts to jurisdictional wetlands would be reduced to less-than-significant with incorporation of Mitigation Measure BIO-5 (Wetlands, Waters, and Riparian Habitat) described below. This potential impact would be less than significant with mitigation.

Vegetation work would be performed in wetland and riparian areas at the Laguna and Penngrove vegetation maintenance sites. Proposed Project activities include thinning of understory vegetation and minor pruning of trees to maintain access to appurtenances on the site. No trees would be removed and trimming of branches would be minimal. No ground disturbing or discharge activities would occur, and no vehicles would be allowed within seasonal wetlands during Proposed Project activities. Vegetation maintenance activities would take place within riparian areas at these sites and would be subject to Section 1602 of the California Fish and Game Code and may require a Lake and Streambed Alteration Agreement through CDFW. This potential impact to riparian areas would be reduced to less-than-significant with incorporation of Mitigation Measure BIO-5 (Wetlands, Waters, and Riparian Habitat) described below. This potential impact would be less than significant with mitigation.

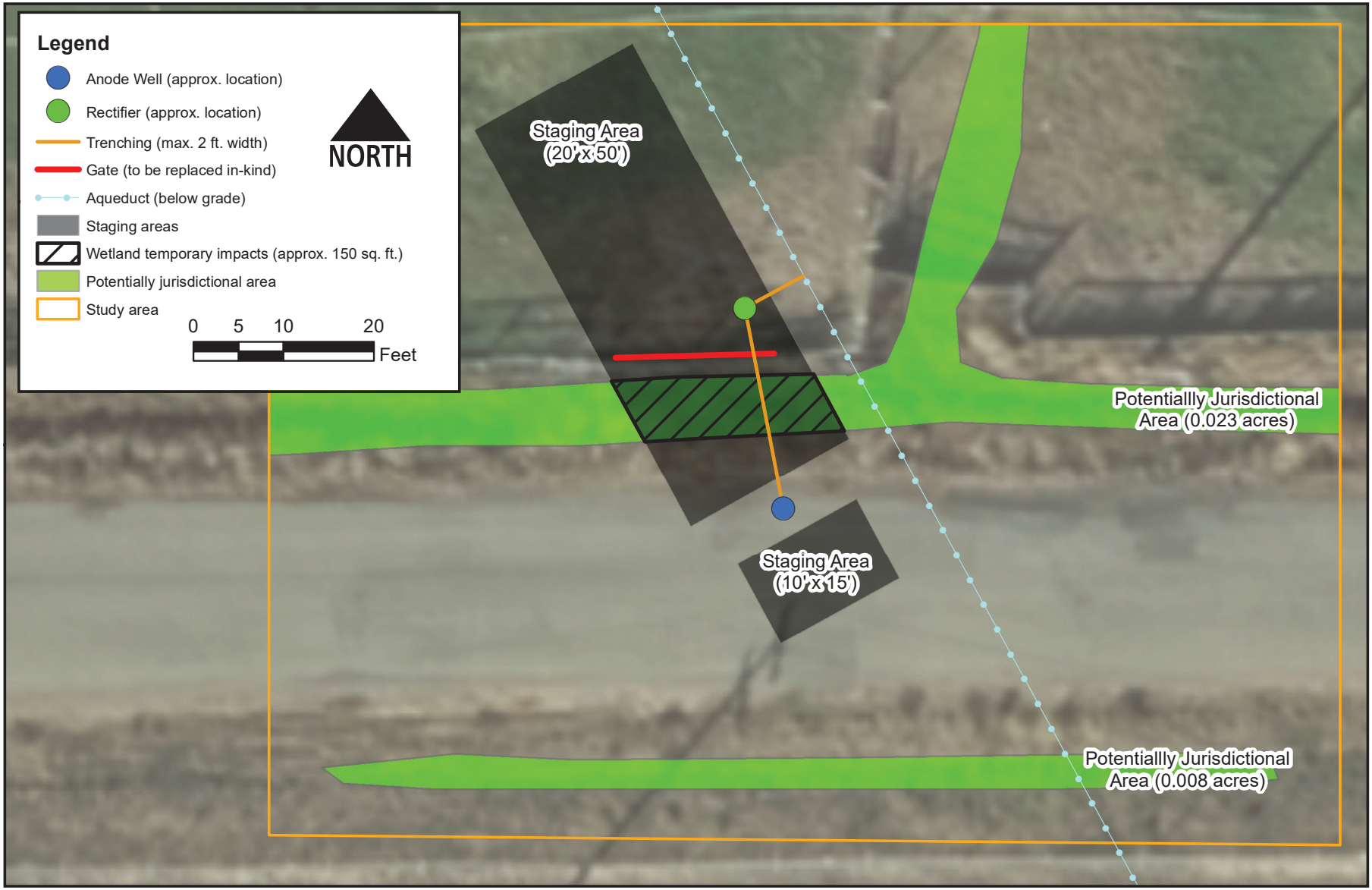


Figure 3.4-2. Cathodic Protection Station RR 606+00 Construction activities and temporary impacts within potentially jurisdictional areas.

DISCLAIMER
This map document and associated data are distributed for informational purposes only "AS-IS" at the published scale and provided without warranty of any kind, expressed or implied. The positional accuracy of the data is approximate and not intended to represent survey map accuracy. The Sonoma County Water Agency assumes no responsibility arising from the use of this information.

Sonoma Water

Discharge and fill material associated with the Proposed Project are not anticipated to result in any net loss of wetlands under the jurisdiction of USACE, Regional Board, or CDFW; however, temporary disturbance to a small area of wetlands would occur during construction. The Proposed Project's impact on wetlands and riparian habitat at Cathodic Protection Station RR 606+00, Laguna Vegetation Maintenance, and Penngrove Vegetation Maintenance sites would be less than significant with incorporation of the mitigation measures listed below. Several measures to avoid and minimize disturbance to state or federally-protected wetlands are incorporated into the Proposed Project, including Mitigation Measures BIO-1 (Worker Awareness Training), BIO-2 (Protective Measures for Sebastopol meadowfoam), BIO-3 (Compensate for Impacts to CTS Habitat), BIO-4 (Protective Measures for Nesting Birds), and GEO-1 (Erosion and Sedimentation). Also, compliance with regulatory agency permit and agreement requirements as described in Mitigation Measure BIO-5 (Wetlands, Waters, and Riparian Habitat) would further reduce potential impacts from the Proposed Project to wetlands and riparian habitats to a less-than-significant level with mitigation incorporated. The following mitigation measure would reduce impacts from construction activities on wetlands and other protected waters to less than significant with mitigation incorporated.

Mitigation Measure BIO-5: Avoid, minimize, or compensate for impacts to jurisdictional wetlands, other protected waters, and riparian habitat.

1. Construction activities resulting in the introduction of fill or other disturbance to jurisdictional wetlands and other protected waters may require a permit from the US Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act (CWA), a Water Quality Certification from North Coast Regional Water Quality Control Board (NCRWQCB) pursuant to Section 401 of the CWA, and California Department of Fish and Wildlife (CDFW) has jurisdiction over streams and may require a Streambed Alteration Agreement (SAA) 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, which would likely include, but not necessarily limited to, the measures listed below:
    a. Delineate all jurisdictional wetlands and other protected waters in the Proposed Project area according to USACE protocol.
    b. Where soil removal is necessary in a wetland or drainage, the top 12 inches of soil will be stockpiled to maintain an onsite seed source. After excavation is complete, the stockpiled material will be returned and recontoured to the original topography. Supplemental native wetland seed mix will be applied, as needed.
    c. To account for temporal and permanent disturbance to wetland function, wetland habitat enhancement will be conducted on- or off-site.

Enhancement will include one or more of the following: increasing native plant species abundance within the area impacted, managing invasive plants, installing native wetland vegetation on or offsite, and/or acquiring credit from an approved wetland mitigation bank. The appropriate mitigation ratio shall be negotiated with the USACE and NCRWQCB and shall be no less than 1:1. The enhancement effort shall require implementation of a five-year monitoring program with applicable performance standards negotiated with the resource agencies, which will include criteria such as establishing 80 percent survival rate of restoration plantings, increase in vegetative cover by native plant species, and a self-sustaining habitat condition.

d) ***Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? - Less than Significant Impact***

The Proposed Project would not interfere substantially with the movement of any native resident or migratory fish and wildlife species. Work would not occur within stream habitat, and no structures that could impede the movement of fish and wildlife in either aquatic or terrestrial habitats would be constructed. Proposed Project sites and aboveground infrastructure installed as part of the Proposed Project are very small in size and would not create a barrier or otherwise impede the movement of animals. Therefore, the Proposed Project would have a less-than-significant impact on the movement of fish or wildlife species, established wildlife corridors, and use of nursery sites.

e) ***Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? - No Impact***

As discussed in Section 3.5b, Proposed Project activities would not conflict with any local policies or ordinances. Trees are not anticipated to be removed during Proposed Project activities. Because Proposed Project activities would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, no impact is anticipated.

f) ***Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local regional, or state habitat conservation plan? - No Impact***

Portions of the Proposed Project areas are within the Santa Rosa Plain Conservation Strategy (USFWS, 2005), which stipulates that “discretionary projects permitted or undertaken by local and state government agencies must be reviewed under CEQA,” which “requires that all significant environmental impacts (including impacts to endangered

species and wetlands) be mitigated to the extent feasible." Regulatory requirements described in the Strategy Plan were addressed in Section 3.5b. By performing impact analysis in accordance with CEQA, applying for required permits with regulatory agencies (Mitigation Measure BIO-5: Wetlands, Waters, and Riparian Habitat) and implementing measures required by regulatory agencies, the Proposed Project would not conflict with the provisions of the Strategy Plan, and therefore would not result in any conflict with conservation plans and no impact is anticipated.

Section 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 CEQA Guidelines §15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

Cultural Resources Setting

The cultural resources setting is provided along with relevant regulatory background, summary of surveys conducted, and their applicability to the Proposed Project.

Cultural resources discussed in this section include archaeological resources, which may be historical resources or unique archaeological resources. Historical resources and unique archaeological resources are defined below under the California Environmental Quality Act section.

Regional Cultural History

Prehistoric Setting

Archaeological evidence indicates that human occupation of California began at least 11,000 years ago. Early occupants appear to have had an economy based largely on hunting, with limited exchange, and social structures based on the extended family unit. Later, milling technology and an inferred acorn economy were introduced. This diversification of economy appears to be coeval with the development of sedentism and population growth and expansion. 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, obsidian tool stone), which are possible indicators of both status and increasingly complex exchange systems (Tom Origer & Associates, 2019).

Ethnographic Setting

At the time of European settlement, the study area was included in the territory of the Southern Pomo. The Pomo were hunter-gatherers who lived in rich environments that allowed for dense populations with complex social structures. They settled in large,

permanent villages about which were distributed seasonal camps and task-specific sites. Primary village sites were occupied continually throughout the year and other sites were visited in order to procure particular resources that were especially abundant or available only during certain seasons. Sites often were situated near sources of fresh water and in ecotones where plant life and animal life were diverse and abundant.

Historic Setting

Historically, the study area is within the bounds of the Rancho San Miguel (west) and Rancho El Molino. Rancho El Molino, a 10.5 league land grant, was made to John Bautista Roger Cooper in 1836, of which 17,892 acres was patented to him in 1858. Rancho San Miguel consisted on 1.5 leagues granted in 1849 and 1844 to William Mark West. Approximately 6,663 acres were patented in 1865 to West's heirs (Tom Origer & Associates, 2019).

Results of Research and Surveys

Tom Origer and Associates (Consultant) conducted archival records searches and site visits for the Proposed Project locations from 2017 through 2019 and submitted summaries of the results and recommendations in a report dated October 30, 2019, and revised November 14, 2019. Most sites had been previously studied. Those sites that hadn't been previously studied were surveyed (Tom Origer & Associates, 2018) (Tom Origer & Associates, 2019). Results of these studies are provided in more detail in the Cultural Resources analysis.

Native American Outreach

Assembly Bill 52 (AB52) tribal consultation was initiated with seven Native American tribes that are known to have traditional lands or cultural places located within the boundaries of the Proposed Project. Sonoma Water previously received formal requests for AB52 notifications from Middletown Rancheria, Lytton Rancheria, and the Federated Indians of Graton Rancheria (FIGR) for projects subject to CEQA. In addition, Sonoma Water staff submitted a letter of request to the Native American Heritage Commission (NAHC) on February 2, 2018, for a list of tribes to consult about potential tribal cultural resources in the locations included in the Proposed Project. The NAHC provided the requested consultation list on February 15, 2018. AB52 consultation initiation letters were sent on February 16, 2018, to the tribes identified on the NAHC consultation list, including Middletown Rancheria, Lytton Rancheria, and FIGR. After an undelivered letter to the Mishewal-Wappo was returned to Sonoma Water, staff sent a follow-up email to Scott Gabaldon on April 9, 2018.

Responses were received from four of the seven tribes contacted. Lytton Rancheria and Stewarts Point Rancheria Kashia Band of Pomo responded that no further consultation was required. Middletown Rancheria responded that they had no comments at that time

but would like to be contacted in the case of accidental discovery. The FIGR requested further consultation and additional information. Sonoma Water staff provided the FIGR with the requested information on February 26, 2020.

Sonoma Water staff also requested information from FIGR, if available, for any Tribal Cultural Resources that should be considered in preparation of the CEQA document. Tribal Cultural Resources are discussed in Section 3.18.

Cultural Resource Studies

Cultural resources studies were conducted by Tom Origer & Associates (Consultant) for all 85 proposed locations for components included in the Proposed Project. This includes 47 locations along the Santa Rosa Aqueduct, 33 locations along the Russian River to Cotati Aqueduct, and four vegetation maintenance locations. Studies and archival records searches for the Proposed Project are compiled and summarized in a single report dated October 30, 2019, and revised November 14, 2019.[2] The studies included archival records searches at the Northwest Information Center, Sonoma State University; examination of the library and files of Tom Origer & Associates; and field inspection of the study areas.

All Proposed Cathodic Protection, Test Station, and Vegetation Maintenance locations had been previously studied except for seven locations. Six of these Proposed Project locations would include ground-disturbing activities as part of the Proposed Project and, therefore, were surveyed by Consultant. No archaeological sites or site indicators were observed during field surveys. Site indicators would include: obsidian and chert flakes; chipped stone tools; grinding and mashing implements (e.g., slabs and handstones or mortars and pestles); bedrock outcrops and boulders with mortar cups; and locally darkened midden[3] soils (Tom Origer & Associates, 2018). Project activities proposed on the seventh, previously unstudied location would include vegetation maintenance only and would not include ground-disturbing activities onsite. Therefore, this site was not surveyed and no additional study was recommended (Tom Origer & Associates, 2019).

The archival records searches identified no known cultural resources sites within the Proposed Project areas for the Cathodic Protection and Test Station locations. The archival records searches found that one of the four proposed vegetation maintenance locations may overlap historic-period resources. However, project-related activities at this location would not include ground disturbance and no pedestrian surveys were

[2] The report "Archival Study and Cultural Resources Survey of Selected Locations of the Proposed Santa Rosa Aqueduct and Cotati Aqueduct Cathodic Protection Project: Sonoma County, California" dated October 30, 2019, revised November 14, 2019, is not available to the public to protect potential cultural resources, consistent with California Public Resources Code §5097.9.

[3] Midden soils may contain bone and shell remains and fire-affected stones in addition to the site indicators listed above.

recommended or conducted. No additional study was recommended for this site. Archival records searches revealed known resources within 500 feet of 17 of the 85 Proposed Project locations, including Cathodic Protection Stations, Test Stations, and Vegetation Management locations (Tom Origer & Associates, 2019).

Table 3.5-1. Cultural Resources Study Results Summary

	Proposed Project Locations Studied[4]	Proposed Project Locations Not Previously Studied	Previously Unstudied Proposed Project Locations with Pedestrian Surveys Completed[5]	Proposed Project Locations with Known Resources within 500 feet	Proposed Project Locations with Potential Cultural Resources within Project Footprint
Proposed Project Locations	85	7	6	17	1
Additional Details	-	-	-	-	Historic era, no ground disturbance, therefore no further study recommended

As described in Table 3.5-2 below, the Consultant estimated the likelihood of inadvertently encountering previously unknown buried deposits at each Proposed Cathodic Protection Station and Test Station location. These estimates are based on landform age, distance to water, slope, and archaeological data for each location. The probability of identifying buried resources was highest (5-20 percent) in ten locations, high (3-5 percent) in 16 locations, moderate (2-3 percent) in 24 locations, low (1-2 percent) in five locations, and lowest (0-1 percent) in 25 locations. Vegetation Maintenance locations are not included in these estimates because the Proposed Project is unlikely to disturb buried resources as no ground-disturbing activities are proposed.

No prehistoric or historic resources have been recorded at any of the Proposed Project locations that include ground-disturbing activities.

No ground disturbing activities are proposed within Caltrans property.

[4] Includes Cathodic Protection Stations, Test Stations, and vegetation management sites. Several additional sites were included in the archival searches but are no longer part of the Proposed Project are omitted here.

[5] Pedestrian surveys were completed at all previously unstudied locations, except for one location where no ground disturbance would occur. One additional site was surveyed but is no longer part of the Proposed Project and is omitted here.

Table 3.5-2. Estimated Likelihood for Encountering Buried Prehistoric Archaeological Resources at Proposed Cathodic Protection Station and Test Station Locations

	Proposed Cathodic Protection and Test Station Locations	Locations with Highest Likelihood	Locations with High Likelihood	Locations with Moderate Likelihood	Locations with Low Likelihood	Locations with Lowest Likelihood
Total Number of Locations	81	10	16	25	5	25

Lowest: 0-1 percent; Low 1-2 percent; Moderate: 2-3 percent; High: 3-5 percent; Highest: 5-20 percent. Totals include include Cathodic Protection Stations and Test Stations.

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 CEQA Guidelines §15064.5? - Less than Significant Impact with Mitigation***

b) ***Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064.5? - Less than Significant Impact with Mitigation***

a) and b) The archival records searches identified no known historical or archaeological resources sites within the Proposed Cathodic Protection Station and Test Station locations.

Historic-period refuse deposits could overlap one of the vegetation maintenance sites but no ground disturbance would occur at vegetation maintenance sites, therefore no impact is anticipated at vegetation maintenance locations and they are omitted from the analysis below.

While no resources have been recorded at any of the Proposed Cathodic Protection Station or Test Station locations, there is potential to uncover previously unidentified historical or archaeological resources during ground disturbance throughout the Proposed Project area and, in particular, in locations ranked “high” and “highest” in the cultural resources studies. As discussed above, the Consultant estimated the likelihood of inadvertently encountering previously unknown buried deposits at each Proposed Cathodic Protection Station and Test Station location. These estimates are based on landform age, distance to water, slope, and archaeological data for each location. The probability of identifying buried resources was highest (5-20 percent) in ten locations, high

(3-5 percent) in 16 locations, moderate (2-3 percent) in 24 locations, low (1-2 percent) in five locations, and lowest (0-1 percent) in 25 locations. In addition to these locations, consultation with FIGR revealed other sites that have an elevated probability of finding resources. The disturbance or damage of previously unidentified historical or archaeological resources would be a potentially significant impact. Implementation of Mitigation Measure CUL-1 (Tribal Monitor and Archaeologist During Ground-disturbing Activities) and Mitigation Measure CUL-2 (Inadvertent Discovery of Historical or Archaeological Resources) would minimize the potential for construction or maintenance activities related to the Proposed Project to adversely affect historical or archaeological resources by halting work within 50 feet of an unanticipated find, consulting with a qualified archaeologist and Native American representative, and implementing data recovery or preservation procedures, which would reduce the impact to less than significant. If the resource is determined to be a significant resource that is either a historical resource 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: Tribal Monitor and Archaeologist During Ground-disturbing Activities

During ground-disturbing construction activities at sites determined by either a qualified archaeologist or a culturally-affiliated tribe to have an elevated sensitivity to uncover previously unidentified historical or archaeological resources, a qualified archaeologist and representative from a culturally-affiliated tribe shall be present to monitor ground-disturbing activities.

Mitigation Measure CUL-2: Inadvertent Discovery of Historical or 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 CFR Parts 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 Tribe 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, archaeological, 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 historical or archaeological materials occurs 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 Parts 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 historical or 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 appropriate 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.

c) Disturb any human remains, including those interred outside of formal cemeteries? - Less than Significant Impact with Mitigation

No known historical or archaeological resources are located within the boundaries of proposed project sites that include ground disturbance 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. Implementation of Mitigation Measure CUL-3 (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.

Mitigation Measure CUL-3: Inadvertent Discovery of Human Remains

The project specifications will 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. If the coroner determines the remains are Native American, the coroner will contact the Native American Heritage Commission. As provided in Public Resources Code Section 5097.98, the Native American Heritage Commission will identify the person or persons believed to be most likely descended from the deceased Native American. The Most Likely Descendent (MLD) makes recommendations for means of treating the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98. Work shall cease in the immediate area until the recommendations of the appropriate MLD are concluded.

Section 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

California Energy Commission

The California Energy Commission (CEC) oversees rules and regulations related to California's energy uses and needs. Rules and regulations have been established for appliance efficiency and building energy efficiency. Additionally, the CEC oversees the Renewables Portfolio Standard (RPS), a program that sets energy procurement requirements for the state's energy providers (California Energy Commission, 2020).

Electricity providers in the Proposed Project area include Pacific Gas & Electricity and Sonoma Clean Power.

Pacific Gas & Electricity

The Pacific Gas and Electric Company (PG&E) is an American investor-owned utility headquartered in San Francisco, California. PG&E provides natural gas and electricity to much of northern California including much of the Proposed Project area (Pacific Gas and Electric, 2020).

County of Sonoma Renewable Energy Policies

In 2013, the County of Sonoma adopted its Renewable Energy Ordinance (Ordinance No. 6046) to implement changes to the Zoning Code that make it easier to construct and use renewable energy facilities throughout the county. These changes include a Renewable Energy Combining Zone to identify, designate and protect areas suitable for the development of large-scale renewable energy facilities (County of Sonoma, 2020).

Sonoma Clean Power

In 2011, the Sonoma Water Board of Directors directed Sonoma Water to investigate forming a community power program in response to Sonoma County's desire for lower rates and cleaner power. In 2012, a Joint Powers Authority was approved by the Board, and Sonoma Clean Power (SCP) was launched. Since then, SCP has become the default

electricity provider for Sonoma County residents and businesses providing locally controlled electricity and the option of using environmentally friendly power generated by renewable sources at competitive rates.

Sonoma Water Energy Policy and "Carbon-free Water" Campaign

The Board of Directors adopted the Sonoma Water's Energy Policy in March 2011, which sets the guidelines for the Sonoma Water's energy-related projects and innovations and lays the groundwork for a comprehensive program of water-use efficiency, system efficiency, and development and purchase of renewable energy sources. Carbon-free water was achieved by Sonoma Water in 2015.

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***

Construction and maintenance of the Proposed Project would be within the scale of similar types of utility projects and would incorporate Mitigation Measure AIR-1 (Dust Management, Exhaust Control and Air Quality Protection) related to construction and maintenance activities to reduce fuel consumption by equipment and vehicles and minimize impacts to less than significant. Provisions in Mitigation Measure AIR-1 will be defined in project plans and specifications, and are described in Chapter 2, "Project Description". Operation of the Proposed Project would require the consumption of minor amounts of electricity but would not be a substantial change to the existing levels. Electricity for operation of the Test Stations and Cathodic Protection Stations would be acquired from the electrical grid in most cases and from solar installations at two locations. For these reasons, the Proposed Project would not result in wasteful, inefficient, or unnecessary consumption of energy resources during project construction, operation, or maintenance and the impact would be less than significant.

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

The construction, operation, and maintenance of the Proposed Project would not have the potential to conflict with or obstruct a state or local plan for renewable energy or energy efficiency because there would not be a substantial increase in energy use above existing levels, would not conflict with Renewable Energy zoning, and because the Proposed Project incorporates installation of solar panels at two locations. No impact is anticipated.

Section 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 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?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	☐	☒	☐	☐

Geology and Soils Setting

The Proposed Project area lies within the northeastern portion of the Cotati Valley and the Santa Rosa Plain. Topography of the Proposed Project area topography is relatively flat ranging in elevation from approximately 65 to 250 feet above mean sea level and slopes gently westward. Sonoma Volcanics, Petaluma Formation, and alluvial deposits underlie much of the area (City of Santa Rosa, 2009).

The Proposed Project is located within the seismically active North Bay/North Coast Area of California. The seismic environment in Northern California and the San Francisco Bay Area is characterized by the San Andreas Fault Zone, which formed due to major forces occurring at the boundary of shifting tectonic plates. This fault zone, and its northwest-trending folds and faults, control much of the geologic structure within the northern Coast Ranges. The major faults in the region include the San Andreas, Hayward-Rodgers Creek, Maacama-Garberville, Calaveras, and Green Valley faults (California Division of Mines and Geology, 1980).

Regional Geology

The Proposed Project area is located within the Coast Ranges geomorphic province,[6] which extends from the Pacific Ocean eastward to the Great Valley (Sacramento and San Joaquin valleys) and from the Oregon border southward to the Santa Ynez Mountains near Santa Barbara. The Coast Ranges province is generally characterized by northwest-trending mountain ranges, running roughly parallel to the San Andreas Fault Zone, composed of volcanic rocks and intervening valleys of relatively thick marine sediments. The Northern Coast Ranges are located north of San Francisco Bay and are largely composed of the Franciscan Complex (or Assemblage) which includes greywacke, shale, greenstone, basalt, chert, and sandstone that were ancient sea floor sediments. Franciscan rocks are overlain by volcanic cones and flows of the Quien Sabe, Sonoma and Clear Lake volcanic fields (California Division of Mines and Geology, 1980).

Local Geology

The Proposed Project area lies within the northeastern portion of the Cotati Valley and the Santa Rosa Plain. Topography of the Proposed Project area is relatively flat, ranging in elevation from approximately 65 to 250 feet above mean sea level, and slopes gently westward.

Sonoma Volcanics, Petaluma Formation, and alluvial deposits underlie much of the area. The Sonoma Volcanics formed during volcanic activity approximately 3 to 6 million years ago and are generally found in hilly upland areas. The Petaluma Formation formed at approximately the same time and consists of claystones, siltstones, and mudstones formed from the deposition of eroded materials in upland areas. The alluvial deposits include the Huichica Formation and the Glen Ellen Formation. While the Huichica Formation is more recent, both consist of gravels, silt, sands, and clays. Alluvial fan deposits have been deposited on top of these formations (City of Santa Rosa, 2009).

[6] A geologic province is a region with similar bedrock, structure, history, and age. California contains 11 geologic provinces.

Faults and Seismicity

The Proposed Project is located within the seismically active North Bay/North Coast Area of California. The seismic environment in Northern California and the San Francisco Bay Area is characterized by the San Andreas fault zone, which formed due to major forces occurring at the boundary of shifting tectonic plates. This fault zone, and its northwest-trending folds and faults, control much of the geologic structure within the northern Coast Ranges. The major faults in the region include the San Andreas, Hayward-Rodgers Creek, Maacama-Garberville, Calaveras, and Green Valley faults (California Division of Mines and Geology, 1980).

The nearest known active fault is the Hayward-Rodgers Creek Fault, which extends northwest through Santa Rosa and is estimated to have a 33 percent chance of a M>=6.7 earthquake on the combined Rodgers Creek-Hayward fault system over the 30-year period from 2014 to 2043 (U.S. Geological Survey, 2018). The Santa Rosa Aqueduct crosses the Hayward-Rodgers Creek fault zone at approximately Sonoma Avenue and Talbot Avenue, but no components of the Proposed Project would be installed within the fault zone. The Proposed Project is, therefore, not located within an Earthquake Fault Zone as defined by the 2010 California Geological Survey in accordance with the Alquist–Priolo Earthquake Fault Zone Act of 1972 (California Geological Survey, 2018).

The Proposed Project sites could experience strong ground shaking from major earthquakes generated on the Rodgers Creek fault (approximately 1.5 miles northwest of the Santa Rosa Aqueduct at its closest and 6.5 miles northeast of the Russian River-Cotati Aqueduct at its closest) or the San Andreas fault (located approximately 20 miles west of the Santa Rosa Aqueduct and approximately 15 west of the Russian River to Cotati Aqueduct), the Maacama-Garberville fault (approximately 3 miles and 10 miles northeast of the Santa Rosa and Russian River to Cotati aqueducts, respectively), the West Napa fault (approximately 20 miles southeast of the southern extent of the Santa Rosa and Russian River-Cotati aqueducts), and the Hayward fault (approximately 35 miles and 30 miles south of the Santa Rosa and Russian River to Cotati aqueducts, respectively) (California Geological Survey, 2010b).

A number of large earthquakes have occurred within this region in the historic past. Some of the significant nearby events include the 2000 Napa earthquake (movement magnitude (M) 5.0), two (2) 1969 Santa Rosa earthquakes (M5.6, 5.7), the 2014 Napa earthquake (M6.0) and the 1906 San Francisco earthquake (M8+). Future seismic events in this region can be expected to produce strong seismic ground shaking at this site. The intensity of future shaking will depend on the distance from the Proposed Project area to the earthquake focus, magnitude of the earthquake and the response of the underlying soil and bedrock (Kleinfelder, 2015).

Paleontological Resources

Paleontological resources are the fossilized evidence of past life found in the geologic record. For the purpose of this document, paleontological resources refer to fossilized plant and animal remains of prehistoric species. Fossils are important scientific and educational resources because of their use in (1) documenting the presence and evolutionary history of particular groups of now-extinct organisms; (2) reconstructing the environments in which these organisms lived; and (3) determining the relative ages of the strata in which they occur, as well as the relative ages of the geologic events that resulted in the deposition of the sediments that formed these strata and in their subsequent deformation.

Paleontological resources are valued for the information they yield about the history of the earth and its past ecological settings. They represent a limited, non-renewable, impact-sensitive scientific and educational resource. Fossil remains such as bones, teeth, shells, and leaves are found in geologic deposits (i.e., rock formations). Paleontological resources, in general, include fossils as well as the collecting localities and the geologic formations that contain those fossils.

Rock formations that are considered of paleontological sensitivity are those rock units that have yielded significant vertebrate or invertebrate fossil remains. This includes, but is not limited to, sedimentary rock units that contain significant paleontological resources anywhere within its geographic extent. The Proposed Project area is primarily underlain by Late Pleistocene-age alluvial deposits. Based on the Society for Vertebrate criteria, Late Pleistocene-age alluvial deposits have the potential to contain significant paleontological resources (Society of Vertebrate Paleontology, 2010). A search of the University of California Museum of Paleontology database was conducted and indicates that the nearest known paleontological resources are located approximately one mile from the project area north of Trenton Road (Tom Origer & Associates, 2018).

State Laws, Regulations, and Policies

Alquist-Priolo Earthquake Fault Zoning Act

The purpose of the Alquist-Priolo Earthquake Fault Zoning Act (1972) is to prevent the construction of buildings used for human occupancy on the surface trace of active faults in order to reduce hazards associated with surface fault rupture. The Alquist-Priolo Act requires the delineation of fault rupture zones along all active faults in California. Cities and counties must regulate certain development projects within the zones, including withholding permits until geologic investigations demonstrate that development sites are not threatened by future surface displacement (Bryant W.A., 2007).

California Building Code

The California Building Code (also known as the California Building Standards Code or Title 24, California Code of Regulations) is assigned to the California Building Standards Commission, which, by law, is responsible for coordinating all building standards (Bolt c1978-1988). The California Building Code incorporates by reference the Uniform Building Code with necessary California amendments. The Uniform Building Code is a widely-adopted model building code in the United States. About one-third of the text within the California Building Code has been tailored for California earthquake conditions (CCR c2013).

California Public Resources Code Section 5097

Section 5097 of the PRC protects paleontological resources and states part that a person shall not knowingly and willfully excavate upon, or remove, destroy, injure or deface any vertebrate paleontological site, or any other paleontological feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

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? - Less than Significant Impact*

There are no active faults or potentially active faults underlying the Proposed Project sites according to California Geologic Survey maps (California Geological Survey, 2018). The Proposed Project is not located within an identified Alquist-Priolo Earthquake Hazard Zone (Calfornia Geological Survey, Revised 2018). However, the nearest known active fault is the Rodgers Creek Fault, which extends northwest through Santa Rosa and crosses the Santa Rosa Aqueduct at approximately Sonoma Avenue and Talbot Avenue. The closest Proposed Project components are Test Station SR 677+00 (outside of, but immediately west of, the mapped Earthquake Zone of Required Investigation) and Cathodic Protection Station SR 713+80 (approximately 0.4 miles east of the mapped Earthquake Zone of Required Investigation) (California Geological Survey, 2018). There is an estimated 33 percent chance of a magnitude 6.7 or

greater earthquake on the combined Hayward-Rodgers Creek fault system over the 30-year period from 2014 to 2043 (U.S. Geological Survey, 2018). Since the Proposed Project is not located within an Alquist-Priolo Earthquake Fault Zone the likelihood of ground rupture from faulting at the Proposed Project sites is low. Furthermore, the proposed project would not include the development of habitable structures and includes seismic design considerations such as the backfill placed in the trenches would be composed of fill materials not susceptible to liquefaction and would be properly compacted. Therefore, any directly or indirectly potential impacts related to the rupture of a known earthquake fault would be less than significant.

ii. ***Strong seismic ground shaking? - Less than Significant Impact***

The Proposed Project sites could experience strong ground shaking from major earthquakes generated on the Rodgers Creek Fault, which crosses the Santa Rosa Aqueduct at approximately Sonoma Avenue and Talbot Avenue and is located approximately 6.5 miles northeast of the Russian River to Cotati Aqueduct at its closest. The Proposed Project area could also experience strong ground shaking from the San Andreas fault (located approximately 20 miles west of the Santa Rosa Aqueduct and approximately 15 west of the Russian River to Cotati Aqueduct), the Maacama-Garberville fault (approximately 3 miles and 10 miles northeast of the Santa Rosa and Russian River to Cotati aqueducts, respectively), the West Napa fault (approximately 20 miles southeast of the southern extent of the Santa Rosa and Russian River to Cotati aqueducts), and the Hayward fault (approximately 35 miles and 30 miles south of the Santa Rosa and Russian River to Cotati aqueducts, respectively) (California Geological Survey, 2010b). According to the Working Group on California Earthquake Probabilities, the 2015 Uniform California Earthquake Rupture Forecast, Version 3 (UCERF3) (Field, E.H., and 2014 Working Group on California Earthquake Probabilities, 2015) there is a 72 percent probability of a magnitude 6.7 or greater earthquake in the Bay Area within 30 years, with the greatest probabilities of earthquakes on the Hayward-Rodgers Creek Fault and the San Andreas Fault, which are two faults close to the Proposed Project sites. The closest Proposed Project components are Test Station SR 677+00 (outside of, but immediately west of, the mapped Earthquake Zone of Required Investigation) and Cathodic Protection Station SR 713+80 (approximately 0.4 miles east of the mapped Earthquake Zone of Required Investigation) (California Geological Survey, 2018). Seismic upgrades to the Santa Rosa Aqueduct were completed in this area in 2014 (Koldis, 2019). The Proposed Project would result in reduced corrosion over time along the Santa Rosa and Russian River

to Cotati aqueducts, thus reducing the risk of damage to the aqueducts during an earthquake.

Ground shaking from earthquakes can cause extensive damage to buildings and other infrastructure. Factors that determine the amount of damage caused by ground shaking are interrelated and include the magnitude and depth of the earthquake, distance from the fault, duration of the shaking, type of bedrock and soils, and topography, among others. The entire Bay Area, including Sonoma County, would be subject to strong ground shaking during earthquakes. The portions of the Proposed Project area with the risk of violent or very violent ground shaking during an earthquake on the Rogers Creek Fault include much of the City of Santa Rosa (City of Santa Rosa, 2009). While strong ground shaking could potentially damage cathodic protection equipment, the equipment, including the subsurface components, would likely remain functional despite damage due to earthquakes and no releases of potable water or harmful materials would result from damage. Additionally, the purpose of the Proposed Project is to prevent corrosion on existing water supply aqueducts, thereby maintaining their structural integrity over time and reducing long-term vulnerability to seismic events.

During construction activities, trenching would be limited but some trenches in very small sections may reach a depth that could potentially pose a hazard to construction workers during strong seismic ground shaking. Precautionary measures would include adherence to state- and federally-mandated safety standards, including federal Occupational Safety and Health Administration (OSHA) regulations (29 CFR 1926) and Cal/OSHA regulations (8 CCR Title 8, Section 1540, Section 5192) that during construction would minimize hazards to construction workers, including those associated with seismic ground shaking.

iii. ***Seismic-related ground failure, including liquefaction? - Less than Significant Impact***

Liquefaction susceptibility varies greatly in the Proposed Project area with the highest risk areas being near waterways such as the Russian River, Laguna de Santa Rosa, and Santa Rosa Creek. Liquefaction can cause extensive damage to buildings and other infrastructure. While liquefaction could potentially damage cathodic protection equipment, the equipment is likely to remain functional despite damage due to earthquakes, including the subsurface components, and no releases of harmful materials would result. As stated above in Criteria VI a) i, the Proposed Project would not include the development of habitable structures and includes seismic design considerations. The purpose of the Proposed Project is to prevent corrosion on existing water supply aqueducts, thereby

maintaining their structural integrity over time and reducing long-term vulnerability to seismic events. Therefore, this potential impact would be less than significant.

iv. *Landslides? - No Impact*

The Proposed Project area does not include steep slopes or mapped areas of landslide potential (City of Santa Rosa, 2009) (County of Sonoma, 2017) therefore, there would be no impact related to landslides.

b) *Result in substantial soil erosion or the loss of topsoil? - Less than Significant Impact with Mitigation*

Surface soil erosion and loss of topsoil could occur from soil disturbance associated with the Proposed Project's ground disturbing construction activities, such as site clearing, open trench and trenchless construction activities. For example, construction at each Proposed Project site would occur in localized areas and amount to only a limited area of soil disturbance within the Proposed Project area. As described in Chapter 2, Project Description, and Mitigation Measure GEO-1 (Erosion and Sedimentation), the Proposed Project would also include trench backfilling and site restoration activities that would restore upland disturbed or exposed areas to their pre-construction conditions, including replacing topsoil that was removed during excavation activities, re-establishing preconstruction contours and drainage patterns, installing erosion and sedimentation controls, and reseeding once construction is complete to stabilize exposed soils, reduce erosion, and quickly revegetate disturbed habitat areas with appropriate native plant species. In addition, because the Proposed Project would disturb more than one acre, the Proposed Project would be required to comply with the State Water Resources Control Board Construction General Permit. The Construction General Permit would require the preparation and implementation of a Stormwater Pollution Prevent Plan that would include measures designed to prevent erosion and control stormwater runoff. These practices and procedures would reduce the risk of erosion and sediment transport outside of the Proposed Project work areas.

These practices and procedures combined with implementation of Mitigation Measure GEO-1 (Erosion and Sedimentation) protect geology and soils by avoiding or minimizing potential adverse impacts during construction and maintenance activities, which minimize impacts to less than significant with mitigation incorporated.

Mitigation Measure GEO-1: Measures to minimize erosion, sedimentation, and discharge to surface and groundwater during construction and maintenance activities

Sonoma Water will require contractors, through project contract specifications, and maintenance staff to implement the following in accordance with Caltrans BMP Manual (Caltrans, 2017) if not otherwise included in the project Storm Water Pollution Prevention Plan (SWPPP):

1. Soil disturbance shall be kept to the minimum footprint necessary to complete the project and existing vegetation should be preserved to the extent feasible.
2. Staging will 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 will be contained within the existing service roads, paved roads, or other pre-determined staging and stockpile areas. Stockpiling of materials, including portable equipment, vehicles and supplies (e.g., chemicals), shall be restricted to the designated construction staging areas.
3. All project-related items, including equipment, stockpiled material, temporary erosion control treatments, and trash, will be removed within 72 hours of project completion.
4. As necessary, to prevent sediment-laden water from being released during transport of spoils to disposal locations, truck beds will 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.
5. No runoff from the staging areas will be allowed to enter waters of the State, including the creeks 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 on-site 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.
6. During the dry season (April 15 to October 15), if stockpiled soils will remain exposed and unworked for more than 7 days then erosion control measures will be utilized. During the wet season (October 16 to April 14), no stockpiled soils will remain exposed, unless surrounded by properly installed and maintained silt fencing or other means of erosion control.
7. When ground disturbing activities occur during the wet season, work will avoid significant rainfall events. Significant rainfall is defined as 0.1 inch of rain in a 24-hour period. Work will resume when conditions allow and as specified in the SWPPP and Construction General Permit for the Proposed Project.
8. In anticipation of the first significant rainfall event, exposed soils will be stabilized according to requirements of the SWPPP and Construction General Permit.
9. Following completion of construction or maintenance activities, upland soils should be seeded and stabilized using erosion control fabric, straw, and/or

hydroseeding using California certified weed free native seeds appropriate for the site.

10. Erosion control fabrics shall consist of natural fibers that will biodegrade over time. No plastic or other non-porous material will be used as part of a permanent erosion control approach. Plastic sheeting may be used to temporarily protect a slope from runoff.
11. Erosion control measures shall be installed according to manufacturer's specifications.
12. Appropriate measures include, but are not limited to, the following (measures utilized would be implemented in accordance with the Caltrans BMP Manual (Caltrans, 2017)):
    a. Silt fences
    b. Straw bale barriers
    c. Brush or rock filters
    d. Storm drain inlet protection
    e. Sediment traps
    f. Sediment basins
    g. Erosion control blankets and mats
    h. Straw wattles
    i. Soil stabilization (i.e., tackified straw with native seed, jute or geotextile blankets, broadcast and hydroseeding, etc.)
13. All temporary construction-related erosion control methods (e.g., silt fences) shall be removed at the completion of construction, or as directed by a qualified erosion control specialist.

The potential for impacts related to soil erosion and loss of top soil would be reduced to less than significant with implementation of Mitigation Measure GEO-1 (Erosion and Sedimentation). This impact would be less than significant with mitigation.

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

Because the Proposed Project area is relatively flat, potential for landslides are considered low. The Proposed Project area does not include steep slopes or mapped areas of landslide potential (City of Santa Rosa, 2009). The potential for liquefaction and lateral spreading was previously discussed in Criteria VI a) iii) and would be less than significant. Finally, backfill placed in trenches would be properly compacted to reduce the risk of settlement or collapse. Therefore, the impacts from unstable geologic units or soil would be less than significant.

d) ***Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? - Less than Significant Impact***

Expansive soil, or soil with a high shrink-swell potential, is influenced by the amount and type of clay in the soil. Although some of the native soils underlying the Proposed Project area have expansion or shrink-swell potential, the structures installed as part of the Proposed Project would not be particularly vulnerable to damage from expansion and adherence to standard engineering and construction techniques described above in Criteria VI a) i would further minimize potential effects of expansive soils. Therefore, impacts relative to expansive soils would be less than significant.

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? - No Impact***

No septic tanks or alternative wastewater disposal systems are included in the Proposed Project. Therefore, no impacts would occur.

f) ***Directly or indirectly destroy a unique paleontological resource or site or unique geological feature? - Less than Significant Impact with Mitigation***

The Proposed Project would consist of the installation and maintenance of 31 Cathodic Protection Stations and 49 Test Stations at intervals along the Santa Rosa and Russian River to Cotati aqueducts. The Proposed Project area is primarily underlain by Late Pleistocene-age alluvial deposits. Based on the Society for Vertebrate Paleontology criteria, Late Pleistocene-age alluvial deposits have the potential to contain significant paleontological resources (Society of Vertebrate Paleontology, 2010). A search of the University of California Museum of Paleontology database was conducted and indicates that the nearest known paleontological resources are located approximately one mile from the project area north of Trenton Road (Tom Origer & Associates, 2018). As with archaeological remains, paleontological resources may be buried with no surface manifestation. The accidental discovery of significant paleontological resources that could be destroyed as a result of construction of the proposed project would be considered a significant impact. Should previously undiscovered paleontological resources be found, implementation of Mitigation Measure GEO-2 would reduce impacts to a less-than-significant level by immediately halting work if materials are discovered, evaluating the significance of the find, and implementing appropriate mitigation measures, as necessary. The direct or indirect impact related to accidental uncovering of paleontological resources or site or unique geological feature would be less than significant with mitigation.

Mitigation Measure GEO-2: Stop work if paleontological resources are discovered during project activities, evaluate all identified resources for eligibility for inclusion in the California Register of Historical Resources, and implement appropriate mitigation measures for eligible resources.

Prior to initiation of ground-disturbing activities, Sonoma Water shall arrange for construction crews to receive training about the kinds of paleontological materials that could be present at the project site and the protocols to be followed should any such materials be uncovered during construction or maintenance activities. Training shall be conducted by a professional paleontologist meeting the professional standards established by the Society of Vertebrate Paleontology (Society of Vertebrate Paleontology, 2010). Training may be required during different phases of construction to educate new construction personnel.

Paleontological resources include fossil remains, as well as fossil localities and rock or soil formations that have produced fossil material. Fossils are the remains or traces of prehistoric animals and plants. Fossils are important scientific and educational resources because of their use in (1) documenting the presence and evolutionary history of particular groups of now-extinct organisms; (2) reconstructing the environments in which these organisms lived; and (3) determining the relative ages of the strata in which they occur, as well as the relative ages of the geologic events that resulted in the deposition of the sediments that formed these strata and in their subsequent deformation.

If any items of paleontological interest are encountered, all soil-disturbing work in that area and within 100 feet of the find shall be halted until a qualified paleontologist meeting the professional standards established by the Society of Vertebrate Paleontology (Society of Vertebrate Paleontology, 2010) evaluates the site.

If it is determined by the qualified paleontologist that the proposed project could damage a unique paleontological resource, as defined in the CEQA Guidelines, mitigation shall be implemented in accordance with PRC § 21083.2 and § 15126.4 of the CEQA Guidelines. If avoidance is not feasible, the paleontologist shall develop and implement a treatment plan consistent with the methods recommended by the Society of Vertebrate Paleontology (Society of Vertebrate Paleontology, 2010). Work shall not be resumed until recommendations received from the qualified paleontologist are implemented.

Section 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 greenhouse gas emissions setting is provided along with relevant regulatory background and guidelines, and their applicability to the Proposed Project.

Certain gases in the atmosphere naturally trap heat by impeding the exit of solar radiation that has hit the earth and is reflected back into space. This is sometimes referred to as the "greenhouse effect" and the gases that cause it are called "greenhouse gases." Some greenhouse gases (GHG) occur naturally and are necessary for keeping Earth's surface inhabitable. However, increases in the concentrations of these gases in the atmosphere have decreased the amount of solar radiation that is reflected back into space, intensifying the natural greenhouse effect, and resulting in the increase of global average temperature.

Carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6) are the principal GHGs. When concentrations of these gases exceed natural concentrations in the atmosphere, the greenhouse effect may be intensified. CO_2, CH_4, and N_2O occur naturally, and are also generated through human activity. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 primarily results from off-gassing[7] associated with agricultural practices and landfills. CO_2 is the reference gas for climate change because it is the predominant GHG emitted. The effect that each of the aforementioned gases can have on global warming is a combination of the mass of their emissions and their global warming potential (GWP). GWP indicates, on a pound-for-pound basis, how much a gas is predicted to contribute to global warming relative to how much warming would be predicted to be caused by the same mass of CO_2. For example, CH_4 and N_2O are substantially more potent GHGs than CO_2, with GWPs of 21 and 310 times that of CO_2, respectively.

[7] Off-gassing is defined as the release of chemicals under normal conditions of temperature and pressure.

In emissions inventories, GHG emissions are typically reported as metric tons of CO_2 equivalents (CO_2e). CO_2e are calculated as the product of the mass emitted of a given GHG and its specific GWP. While CH_4 and N_2O have much higher GWPs than CO_2, CO_2 is emitted in such vastly higher quantities that it accounts for the majority of CO_2e emissions, both from residential developments and human activity in general.

Regulatory Setting

Federal Regulations

Supreme Court Ruling of Carbon Dioxide as a Pollutant

The U.S. Environmental Protection Agency (EPA) is the federal agency responsible for implementing the federal Clean Air Act (CAA) and its amendments. The Supreme Court of the United States ruled on April 2, 2007, that CO_2 is an air pollutant as defined under the CAA, and that EPA has the authority to regulate emissions of GHGs. The ruling in this case resulted in EPA taking steps to regulate GHG emissions and lent support for state and local agencies' efforts to reduce GHG emissions.

State

In California, the legal framework for GHG emission reduction has come about through an incremental set of Governors' Executive Orders, legislation, and regulations put in place since 2002. The major components of California's climate change initiative are reviewed below.

Executive Order S-3-05

Executive Order S-3-05, signed by Governor Arnold Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra Nevada snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the Executive Order established total GHG emission targets for the state. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

Assembly Bill (AB) 32 California Climate Change Scoping Plan

Assembly Bill 32 Requirements

In 2006, the California legislature passed Assembly Bill 32 (California Health and Safety Code Division 25.5, Sections 38500, et seq., or AB 32), also known as the Global Warming Solutions Act. AB 32 requires the California Air Resource Board (CARB) to design and implement feasible and cost-effective emissions limits, regulations, and other measures, such that statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25-percent reduction in emissions). AB 32 anticipates that the GHG

reduction goals will be met, in part, through local government actions. The CARB has identified a GHG reduction target of 15 percent from current levels for local governments (municipal and community-wide) and notes that successful implementation of the plan relies on local governments' land use planning and urban growth decisions because local governments have primary authority to plan, zone, approve, and permit land development to accommodate population growth and the changing needs of their jurisdictions.

Scoping Plan Provisions

Pursuant to AB 32, the CARB adopted a *Climate Change Scoping Plan* in December 2008 (re-approved by CARB on August 24, 2011) outlining measures to meet the 2020 GHG reduction goals. In order to meet these goals, California must reduce its GHG emissions by 30 percent below projected 2020 business-as-usual emissions levels or about 15 percent from today's levels. The Scoping Plan recommends measures that are worth studying further, and that the State of California may implement, such as new fuel regulations. It estimates that a reduction of 174 million metric tons of CO_2e (about 191 million U.S. tons) from the transportation, energy, agriculture, forestry, and other sources could be achieved should the state implement all of the measures in the Scoping Plan. The Scoping Plan relies on the requirements of Senate Bill (SB) 375 to implement the carbon emission reductions anticipated from land use decisions (California Air Resources Board, 2008, re-approved 2011).

In May 2014, CARB published its First Update to the Scoping Plan. This update builds upon the initial Scoping Plan with new strategies and recommendations. The update defines CARB's climate change priorities over the next five years and sets the groundwork to reach long-term goals set forth in Executive Orders S-3-05 (California Air Resources Board, 2014).

California's 2017 Climate Change Scoping Plan (2017 Scoping Plan) outlines the main strategies California will implement to achieve the legislated GHG emission target for 2030 and "substantially advance toward our 2050 climate goals." It identified the reductions needed by each GHG emissions sector (e.g., transportation, industry, agriculture, etc.) (California Air Resources Board, 2017).

Executive Order B-30-15

On April 20, 2015, Governor Edmund G. Brown, Jr., signed Executive Order B-30-15 to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The Governor's executive order aligns California's GHG reduction targets with those of leading international governments such as the 28-nation European Union, which adopted the same target in October 2014. California met its legislated target of reducing GHG emissions to 1990 levels by 2020, as established in the California Global Warming Solutions Act of 2006 (AB 32, summarized above) (CARB, 2020).

Senate Bill 32

In 2016, Senate Bill (SB) 32 codified the Executive Order B-30-15 target of 40 percent reduction below 1990 levels by 2030 and directed State regulatory agencies to develop rules and regulations to meet the 2030 State target.

Executive Order B-55-18

In 2018, Governor Edmund G. Brown, Jr., signed Executive Order B-55-18, which establishes the goal of achieving statewide carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter (CARB, 2021).

Regional and Local Regulations

Northern Sonoma County Air Pollution Control District

The Northern Sonoma County Air Pollution Control District recommends reliance on thresholds developed by the Bay Area Air Quality Management District (BAAQMD) (DePrimo, Personal Communication, 2019).

Bay Area Air Quality Management District

The BAAQMD's *CEQA Air Quality Guidelines* were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area (Bay Area Air Quality Management District, 2017). The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process and include recommended thresholds of significance, mitigation measures, and background air quality information. BAAQMD has identified screening criteria and significance criteria for development projects that would be applicable to the Project. If a project exceeds the Guidelines' GHG screening-level sizes, the project would be required to conduct a full GHG analysis using the following BAAQMD significance criteria:

1. Compliance with a Qualified GHG Reduction Strategy; or
2. 1,100 metric tons of CO_{2e} per year; or
3. 4.6 metric tons of CO_{2e} per service population

BAAQMD does not have thresholds of significance for construction-related GHG emissions, but requires quantification and disclosure of construction-related GHG emissions. GHG emissions from construction activities are short term. One-time, short-term emissions can be converted to average annual emissions by mathematically distributing them over the service life of the project.

The BAAQMD's 2017 Clean Air Plan contains 35 control measures aimed at reducing GHG emissions in the Bay Area and meeting the State of California's adopted targets of reducing emissions 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050. Two GHG measures applicable to water and wastewater: WR1 (Limit

GHGs from POTWs [Publicly-Owned Treatment Works]) and WR2 (Support Water Conservation).

Sonoma County Climate Action 2020 and Beyond

The Sonoma County Regional Climate Action Plan: Climate Action 2020 and Beyond (RCAP) provides an overall strategy for reducing GHG emissions in each sector to meet a target of reducing emissions to 25 percent of 1990 levels by 2020 and provides the foundation for long-term success in reducing GHG emissions (Regional Climate Protection Authority, 2016). The Sonoma County Climate Action Plan is a non-binding advisory document.

Sonoma County General Plan 2020

The Sonoma County General Plan 2020 contains goals and policies related to greenhouse gas emissions in the following elements: Land Use, Open Space & Resource Conservation, and Circulation and Transit. However, the majority of goals, policies, and objectives are not relevant to the Proposed Project and are not discussed further with the exception of objective OSRC-14.4 listed below (Sonoma County Permit and Resource Managment Department, 2008, last amended July 10, 2018).

> *OSRC-14.4: Reduce greenhouse gas emissions by 25 percent below 1990 levels by 2015*

City of Santa Rosa General Plan 2035

The City of Santa Rosa General Plan 2035 contains goals and policies related to greenhouse gas emissions in the following chapters: Land Use and Livability, Urban Design, Housing, Transportation, Public Services and Facilities, Open Space and Conservation, Growth Management, Economic Vitality, Historic Preservation, and Noise and Safety. However, these goals and policies, with the exception of OSC-M-1, are not relevant to the Proposed Project and are not discussed further (City of Santa Rosa, 2009).

> *OSC-M-1: Meet local, regional and state targets for reduction of greenhouse gas emissions through implementation of the Climate Action Plan.*

Santa Rosa Community-wide Climate Action Plan

The City of Santa Rosa adopted its Community-wide Climate Action Plan (CCAP) in 2012. The CCAP presents measures that will reduce local greenhouse gas emissions and meet state, regional, and location reduction targets (City of Santa Rosa, 2012). Relevant implementation strategies included in the plan include the following measure and action items:

> *9.2 Reduce construction equipment emissions*
>
> *9.2.1. Minimize idling time to 5 minutes or less*

9.2.2. Maintain construction equipment per manufacturer's specs

9.2.3. Limit construction equipment emissions with measures.

9.2.3a. Substitute electrified equipment for diesel- and gasoline-powered equipment where practical.

9.2.3b. Use alternative fuels for construction equipment on-site, where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane, or biodiesel.

9.2.3c. Avoid the use of on-site generators by connecting to grid electricity or utilizing solar-powered equipment.

Discussion of Potential Impacts

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

a) *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? - No Impact*

The impact assessment below addresses annual GHG emissions related to construction of the Proposed Project. Construction equipment for the Proposed Project would emit greenhouse gases. Operation of the Proposed Project would not result in additional GHG emissions. Maintenance activities for the Proposed Project would likely remain consistent with existing ongoing maintenance activities of the existing aqueduct with the addition of the use of hand tools to manage vegetation along specified portions of the aqueduct. Maintenance activities could include occasional repair or replacement of components installed as part of the Proposed Project. However, because the projected life of components installed is anticipated to be 30 or more years, emissions resulting from maintenance activities during this time period are likely to be minor in comparison to construction activities.

To determine approach to analysis, the GHG criteria used by the BAAQMD was reviewed and NSCAPCD staff was consulted. The BAAQMD has not adopted thresholds for construction, however the BAAQMD has adopted operational GHG significance thresholds of 1,100 metric tons of CO_{2e} per year for projects other than stationary sources and 10,000 metric tons of CO_{2e} per year for stationary source projects (Bay Area Air Quality Management District, 2017). Since the Proposed Project would not include stationary sources of GHG emissions, annual construction emissions that exceed the BAAQMD's GHG operational significance threshold of 1,100 metric tons of CO_{2e} per year would be considered to result in a significant impact on the environment. This impact analysis estimates GHG emissions that would be emitted during project construction and

then compares them to BAAQMD's 2017 Guidelines operational significance thresholds (Table 3.8-1 below and Appendix C, "Air Quality and Greenhouse Gas Emissions Estimates").

Table 3.8-1. Project-related Annual Construction GHG Emissions Compared to BAAQMD Thresholds for GHG

Year	GHG Emissions (MT CO2e per year)[a]
Total Construction-related Emissions	268.46
Amortized Emissions (over 30-year life of the Project)	8.12
BAAQMD GHG Operational Threshold	1,100
Over Threshold?	No

NOTE:
[a]Emissions were modeled using the Sacramento Metropolitan Air Quality Management District (SMAQMD) Road Construction Emissions Model (Version 8.1.0). Modeling details can be found in Appendix C.

GHG emissions were estimated using the Road Construction Emission Model (Version 9.0.0) for each phase of construction and are depicted above in Table 3.8-1. Additional assumptions and information are included in Appendix C.

As shown in Table 3.8-1, the annual GHG emissions associated with construction of the Proposed Project would not exceed the BAAQMD's 1,100 metric tons (MT) per year CO_{2e} operational significance threshold. Operation of the Proposed Project would not result in GHG emissions. The BAAQMD 1,100 MT CO2e threshold was derived based on a 2020 target, and SB 32 updates that target for 2030 to be 40% lower. The construction emissions would also be well below a threshold that is adjusted 40% lower to meet 2030 targets established by SB 32. Maintenance-related emissions would be small in comparison to construction-related impacts because Proposed Project components are anticipated to have a lifespan of 30 or more years, thus reducing the need for either repair or replacement during the life of the Project. Therefore, the Proposed Project would not generate GHG emissions, either directly or indirectly, that would have a significant effect on the environment and there would be no impact.

b) ***Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? - Less than Significant Impact***

The Proposed Project does not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHG.

Because the Proposed Project would not result in additional ongoing GHG emissions, implementation of the Proposed Project would not conflict with the County of Sonoma's or City of Santa Rosa's general plan goals, policies, or objectives related to reduction of greenhouse gas emissions.

As identified above, the City of Santa Rosa's adopted Climate Action Plan identifies measures to reduce construction-related emissions, including minimizing idling times to 5 minutes or less, properly maintaining equipment, and choosing from a list of additional measures to reduce emissions from equipment. The Proposed Project includes implementation of Mitigation Measure AIR-1 (Dust Management, Exhaust Control and Air Quality Protection), which would limit idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of CCR), require that construction equipment be maintained properly, and incorporates solar power at two of the Proposed Cathodic Protection sites. Other sites would be connected to the electrical grid; no diesel generators would be installed. These measures are defined in project plans and specifications, described in Chapter 2, "Project Description", and in Sections 3.3, "Air Quality" and 3.6, "Energy" and would ensure that the Proposed Project is consistent with the City of Santa Rosa's CAP.

The Proposed Project would also be consistent with BAAQMD's 2017 Clean Air Plan. The 2017 CAP has two GHG measures applicable to water and wastewater: WR1 (Limit GHGs from POTWs [Publicly-Owned Treatment Works]) and WR2 (Support Water Conservation). Since the operation of the Proposed Project would not increase GHG emissions from water or wastewater facilities and would not impede water conservation efforts, the Proposed Project would be consistent with the 2017 Clean Air Plan.

The Proposed Project would also be consistent with AB32 through compliance with the BAAQMD. The BAAQMD GHG thresholds were designed to meet the AB32 goal of reducing GHG emissions to 1990 levels by 2020. As discussed under Impact Criteria VII a) above, the Proposed Project would not result in any temporary or new permanent sources of GHG emissions that would exceed the BAAQMD's 1,100 metric tons per year CO_2e operational significance threshold. Since the BAAQMD GHG significance threshold would not be exceeded and because the Proposed Project would not result in a new permanent source of GHG emissions, the Proposed Project would not result in a cumulatively considerable increase in GHG emissions that would impair the State's ability to implement AB 32.

Because the Proposed Project would comply with all applicable plans, policies, and regulations, this impact would be less than significant.

Section 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 which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☒	☐
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?	☐	☒	☐	☐

Existing Environment

Environmental Resources Management (EDM) performed a Limited Phase I Environmental Site Assessment (ESA) to identify if potentially hazardous materials are present within the Proposed Project areas. Site visits and database records review were conducted to assess whether hazardous materials would affect excavated soil and groundwater during construction (Environmental Resources Management, 2016).

In addition to the Limited Phase I ESA, a Superfund Enterprise Management Search (SEMS) public access database search revealed no Superfund sites within the Proposed

Project area (U.S. Environmental Protection Agency, 2020). A database search of the GeoTracker, a website compiled by the State Water Resources Control Board to track cleanup sites, revealed no active sites identified in relation to the Proposed Project area. One active Leaking Underground Storage Tank (LUST) site is located on a property approximately 860 feet west of proposed Test Station RR 245+00. Clean-up of this site has not yet been completed (State Water Resources Control Board, 2020).

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 Impact***

The Proposed Project would involve the temporary, routine transport and handling of small quantities of hazardous substances such as diesel fuels, lubricants, and solvents for equipment during construction and periodic maintenance activities. 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 (Cal/OSHA) and California Department of Toxic Substances Control (DTSC) requirements and manufacturer's instructions, during 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. There would be no operational transport, use or disposal of hazardous materials. Therefore, this impact would be less than significant.

b) ***Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? - Less than Significant Impact with Mitigation***

There are no reported or anticipated sources of hazardous material contamination within Proposed Project sites. The Proposed Project would involve the temporary, routine transport and handling of small quantities of hazardous substances such as diesel fuels, lubricants, and solvents for equipment during construction and periodic maintenance activities. 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 (Cal/OSHA) and California Department of Toxic Substances Control (DTSC) requirements and manufacturer's instructions, during project construction and maintenance activities. The

Proposed Project would be required to implement and comply with existing hazardous material regulations; therefore, the 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 through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. There would be no operational transport, use or disposal of hazardous materials. Implementation of Mitigation Measure HAZ-1 (Spill Prevention and Response) would further minimize the potential effects of an unforeseeable release of hazardous materials. The potential impact would be reduced to less than significant with mitigation incorporated.

Mitigation Measure HAZ-1: Spill Prevention and Response

Sonoma Water will require the contractors, through project specifications, to prepare a 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 will require contractors, through project contract specifications, and maintenance staff to follow the SWPPP during all 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 will be available on site and spills and leaks will 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 will 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) will routinely inspect the work site to verify that items 1-4 above are properly implemented and maintained.

5. Absorbent materials will 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 will be excavated and properly disposed rather than

burying it. The absorbent materials will be collected and disposed of properly and promptly.

6. Vehicle and equipment maintenance activities will be conducted off-site or in a designated, protected area away from waterways 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 will be kept clean. Excessive build-up of oil or grease will be avoided. Incoming vehicles and equipment will be checked for leaking oil and fluids (including delivery trucks, and employee and subcontractor vehicles). Leaking vehicles or equipment will not be allowed onsite.

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***

There are two existing schools (Santa Rosa French-American Charter School (private) and Herbert Slater Middle School (Santa Rosa City Schools District) located within one-quarter mile of the Proposed Project area. As discussed above, the Proposed Project would involve the temporary, routine transport and handling of small quantities of hazardous substances such as diesel fuels, lubricants, and solvents for equipment during construction and periodic maintenance activities. These materials would be used in accordance with local, state, and federal regulations. There would be no operational transport, use or disposal of hazardous materials. The potential impact to local schools would be reduced to less than significant with implementation of Mitigation Measure HAZ-1 (Spill Prevention and Response) described above.

d) ***Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? - No Impact***

The Proposed Project sites are not included on any lists of hazardous materials sites maintained by the State Water Resources Control Board (State Board) or the Department of Toxic Substances Control (DTSC) that are compiled pursuant to Government Code Section 65962.5 (State Water Resources Control Board, 2020) (California Department of Toxic Substance Control, 2020). Thus, the Proposed Project's ground-disturbing activities would not create a significant hazard to the public or the environment; therefore, there would be no impact.

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

The Proposed Project includes components that would be installed within lands owned and operated by the Sonoma County Charles M. Schulz Airport as well as other properties located within two miles of this airport but these project components would be low in profile and silent during operation and would not result in a safety hazard or excessive noise for noise for people residing or working in the project area. The Proposed Project would have a less than significant impact with respect to airport compatibility on people residing or working at the Proposed Project area.

f) ***Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? - Less than Significant Impact with Mitigation***

Activities associated with construction of the Proposed Project would be conducted in phases and would be of short duration (approximately one to three weeks per location). Operation and maintenance activities associated with the Proposed Project would be minimal, including regular maintenance, vegetation management activities, and periodic inspections. However, potential repairs and replacement may occur that would require short duration construction activities. As described in the Transportation and Traffic section, per Mitigation Measure TRAN-1 (Traffic Control Plan), a traffic control plan would be implemented in order to reduce potential impacts in some locations (see Transportation section). Construction activities would continue to allow the movement of emergency vehicles and the Proposed Project would have a less than significant impact on 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? - Less than Significant Impact with Mitigation***

Proposed Project construction, maintenance, and operations activities would not involve placement of people or habitable structures that would result in exposure to a significant risk of wildland fires. As described in Section 3.20, Wildfire, the Proposed Project is not located in portions of Sonoma County that are at high or very high Fire Hazard Severity Zones (Permit Sonoma, 2014) (City of Santa Rosa, 2009) (Fire Safe Sonoma, 2016). For additional information regarding fire risk and state and local agency jurisdictions, refer to Section 3.20, Wildfire. During Proposed Project activities related to construction and vegetation management, fire risk would be further reduced per Mitigation Measure WILD-

1 (Fire Protection Plan) which provides for the preparation and implementation of a Fire Protection Plan during construction activities and requires the reduction of fire risk associated with equipment used during vegetation management activities (see Section 3.20, Wildfire). With the incorporation of Mitigation Measure WILD-1 (Fire Protection Plan), the Proposed Project would have a less-than-significant impact on exposure of people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

Section 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 a substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☐	☒	☐
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?	☐	☐	☒	☐
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 hydrological setting is provided along with relevant regulatory background topics and their applicability to the Proposed Project.

Hydrological Setting

Sonoma County has a Mediterranean climate characterized by warm, dry summers and mild, moist winters. The majority of annual precipitation in this region occurs as rain that falls during the period between November through April. Mean annual precipitation varies but averaged 30.7 inches during the last century. Precipitation patterns in the region are influenced by local topography; correspondingly, mean annual precipitation generally

increases with elevation. Stream discharge in the area is determined by precipitation patterns, bringing higher flows during periods of rain, generally in winter, and lower flows during dry conditions, typically during the summer (Santa Rosa Groundwater Sustainability Agency, n.d.). The United States Geological Survey (USGS) maintains a system of stream gages that provide flow data within the Proposed Project area, including along the Russian River, Mark West Creek, and Laguna de Santa Rosa (United States Geological Survey, 2020). The Proposed Project is located in the Santa Rosa Plain in Sonoma County ranging in elevation from approximately 55 to 300 feet above mean sea level.

Surface Water Hydrology

The Proposed Project area is located within the Laguna de Santa Rosa watershed, which is the largest tributary to the Russian River and drains an area of approximately 254 square miles. The northern-most sites along the Santa Rosa Aqueduct are located near the Russian River, immediately outside of, but adjacent to, the Laguna de Santa Rosa watershed. Tributaries of the Laguna de Santa Rosa within the Proposed Project area include Windsor Creek, Mark West Creek, Piner Creek, Paulin Creek, Santa Rosa Creek, Spring Creek, Laguna de Santa Rosa, Roseland Creek, Colgan Creek, Five Creek, Washoe Creek, and other named and unnamed creeks and drainages.

Surface Water Quality

Creek and river flows in the project area are generated primarily by stormwater runoff within each watershed. The mix of urban, rural, agricultural, and undeveloped land uses within the project areas contributes to varied pollutant types and concentrations that currently exist in each creek and river. In the urbanized areas of the Proposed Project area, storm water runoff can entrain urban pollutants generated by residential, commercial, and industrial land uses. These pollutants typically include sediment, oil and grease, heavy metals, pesticides, and debris. In the agricultural areas of the Proposed Project, pollutants can include contaminants from livestock manure and chemical fertilizers. Rural residential land uses can potentially contribute pollutants through malfunctioning onsite sewage disposal systems in areas without access to municipal wastewater treatment systems. Additionally, sediments from erosion in the upper tributaries of the watershed decrease the capacity of downstream and tidal waterways (California Environmental Protection Agency, 2019).

For the Laguna de Santa Rosa, Total Maximum Daily Load (TMDL) development for nutrients (nitrogen and phosphorus), dissolved oxygen, temperature, sedimentation/siltation, and indicator bacteria are currently under development. In 1995, a TMDL for high levels of ammonia and low dissolved oxygen concentrations was approved by the United States Environmental Protection Agency (US EPA). This document, known as “The Waste Reduction Strategy for the Laguna de Santa Rosa”

seeks to reduce ammonia levels and raise dissolved oxygen levels (California Water Boards, North Coast Regional Water Quality Control Board, 2019).

Groundwater Resources

The Proposed Project area is located in the Santa Rosa Plain (Sub-basin 1-055.01), which is a part of the Santa Rosa Valley groundwater basin (Basin 1-055) within the North Coast hydrologic region (Department of Water Resources, 2018). The principal water-bearing materials in Sonoma County are the alluvial deposits and sedimentary units of the valleys as well as some of the volcanic rocks. Natural recharge takes place along streams, rivers, and through direct infiltration of precipitation through surficial and permeable portions of the water-bearing materials. Development in these areas can increase surface runoff and reduce groundwater quality and recharge capability.

Groundwater resources are recognized as playing a significant role in the development, and sustainability of the Santa Rosa Plain. As agricultural, domestic, and urban groundwater pumping increased in the late 1970s and 1980s, groundwater levels dropped in intermediate and deeper wells in the southern Santa Rosa Plain. The decline peaked in the early 1990s and began to recover in the early 2000s after Russian River water and recycled water became more available and water conservation measures were implemented. More recent groundwater-level data within the Subbasin generally indicate relatively stable to increasing trends (Santa Rosa Plain Groundwater Sustainability Agency, n.d.).

In 2014, three legislative bills were signed into law by Governor Jerry Brown: AB 1739 (Dickinson), SB 1168 (Pavley), and SB 1319 (Pavley). Together they are known as the Sustainable Groundwater Management Act (SGMA). SGMA requires governments and water agencies in high and medium priority basins to form Groundwater Sustainability Agencies (GSAs) to manage groundwater sustainably and adopt Groundwater Sustainability Plans (California Department of Water Resources, 2020). The Santa Rosa Plain GSA manages groundwater resources in the Proposed Project area.

Flooding and Storm Water Management System

The Federal Emergency Management Agency (FEMA) is responsible for mapping areas subject to flooding during a 100-year flood event (1 percent chance of occurring in a single year). The Proposed Project includes facilities and activities located within a 100-year flood zone. Proposed Project sites within FEMA's mapped floodplains are listed in Table 3.10-1 below (Federal Emergency Management Agency, 2012).

Table 3.10-1. Proposed Project Sites Located within Mapped FEMA Floodplain

Russian River to Cotati Aqueduct	Santa Rosa Aqueduct	Test Station	Cathodic Protection Station (CP Station)	Proposed Site	Adjacent Waterway
X		X		Test Station RR 31+22	Russian River, Mark West Creek
X			X	CP Station RR 45+00	Russian River, Mark West Creek
X		X		Test Station RR 286+50	Laguna de Santa Rosa
X			X	CP Station RR 302+00	Laguna de Santa Rosa
X		X		Test Station RR 312+50	Laguna de Santa Rosa
X		X		Test Station RR 336+40	Laguna de Santa Rosa
X			X	CP Station RR 436+80	Laguna de Santa Rosa
X			X	CP Station RR 643+75	Laguna de Santa Rosa
X		X		Test Station RR 669+30	Laguna de Santa Rosa
X			X	CP Station RR 677+80	Laguna de Santa Rosa
X				Laguna Vegetation Maintenance	Laguna de Santa Rosa
	X		X	CP Station SR 95+00	Mark West Creek
	X	X		Test Station SR 111+00	Mark West Creek
	X	X		Test Station SR 123+43	Mark West Creek
	X	X		Test Station SR 247+94	Mark West Creek

SOURCE: (Federal Emergency Management Agency, 2012)

Water runoff from cities, highways, and construction sites, among other sources, can carry pollutants that can enter and degrade water quality. In order to systematically address this challenge, the Regional Water Quality Control Board and the US EPA have regulated the runoff and treatment of storm water in industrial, municipal and residential areas of the state mainly through the Municipal Stormwater Program and other similar programs, aimed at controlling the discharges with the goal of ultimately preventing pollutants from entering waterways (California State Water Resources Control Board, 2018).

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 Impact with Mitigation***

The Proposed Project would involve ground disturbing construction activities such as drilling, excavation, grading, soil stockpiling, and filling in order to install Proposed Project components. Removed material will generally consist of drilling mud and cuttings and is unlikely to contain significant amounts of groundwater. If, however, groundwater is encountered during drilling and/or excavation, it would be dewatered using sump pumps or well points. The removed groundwater would be stored in Baker-type water tanks (or equivalent) under a low threat discharge to surface waters waste discharge requirement (WDR) permit (Water Quality Order No. 2003 – 0003 – DWQ) from the State Water Resources Control Board or North Coast Regional Water Quality Control Board (Order No. R1-2020-006 / General NPDES No. CAG024902, tested for contaminants, treated as required and depending on the testing results, either hauled away as necessary to a treatment facility, or discharged into the sewer system under an Industrial Wastewater Permit.

Construction would occur within areas that immediately or eventually drain to Mark West Creek, the Laguna de Santa Rosa, and the Russian River. Proposed Project activities are not anticipated to result in impacts to hydrology and water quality, as the project's construction, operation, and maintenance activities would incorporate Mitigation Measures HAZ-1 (Onsite Hazardous Materials Management), HAZ-2 (Spill Prevention and Response), HAZ-3 (Vehicle and Equipment Maintenance and Fueling), and GEO-1 (Erosion and Sedimentation) which require, for example, Sonoma Water and contractors to follow contract specifications, develop and implement a SWPPP in accordance with the State Water Resources Control Board, and comply with all applicable regulations. The above mitigation measures also include, for example, the minimization of the area of ground-disturbing activities; erosion control measures to prevent sediment-laden runoff from entering 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); management of hazardous materials, vehicle and equipment refueling, and spill response protocols to prevent the accidental release of fuels and other chemicals to the environment; and several other measures to protect waters and water quality.

Disturbance of the total Proposed Project area is estimated to be greater than one acre, therefore, Sonoma Water's contractor would be required to obtain coverage under the Non-Point Discharge Elimination System (NPDES) Construction General Permit (State

Board Order No. 2009-0009-DWQ as amended by 2010-0014-DWQ [CGP] on or after September 2, 2012) from the State Water Resources Control Board. Consequently, development and implementation of a SWPPP would be required. The SWPPP would also include measures similar to those described above that would be implemented to minimize the potential for adversely affecting water quality during construction.

As described in Chapter 2, “Project Description,” operation and maintenance activities may require removal of overgrown vegetation such as mowing and trimming of trees and shrubs that prevent access to the aqueduct or associated equipment. In addition, Sonoma Water staff would also repair or replace equipment that reaches the end of its useful lifetime, which may require construction activities. Implementation of Mitigation Measures HAZ-1 (Spill Prevention and Response) and GEO-1 (Erosion and Sedimentation) would adequately prevent impacts to water quality and this potential impact would be 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***

During construction, the Proposed Project could require dewatering activities to temporarily lower the groundwater table in order to complete subsurface improvements. The dewatering, if necessary, would be temporary and have negligible effects on the groundwater table or supplies and would not impede sustainable groundwater management of the basin. The temporary ground disturbance of up to three weeks would be approximately 3,500 square feet at each site and would not interfere with groundwater recharge. The operation and maintenance activities would not require the use of groundwater and thus would not deplete groundwater supplies or interfere substantially with groundwater recharge. Therefore, the Proposed Project would not impact the sustainable management of the basin or the groundwater supplies and recharge capabilities. 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:***

i) ***Result in substantial erosion or siltation on- or off-site. - Less than Significant Impact***

The Proposed Project would require short-term disturbances within the Proposed Project area during construction and maintenance of Cathodic Protection and Test stations. None of these Proposed Project sites are located within a stream, river, or associated riparian vegetation. Operation of the Proposed Project would not include ground disturbance.

Vegetation maintenance activities at the Laguna and Penngrove vegetation maintenance sites would include trimming of understory vegetation within riparian vegetation. No ground disturbing activities are proposed at these sites and, therefore, there would be no impacts related to erosion or siltation associated with these activities.

These activities are not anticipated to result in impacts to hydrology and water quality as these activities would incorporate Mitigation Measures HAZ-1 (Spill Prevention and Response) and GEO-1 (Erosion and Sedimentation). The Proposed Project as defined in the project plans and specifications and would not include the alteration of the course of a stream or river. Following construction and maintenance, disturbed areas would be restored to their original contours and seeded and stabilized using erosion control fabric and/or hydroseeding using California native seeds, and/or straw as appropriate to minimize erosion along the pipeline route and waterways, as identified under BIO-5 (Erosion and Sedimentation). Operation of the Proposed Project would not include ground disturbance, however, maintenance of the Proposed Project could include replacement of below-ground components as needed. Maintenance activities that require ground disturbance would incorporate the above-mentioned mitigation measures in order to avoid or minimize erosion or siltation in project areas. These practices and procedures protect hydrology and water quality resources by avoiding or minimizing potential adverse impacts during construction, operation, and maintenance activities. The small amount of impervious surfaces constructed to support the Cathodic Protection Stations would not substantially affect runoff flow volumes or velocities, and would not impede or otherwise redirect flood flows. In addition, as stated above, project activities do not include the alteration of the course of a stream or river. For these reasons, the impact related to alteration of the project site's drainage pattern would be less than significant.

ii) ***Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. - Less than Significant Impact***

Construction, operation, and maintenance of the Proposed Project would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. Following construction, all disturbed areas would be restored to their original contours. The majority of Proposed Project components would be buried underground and the sites restored to pre-project conditions. New cabinets with a footprint measuring approximately 2 feet by 3 feet at Cathodic Protection Stations would be installed, resulting in a minor increase in impervious surface, however minor changes in surface runoff would not result in flooding. Operation and maintenance of the Proposed Project would not change the rate or amount of surface runoff. Therefore, potential impacts from an increase

in the rate or amount of surface runoff and associated flooding resulting from project construction, maintenance or operation would be less than significant.

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***

Construction, operation, and maintenance of the Proposed Project would not substantially alter surface runoff in a manner which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional causes of polluted runoff. Following construction, all disturbed areas would be restored to their original contours. The majority of Proposed Project components would be buried underground and the sites restored to pre-project conditions. New cabinets with a footprint measuring approximately 2 feet by 3 feet at Cathodic Protection Stations would be installed, resulting in a minor increase in impervious surface, however minor changes in surface runoff would not affect stormwater drainage systems. Operation and maintenance of the Proposed Project would not affect stormwater drainage systems or provide substantial additional causes of polluted runoff. Please see Section 3.9, Hazards and Hazardous Materials for more on potential for hazardous materials at the Proposed Project sites. Therefore, the Proposed Project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff and no impact is anticipated.

iv) ***Impede or redirect flood flows? - Less than Significant Impact***

While some Proposed Project sites are located within areas mapped by FEMA as Regulatory Floodways (see Table 3.10-1 above), these Proposed Project components are largely underground and will avoid flood waters or are small in size and will not redirect flood flows. As discussed above in IX (a), construction, operation, and maintenance activities would require excavation, grading, soil stockpiling, and backfilling of the removed soil. Additionally, the removal of overgrown vegetation such as mowing and trimming of trees and shrubs would be required for continued access to the aqueduct or associated equipment. Implementation of the Proposed Project would not result in the new structures or alterations to the landscape that could impede or redirect flood flows. Therefore, this impact would be less than significant.

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

The Proposed Project sites are not located within tsunami or seiche zones. While the Proposed Project sites listed in Table 3.10-1 above are located within areas mapped by

FEMA as Regulatory Floodways, these Proposed Project components are largely underground and will avoid flood waters or, if potentially exposed to floodwaters do not include storage of pollutants on site. Construction and maintenance would generally occur during the dry season or, if taking place during the rainy season, would avoid significant rain events as defined in Mitigation Measure GEO-1 (Erosion and Sedimentation), thus avoiding the risk of releasing pollutants due to project inundation. Because construction activities would take place during the dry season or would avoid significant rain events, no pollutants will be stored onsite during project operation, and the Proposed Project would not be affected by flood hazards, tsunami, or seiche zones, no impact is anticipated.

e) *Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? - No Impact*

Within the Proposed Project area, TMDL development for nutrients (nitrogen and phosphorus), dissolved oxygen, temperature, sedimentation/siltation, and indicator bacteria are currently under development. In 1995, a TMDL for high levels of ammonia and low dissolved oxygen concentrations was approved by the USEPA. Known as the *Waste Reduction Strategy for the Laguna de Santa Rosa*, this document, seeks to reduce ammonia levels below the USEPA criterion and raise dissolved oxygen levels above the minimum set in the Basin Plan (California Water Boards, North Coast Regional Water Quality Control Board, 2019). The Proposed Project would not contribute significant amounts of pollutants that would conflict with or obstruct implementation of existing or planned TMDLs. While operation of the Proposed Project would not include ground disturbance, construction and some maintenance activities would. These activities are not anticipated to conflict with or obstruct implementation of a water quality control plan as these activities would incorporate Mitigation Measures HAZ-1 (Spill Prevention and Response), BIO-4 (Protective Measures for Biological Resources), and GEO-1 (Erosion and Sedimentation). The Proposed Project's ground-disturbing construction and maintenance activities would, therefore, avoid delivery of pollutants or sediment-laden water to area waterways or other impacts to water quality and no impact is anticipated.

Groundwater in the Proposed Project area would not be affected by dewatering activities during construction or maintenance activities. Once constructed, the Proposed Project would not require the use of groundwater and thus would not deplete groundwater supplies or interfere with groundwater recharge. Therefore, the Proposed Project would not conflict with or obstruct implementation of an existing or future sustainable groundwater management plan and no impact is anticipated.

Section 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 Setting

The Proposed Project area is located in Sonoma County in the City of Santa Rosa and in portions of unincorporated Sonoma County. Land use designations and zoning for the Proposed Project area are listed in Appendix E, "Land Use Designations and City Zoning Along the Santa Rosa and Russian River to Cotati Aqueducts."

Along the Santa Rosa Aqueduct, County land use designations include: Resources Rural Development, Land Intensive Agriculture, Diverse Agriculture, Public/Quasi-Public, and Limited Industrial. City of Santa Rosa zoning includes: Agriculture, Public/Institutional, Business Park, Very Low Residential, Low Residential, Medium Residential, General Industry, Transit Village Medium, Retail, Business Service, Office, and Parks/Recreation.

Along the Cotati Aqueduct, County land use designations include: Land Intensive Agriculture, Mixed Use, Rural Residential, Diverse Agriculture, and Land Extensive Agriculture. This aqueduct is also adjacent to lands zoned Public/Institutional and Agriculture by the City of Santa Rosa. Some sites are located within or adjacent to California Department of Fish and Wildlife's Laguna Wildlife Area (please see Section 3.4 Biological Resources).

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 involves construction of cathodic protection stations and test stations along existing aqueducts and maintenance of those stations, as well as vegetation maintenance and would not create physical changes to the landscape that could result in long-term disruption or the physical division or isolation of existing residential areas. Once completed, many of the project components would be buried.

Above-ground project components of the cathodic protection stations and test stations are small in nature (see Figures 2-23 and 2-25) and would not physically divide the established communities in which they are located. 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? - Less than Significant Impact with Mitigation***

As stated above, the Proposed Project locations are under the jurisdiction of the Sonoma County General Plan and the City of Santa Rosa General Plan. Land uses of the Proposed Project and staging areas vary greatly and are under the jurisdiction of the Sonoma County General Plan (Permit & Resource Management Department, 2014) and the City of Santa Rosa General Plan (City of Santa Rosa, 2019).

The County's General Plan includes policies that support protecting land capable of use for agricultural purposes (i.e., animal husbandry and the production of food) and protecting natural resources. Designated resources and rural development areas allow for limited residential development, while protecting the use of timberlands for timber production, protecting natural resources including fish and wildlife habitat, and protecting lands needed for geothermal resource production (Permit & Resource Management Department, 2014).

The City of Santa Rosa's General Plan also includes plans and policies to provide for development of a full range of housing types, promote mixed use sites and centers, and accommodate light industrial, warehousing and heavy commercial uses. These plan and policies reduce potential conflicts between existing land uses (City of Santa Rosa, 2019).

Implementation of Mitigation Measures HAZ-1 (Spill Prevention and Response), BIO-1 (Worker Awareness Training), BIO-5 (Wetlands, Waters, and Riparian Habitat), GEO-1 (Erosion and Sedimentation), and NOISE-1 (Construction Noise Reduction)) would ensure that the project minimizes potential effects on agriculture, residential, and commercial land uses during and following construction activities. The project site is not included in a coastal zone and not subject to a local coastal program's planning policies or requirements (Permit & Resource Management Department, 2001). The project does not involve habitable structures and would not result in changes to land use. Therefore, the project would not result in any conflicts with applicable land use plans, policies or regulations; thus this potential impact would be less than significant with mitigation measures incorporated.

Section 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

The California Geological Survey (CGS) classifies the regional significance of mineral resources in accordance with the California Surface Mining and Reclamation Act of 1975 (SMARA). Mineral Resource Zones (MRZ) have been designated to indicate the significance of mineral deposits. The MRZ categories are as follows:

MRZ-1: Areas where available geologic information indicates that little likelihood exists for the presence of significant mineral resources.

MRZ-2: Areas underlain by mineral deposits that geologic data indicate to be significant. Contains known economic mineral deposits.

MRZ-3: Areas containing mineral occurrences of undetermined mineral resource significance.

MRZ-4: Areas where available information is inadequate for assignment to any other MRZ category.

Sonoma County contains areas classified as MRZ-1, MRZ-2, MRZ-3, and MRZ-4. The majority of the Proposed Project area is outside of these Mineral Resource Zones. However, one test station, Test Station SR 0+00, is located at an existing Sonoma Water facility adjacent to the Russian River, which is within an area classified as MRZ-2. Specifically, CGS maps indicate that the area contains Portland Cement Concrete-Grade Aggregate (CGS, 2013a), Asphalt Concrete-Grade Aggregate (CGS, 2013b), and Class II Base-Grade Aggregate (CGS, 2013c). CGS maps also indicate that this site is within an area designated as already “depleted by mining or lost to land uses incompatible with mining” (CGS, 2013d).

The Sonoma County Aggregate Resources Management Plan (County of Sonoma, 2010) identifies an area upstream of the project site along the Russian River that is suitable for mineral resource extraction activities. The “middle terrace” area along the Russian River

extends from approximately river mile 30 near the intersection of Limerick Lane and Highway 101 downstream approximately 6 river miles to Lake Benoit in the Riverfront Regional Park, which is approximately 6,000 feet northeast from Test Station SR 0+00.

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 majority of the Proposed Project area does not include any known mineral resources. However, Test Station SR 0+00 would be located within an area designated MRZ-2 and, therefore, known to contain an economic mineral deposit. This site is mapped by CGS as having already been “depleted by mining or lost to land uses incompatible with mining” (CGS, 2013d) because it is currently developed as an existing Sonoma Water facility. Therefore, the construction, operation, and maintenance of the Proposed Project would not result in additional loss of availability of a known mineral resource that would be of value to the region and the residents of the state. For these reasons, no impact is anticipated.

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 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. As discussed above, the Sonoma County Aggregate Resources Management Plan identifies areas along the Russian River that are suitable for mineral resource extraction activities, but these areas are outside of the Proposed Project area. One Proposed Project site is located within an area designated in CGS maps as MRZ-2, known to contain an economic mineral deposit, but is already developed and is identified by CGS as already “depleted by mining or lost to land uses incompatible to mining” (CGS, 2013d) therefore it is no longer considered a locally-important mineral resource recovery site. For these reasons, no impact is anticipated.

Section 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 the 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 two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Noise Setting

The environmental setting for noise includes all areas that could be affected by activities associated with the Proposed Project. Relevant background topics, guidelines, regulatory criteria, and their applicability to the Proposed Project are provided below.

Noise

Noise Background

Sound is mechanical energy transmitted by pressure waves through a medium such as air. Noise can be defined as unwanted sound. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level. Sound pressure level is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing and 120 to 140 dB corresponding to the threshold of pain.

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude (sound power). When all the audible frequencies of a sound are measured, a sound spectrum is plotted consisting of a range of frequency spanning 20 to 20,000 Hz. The sound pressure

level, therefore, constitutes the additive force exerted by a sound corresponding to the sound frequency/sound power level spectrum.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear's decreased sensitivity to low and extremely high frequencies instead of the frequency mid-range. This method of frequency weighting is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA).

Noise Exposure and Community Noise

An individual's noise exposure is a measure of the noise experienced by the individual over a period of time. A noise level is a measure of noise at a given instant in time. However, noise levels rarely persist consistently over a long period of time. In fact, community noise varies continuously with time with respect to the contributing sound sources of the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with the individual contributors unidentifiable. Background noise levels change throughout a typical day, but do so gradually, corresponding with the addition and subtraction of distant noise sources and atmospheric conditions. The addition of short duration single event noise sources (e.g., aircraft flyovers, horns, sirens) makes community noise constantly variable throughout a day.

These successive additions of sound to the community noise environment vary the community noise level from instant to instant requiring the measurement of noise exposure over a period of time to legitimately characterize a community noise environment and evaluate cumulative noise impacts.

Noise Definitions

Time-varying characteristics of environmental noise are described using statistical noise descriptors. Noise descriptors discussed in this analysis are summarized below:

Leq: The equivalent sound level is used to describe noise over a specified period of time, in terms of a single numerical value. The Leq is the constant sound level that would contain the same acoustic energy as the varying sound level, during the same time period (i.e., the average noise exposure level for the given time period).

L50 The noise level that is equaled or exceeded 50 percent of the specified time period. The L50 represents the median sound level.

L90 The noise level that is equaled or exceeded 90 percent of the specified time period. The L90 is sometimes used to represent the background sound level.

Ldn: The day-night noise level (Ldn) average of the A-weighted sound levels occurring over a 24-hour period. The Ldn accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night ("penalizing" nighttime noises). Noise between 10:00 p.m. and 7:00 a.m. is weighted (penalized) by adding 10 dB to take into account the greater annoyance of nighttime noises.

CNEL: Similar to the L_{dn}, the Community Noise Equivalent Level (CNEL) adds a 5-dB *penalty* for the evening hours between 7:00 p.m. and 10:00 p.m. in addition to a 10-dB penalty between the hours of 10:00 p.m. and 7:00 a.m.

L_{max}: The instantaneous maximum noise level measured during the measurement period of interest.

Effects of Noise on People

There is no universally acceptable way to measure the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction. A wide variation exists in the individual thresholds of annoyance and different tolerances to noise tend to develop based on an individual's past experiences with noise. Thus, an important way of predicting a human reaction to a new noise environment is the way the new noise compares to the existing noise levels to which one has adapted: the so called "ambient noise" level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise would be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

1. Except in carefully controlled laboratory experiments, a change of 1-dB cannot be perceived;
2. Outside of the laboratory, a 3-dB change is considered a just-perceivable difference when the change in noise is perceived but does not cause a human response;
3. A change in level of at least 5-dB is required before any noticeable change in human response would be expected; and
4. A 10-dB change is subjectively heard as approximately a doubling in loudness and can cause an adverse response.

These relationships occur in part because of the logarithmic nature of sound and the decibel system. A ruler is a linear scale: it has marks on it corresponding to equal quantities of distance. One way of expressing this is to say that the ratio of successive intervals is equal to one. A logarithmic scale is different in that the ratio of successive intervals is not equal to one. Each interval on a logarithmic scale is some common factor larger than the previous interval. A typical ratio is 10, so that the marks on the scale read: 1, 10, 100, 1,000, 10,000, etc., doubling the variable plotted on the x-axis. The human ear perceives sound in a non-linear fashion; hence, the decibel scale was developed. Because the decibel scale is based on logarithms, two noise sources do not combine in a simple additive fashion, rather they

combine logarithmically. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA.

Noise Attenuation

Sound level naturally decreases with greater distance from the source. This basic attenuation rate is referred to as the *geometric spreading loss*. The basic rate of geometric spreading loss depends on whether a given noise source can be characterized as a point source or a line source. Point sources of noise, including stationary mobile sources such as idling vehicles or on-site construction equipment, attenuate (lessen) at a rate of 6 dB per doubling of distance from the source. In many cases, noise attenuation from a point source increases by 1.5 dB from 6 dB to 7.5 dB for each doubling of distance due to ground absorption and reflective wave canceling. These factors are collectively referred to as *excess ground attenuation*. The basic geometric spreading loss rate is used where the ground surface between a noise source and a receiver is reflective, such as parking lots or a smooth body of water. The excess ground attenuation rate (7.5 dB per doubling of distance) is used where the ground surface is absorptive, such as soft dirt, grass, or scattered bushes and trees.

Widely distributed noises such as a street with moving vehicles (a “line” source) typically would attenuate at a lower rate of approximately 3 dB for each doubling of distance between the source and the receiver. If the ground surface between source and receiver is absorptive rather than reflective, the nominal rate increases by 1.5 dB to 4.5 dB for each doubling of distance. Atmospheric effects, such as wind and temperature gradients, can also influence noise attenuation rates from both line and point sources of noise. However, unlike ground attenuation, atmospheric effects are constantly changing and difficult to predict (California Department of Transportation, 2013).

Existing Ambient Noise Environment

The primary contributors to the noise environment in the Proposed Project area include vehicle traffic on adjacent roads; airplane over-flights; sounds emanating from businesses and residences; and naturally occurring sounds such as wind and wildlife, etc. Roadways in the Proposed Project area include West Sierra Avenue, Todd Road, River Road, Steve Olson Lane, Eastside Road, Mark West Station Road, Russell Lane, Vine Hill Road, Laguna Road, Guerneville Road, Hall Road, Sanford Road, Bravo Toro Lane, Occidental Road, Kimes Road, Sebastopol Avenue, Doyle Road, Marino Road, Todd Road, Llano Road, Meadow Lane, Walker Avenue, Gravenstein Highway, Madrone Avenue, Slusser Road, Laughlin Road, Gilardoni Road, Autumn Walk Drive, West Steele Lane, Jennings Avenue, Ripley Street, Wilson Street, First Street, and Sonoma Avenue. According to the City of Santa Rosa General Plan Noise and Safety Element (City of Santa Rosa, 2009), the primary source of noise within the City is vehicular traffic along U.S Highway 101 and State Highway 12, and regional/arterial streets, which include Fulton Road, Guerneville

Road, Bellevue Avenue, Stony Point Road, Mendocino Avenue, Fountaingrove Parkway, Calistoga Road, Summerfield Road, and College Avenue. Primary source of noise within the City includes railroad operations, emergency medical helicopters and vehicles, landscaping equipment, Charles M. Schulz Sonoma County Airport, and industrial and commercial facilities. The Proposed Project is located in multiple land use areas that include residential and business areas that are subject to temporary and periodic increases in traffic-related noise as a result of the movement of vehicles and airplane over-flights.

Portions of the Proposed Project are located on the Charles M. Schulz-Sonoma County Airport property. There are no private airstrips in the project area.

Vibration

Vibration Characteristics

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. There are several different methods that are used to quantify vibration. Vibration can be a serious concern, causing buildings to shake and rumbling sounds to be heard. In contrast to noise, vibration is not a common environmental problem. Some common sources of vibration are trains, buses on rough roads, and construction activities such as blasting, pile driving, and heavy earth-moving equipment.

Vibration Definitions

Several different measurements are used to quantify different aspects of vibration. One measurement is the peak particle velocity (PPV), which is most frequently used to describe vibration impacts to buildings. Another measurement is the root mean square (RMS) amplitude, which is most frequently used to describe the effect of vibration on the human body. A third measurement is decibel notation (VdB or Lv), commonly used to measure RMS amplitude (Federal Transit Administration, 2006).

Ground-borne Noise

Ground-borne noise refers to the rumbling sound caused by the vibration of surfaces within a building. The annoyance potential of ground-borne noise is characterized in dBA units. Due to differences in the medium the sound is travelling through, ground-borne noises are characteristically of lower frequency sounds than air-borne noise. Due to the non-linearity of human hearing that causes sounds dominated by low-frequency components to seem louder, ground-borne noise with a level of 40 dBA typically sounds louder than 40 dBA air-borne noise (Federal Transit Administration, 2006). Therefore, limits for ground-borne noise are lower than for air-borne noise.

Typical Perceptible Levels of Ground-borne Vibration

In contrast to air-borne noise, ground-borne vibration is not a phenomenon that most people experience every day. The background vibration velocity level in residential areas is usually 50 VdB or lower, well below the threshold of perception for humans, which is approximately 65 VdB. Most perceptible indoor vibration is caused by sources within buildings such as operation of mechanical equipment, movement of people, or slamming of doors. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If the roadway is smooth, the vibration from traffic is rarely perceptible (Federal Transit Administration, 2006).

Structural Response to Vibration

Structural response to vibration is typically evaluated in terms of PPV, which is often used since it is related to the stresses that are experienced by buildings. Various general standards are contained in the International Standards Organization standards 3945, 4866, and 7626-1. The Federal Transit Administration (FTA) identifies limit vibration damage threshold criteria set by these standards. At a PPV of 0.5 inches per second for reinforced-concrete, steel or timber (no plaster), PPV of 0.3 inches per second on engineered concrete and masonry (no plaster), PPV of 0.20 inches per second for non-engineered timber and masonry buildings (i.e., fragile buildings), and PPV of 0.12 inches per second for buildings extremely susceptible to vibration (i.e., fragile historic buildings) (Federal Transit Administration, 2006).

Construction Vibration

Construction activities can result in varying degrees of ground vibration, depending on the equipment and methods employed. Operation of construction equipment causes ground vibrations that spread through the ground and diminish rapidly in strength with distance. Buildings founded on the soil in the vicinity of a construction site respond to these vibrations with varying results, ranging from no perceptible effects at the lowest levels, low rumbling sounds and perceptible vibrations at moderate levels, and slight damage at the highest levels.

Ground vibrations from construction activities do not often reach the levels that can damage structures, but they can achieve the audible and noticeable ranges in buildings very close to the site. A possible exception is the case of fragile buildings, many of them old, where special care must be taken to avoid damage. The construction activities that typically generate the most severe vibrations are blasting and impact pile-driving (Federal Transit Administration, 2006).

Existing Vibration Environment

The existing vibration environment is dominated by traffic from nearby roadways. Vehicles associated with business, residence, recreation and tourism can generate vibrations that vary depending on vehicle type, weight, and pavement conditions.

Regulatory Framework

Federal, State, and local agencies regulate different aspects of environmental noise. Federal and State agencies generally set noise standards for mobile sources such as aircraft and motor vehicles, while local agencies regulation of stationary sources and development of land use noise compatibility policy is left to local agencies. Local regulation of noise involves implementation of general plan policies and noise ordinance standards. Local general plans tend to identify general principles intended to guide and influence development plans; and local noise ordinances and codes establish standards and procedures for addressing specific noise sources and activities. Below detail the settings for Federal, State and local Sonoma County and City of Sonoma regulatory standards related to noise and vibration.

Federal

In 1972, the Noise Control Act was established to address the concerns of noise as a growing danger to the health and welfare of the Nation's population, particularly in urban areas. In 1974, in response to the Noise Control Act, the U.S. Environmental Protection Agency (EPA) published Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. Table 3.12-1 summarizes U.S. EPA findings for residential land uses.

Table 3.12-1. Sound Levels That Protect Public Health

Category	Measure of Exposure	Indoor			Outdoor		
		Activity Interference	Hearing Loss	To Protect Against Both Effects	Activity Interference	Hearing Loss	To Protect Against Both Effects
Residential with Outside Space	Ldn	45	70	45	55	70	55
Residential with No Outside Space	Ldn	45	70	45	-	-	-

Notes: Sound levels are yearly average equivalent in decibels (dB); the exposure period that results in hearing loss at the identified level is a period of forty years.
SOURCE: U.S. Environmental Protection Agency, 1974

The Occupational Safety and Health Administration (OSHA) aims to ensure worker safety and health in the United States by working with employers and employees to create better working environments. With regard to noise exposure and workers, OSHA regulations set

forth accepted criteria to protect the hearing of workers exposed to occupational noise. Noise exposure regulations are listed in 29 Code of Federal Regulations (CFR) Section 1910.95. Most applicable to this project, 1910.95(c)(1) states that an employer shall administer a hearing conservation program whenever noise exposure levels equal or exceed an 8-hour time-weighted average sound level of 85 dBA.

Federal regulations establish noise limits for medium and heavy trucks (more than 4.5 tons, gross vehicle weight rating) under 40 CFR, Part 205, Subpart B. The federal truck pass-by noise standard is 80 dBA at 15 meters (approximately 49 feet) from the vehicle pathway centerline. These controls are implemented through regulatory controls on truck manufacturers.

State

The State of California adopted the California Noise Insulation Standards (California Code of Regulations, Title 24, Part 2) in 1974.[8] These standards set forth an interior standard of 45 dBA Ldn for habitable spaces. These standards may be applied to residences located near construction activities or stationary noise sources as a method of examining potentially intrusive noise.

The State of California encourages each local government to perform noise studies and implement a noise element as part of its general plan. The Office of Noise Control at the California Department of Health Services published guidelines for evaluating the compatibility of various land uses as a function of community noise exposure. The concepts of these guidelines for land use compatibility are incorporated in the Noise and Safety Element of the Santa Rosa General Plan.

There are no adopted state policies or standards for ground-borne vibration. However, the Caltrans' *Transportation and Construction Vibration Guidance Manual* has identified vibration thresholds for adverse human reaction and risk of architectural damage to buildings (California Department of Transportation, 2013). According to Caltrans' guidance, the building damage threshold for older residential structures is 0.3 inch/second PPV and the vibration threshold where vibration level increases are considered strongly perceptible is 0.1 inch/second PPV.

Local

At the local level, noise is addressed through the implementation of general plan policies, including noise and land use compatibility guidelines, and through enforcement of noise ordinances. General plan policies provide guidelines for determining whether a noise environment is appropriate for a proposed or planned land use. Local noise ordinances

[8] California *Code of Regulations*, Title 24, Part 2, Appendix Chapters 12 and 12A (known as Building Standards Administrative Code, California Building Code).

regulate noise sources such as mechanical equipment and amplified sounds, as well as determine allowable hours of heavy equipment operation.

Sonoma County

Sonoma County General Plan 2020

The *Sonoma County General Plan 2020* Noise Element Policy NE1b addresses transportation noise (traffic on public roadways, railroads and airports) due to land use development and noise standards (County of Sonoma, 2020). The Proposed Project is not a land use development project, therefore this policy and its noise standards are not applicable to the Proposed Project. The Sonoma County General Plan 2020 Noise Element Policy NE-1c addresses non-transportation-related (stationary) noise from new projects (operational noise resulting from new sources). It does not specifically address intermittent or short-term construction and maintenance noise (equipment) and currently there is no adopted noise ordinance in the County of Sonoma Municipal Code. The Sonoma County General Plan 2020 Policy NE-1h calls for the County to adopt a noise ordinance that would include noise performance standards (listed in Table 3.12-1) and other polices with the intent of protecting people from existing or future excessive levels of noise that interfere with sleep, communication, relaxation, health or legally-permitted use of property. A noise ordinance has not been adopted to date, but Policy NE-1h does allow that the noise ordinance may exempt or modify noise requirements for certain uses, including construction activities.

Guidelines for the Preparation of Noise Analysis

The General Plan Noise Element calls for the preparation of an acoustical analysis or noise analysis (noise analysis) prior to approval of any discretionary project involving a potentially significant new noise source or a noise sensitive land use in a noise impacted area. The Guidelines for the Preparation of Noise Analysis (County of Sonoma Permit Resources Management Department, 2019) serve as a tool to implement the General Plan Noise Element policies by providing the following: 1) criteria to determine when a noise analysis is required; 2) minimum qualifications for persons preparing a noise analysis; and 3) substantive requirements for a noise analysis, including format content, standards, and thresholds of significance. The Proposed Project is not a land use development project and would not introduce a new noise source; therefore, a noise analysis is not required.

City of Santa Rosa

City of Santa Rosa 2035 General Plan

The Noise and Safety Element of the *City of Santa Rosa 2035 General Plan* (City of Santa Rosa, 2009) contains goals and policies for determining the compatibility of various land uses with different noise environments. These policies recognize that some land uses are more sensitive to ambient noise levels than others, due to the amount of noise exposure

(in terms of both exposure duration and insulation from noise) and the types of activities typically involved.

The noise standards used by the City of Santa Rosa in the General Plan include the California Department of Health Services Land Use Compatibility Standards for community noise environment, State of California Noise Insulation Standards (California Code of Regulations, Title 24, Part 2), and applicable standards in the City of Santa Rosa Noise Ordinance. General Plan policies address noise attenuation along major regional/arterial streets through location of land uses, site design, architectural standards, barriers, and street materials. The Proposed Project is not a stationary new development project that would generate operational noise, therefore the City of Santa Rosa's General Plan Policies NS-B-1 through NS-B-7 are not applicable to the Proposed Project.

Santa Rosa City Code

The City of Santa Rosa regulates noise through Title 17 Environmental Protection, Chapter 17-16, Noise, of the Santa Rosa City Code. The noise ordinance restricts noise sources that create loud, unnecessary or unusual noise which disturbs the peace and quiet of any neighboring land uses. Section 17- 16.120, Machinery and Equipment, limits noise levels produced by stationary mechanical equipment and states 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. Other sections discuss restrictions on noise sources such as leaf blowers and sound-amplifying equipment. The base ambient noise level criteria are defined in Section 17-16.030 and can be used to compare noise levels. The ambient noise level criteria help determine if radios, musical instruments, machinery or equipment or other devices are creating a nuisance. The most restrictive limits are for residences as shown in Table 3.12-2. These criteria are not specific to construction noise, but rather refer to noise in general. Section 17-16.040, Standards for Determining Violation, provides a list of qualitative variables to take into account when determining whether a noise disturbs the peace and quiet of a neighborhood, including background noise levels, proximity to residences, time of day, and duration. The Proposed Project is not a new stationary development project that would generate operational noise, therefore the City of Santa Rosa's City Code is not applicable to the Proposed Project.

Table 3.12-2. Santa Rosa City Code 17-16.030 Ambient Base Noise Level Criteria

Zone	Time	Sound Level A decibels (dBA)1 Community Environment Classification
Single Family Residential (R1) and Medium Density Residential (R2)	10 p.m. to 7 a.m.	45
R1 and R2	7 p.m. to 10 p.m.	50
R1 and R2	7 a.m. to 7 p.m.	55
Multi-family	10 p.m. to 7 a.m.	50
Multi-family	7 a.m. to 10 p.m.	55
Office & Commercial	10 p.m. to 7 a.m.	55
Office & Commercial	7 a.m. to 10 p.m.	60
Intensive commercial*	10 p.m. to 7 a.m.	55
Intensive commercial	7 a.m. to 10 p.m.	65
Industrial	Anytime	70

[1]A-weighted decibels (dBA) units, which are an expression of the relative loudness of sounds in air as perceived by the human ear.
SOURCE: (City of Santa Rosa, n.d.)

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 the local general plan or noise ordinance or applicable standards of other agencies? - Less than Significant with Mitigation***

Operation of the Proposed Project is excluded from such analysis because it would resemble the existing operation of Sonoma Water's facilities and would not result in an increase in existing noise levels. Consequently, the impact assessment below does not address City of Santa Rosa and County of Sonoma methodology but solely addresses the noise impacts associated with the use of equipment related to construction and maintenance activities.

Noise standards associated with construction activities, such as those that would occur under the Proposed Project within the jurisdiction of the County of Sonoma and the City of Santa Rosa are not addressed in applicable general plans or municipal codes. Because there are no noise standards for construction activities within the County of Sonoma or the City of Santa Rosa, the noise levels associated with construction equipment related to the construction and maintenance activities of the Proposed Project, would not expose persons to or generate ambient noise levels in excess of standards. Therefore, no impact related to existing noise standards would result.

Noise resulting from construction activities would depend on construction phase, equipment noise levels, distance to sensitive receptors, and any barriers between the construction activity and sensitive receptors. Noise generated at or near construction areas would occur with varying intensities and durations during the different phases of construction. Noise would fluctuate depending on the particular type, number, and duration of uses of construction equipment. The equipment operates in alternating cycles of full power and low power, thus, producing noise levels less than the maximum level. The average sound level of the construction activity also depends upon the amount of time that the equipment operates and the intensity of the construction during the time period. Table 3.12-2 depicts typical noise levels generated from construction equipment that could be used during Proposed Project construction at a reference distance of 50 feet.

Table 3.12-3. Reference Construction Equipment Noise Levels (50 feet from source)

Type of Equipment	Lmax[1], dBA[2]
Backhoe	80
Compactor (ground)	80
Concrete Mixer	85
Concrete saw	90
Drill Rig Truck	84
Excavator	85
Grader	85
Jack hammer	88
Loader	85
Paver	85
Pickup truck	55
Pneumatic Tools	85
Roller	85
Saw	76
Truck	88
Vacuum excavator (Vac-truck)	85
Welder/Torch	73

[1] The instantaneous maximum noise level measured during the measurement period of interest.

[2] A-weighted decibels (dBA) units, which are an expression of the relative loudness of sounds in air as perceived by the human ear

SOURCE: (Federal Highway Administaration, 2006) (Federal Transit Administration, 2006)

The sensitive receptors near the project area include residences, one church, one school and recreational park users. The nearest residence is on Sonoma Avenue and is located approximately 42 feet from a centralized anode well and rectifier location at Cathodic Protection Station SR 761+00. Additional sensitive receptors include one church (approximately 90 feet) and one school (approximately 204 feet) located adjacent to the

same site (SR 761+00). Additional sensitive receptors include recreational park users of the Spring Creek Trail within Spring Lake Regional Park, which is approximately 15 feet from three different test station locations on the Santa Rosa Aqueduct (Test Stations SR 787+00, SR 801+20, and SR 812+25). Sensitive receptors may be temporarily impacted by construction noise. Due to the distances from construction activities, it is unlikely that the school and church would be adversely affected. Construction of the Proposed Project components would be conducted in phases. Construction is anticipated to be short-term, taking approximately two weeks to complete at each centralized anode well location and up to one week at each test station location. The locations are shown in Figures 2-9, 2-10, 2-14, and 2-15.

In summary, the use of construction equipment associated with construction activities occurring along portions of the Proposed Project within 50 feet or less of sensitive receptors would expose nearby sensitive receptors (residences, church, school, and recreational trail users) to increased ambient noise levels. However, implementation of Mitigation Measures NOISE-1 (Construction Noise Reduction), NOISE-2 (Equipment Noise Control), and NOISE-3 (Implement Public Outreach Program) would reduce short-term construction noise by avoiding or minimizing potential adverse noise-related impacts to sensitive receptors located within 50 feet or less of the Proposed Project areas during construction activities. Implementation of these measures would reduce impacts to less than significant.

Mitigation Measure NOISE-1: Avoid and Minimize Ambient Noise during Construction and Maintenance Activities

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

1. Work will 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) will be equipped with manufacturer's sound-control devices, or alternate sound control that is no less effective than those provided as original equipment. Equipment will be operated and maintained to meet applicable standards for construction noise generation. No equipment will be operated with an unmuffled exhaust.

b) ***Generation of excessive groundborne vibration or groundborne noise levels? - Less than Significant Impact***

There are no specific provisions in the County of Sonoma General Plan and in the Santa Rosa Municipal Code relating to construction ground vibration. The Proposed Project is

not anticipated to generate excessive groundborne noise or vibration because no pile driving or blasting will occur during construction activities. There are some residences within unincorporated areas of Sonoma County and the City of Santa Rosa whose property lines are near the construction work area; however it is not anticipated that the construction, maintenance and operation activities of the Proposed Project would expose the nearest sensitive receptor or structure to groundborne noise or vibration levels that would result in noise level annoyance or building damage, because no excessive groundborne noise or vibration would occur. Therefore, this is considered a less-than-significant impact.

c) ***For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? - No Impact***

The Proposed Project does not involve the development of new noise sensitive land uses, and thus, implementation of the Proposed Project would not expose people to excessive aircraft noise. In addition, the Proposed Project is not located within the vicinity of a private airstrip or within an airport land use plan. The Proposed Project is within two miles of a public airport, but would not expose people residing or working in the project area to excessive noise levels. Therefore, there would be no impact.

Section 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 substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Population and Housing Setting

This section describes the existing setting for population and housing and potential effects from project implementation and its surrounding area. Descriptions and analysis in this section are based on population and housing information provided by the Association of Bay Area Governments, and the City of Santa Rosa.

Unincorporated Areas of Sonoma County

Population

The Association of Bay Area Governments estimated Unincorporated Areas of Sonoma County 2020 resident population at 144,095 people. The projected 2040 population for the Unincorporated Areas of Sonoma County is estimated to be 160,150 (Association of Bay Area Governments, 2018). Population statistics are summarized in Table 3.14-1.

Housing

The Association of Bay Area Governments estimated the total housing units of the Unincorporated Areas of Sonoma County to be approximately 56,950 in 2020. The projected 2040 household numbers for the Unincorporated Areas of Sonoma County are estimated to be approximately 60,020 (Association of Bay Area Governments, 2018). Housing statistics are summarized in Table 3.14-1.

City of Santa Rosa

Population

The City of Santa Rosa's population increased to 177,684 residents in 2017, ranking first among Sonoma County's nine incorporated cities. In addition to being the largest city in Sonoma County, Santa Rosa is the fifth-largest city in the Bay Area. This estimation is

based on projections from the 2016 American Community Survey, and does not include the city's 2017 annexation of Roseland, which added approximately 7,400 residents to the city's population. Between 2010 and 2017, the City of Santa Rosa grew by 9.2%. This rate of growth is third-highest among comparable cities and is higher than the growth of Sonoma County (7.4%), California (8%), and the United States (7.1%) during the same period of time. Following the Tubbs and Nuns fires in 2017, the City projects lower than historic population increases of 0.9% yearly (3.8% overall) through 2022 as the City works to rebuild. Population is anticipated to reach 184,393 residents by 2022 (City of Santa Rosa, 2018).

The Association of Bay Area Governments estimated City of Santa Rosa's 2020 resident population at 173,305. The projected 2040 population for the City of Santa Rosa is estimated at 223,060 (Association of Bay Area Governments, 2018). Population statistics are summarized in Table 3.14-1.

Housing

The City of Santa Rosa is the largest city in Sonoma County and the fifth largest city in the Bay Area. As of 2018, the Association of Bay Area Governments estimated the total housing units of the City of Santa Rosa to be approximately 64,995 in 2020. The projected 2040 household numbers for the City of Santa Rosa are estimated to be approximately 80,035, which represents almost half of the projected household growth in the county (Association of Bay Area Governments, 2018). Housing statistics are summarized in Table 3.14-1.

Table 3.14-1. City of Santa Rosa ABAG Projections 2040 for Population and Households, 2010–2040

	2010	2015	2020	2025	2030	2035	2040
Unincorporated Areas of Sonoma County							
Population	144,095	138,845	144,500	149,765	155,665	159,425	160,150
Households	56,950	54,175	56,560	58,535	60,570	60,570	60,020
City of Santa Rosa							
Population	167,220	168,850	173,305	186,445	204,795	213,615	223,060
Households	63,590	63,225	64,995	69,755	75,630	77,815	80,035

SOURCE: (Association of Bay Area Governments, 2018)

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 provide new housing, businesses, or expand existing infrastructure. The Proposed Project would not increase the capacities of aqueducts above existing conditions and would not provide additional water capacity to allow for development. Consequently, the effect of new project infrastructure on unplanned population growth in the project and surrounding areas would be no impact.

b) ***Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? - No Impact***

The Proposed Project would not result in the displacement of any existing people or housing and would not require construction of replacement housing elsewhere. Therefore, there would be no impact.

Section 3.15 Public Services

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project 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 public services:				
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

Public Services Setting

The Proposed Project area is located in the unincorporated portions of Sonoma County and in the incorporated City of Santa Rosa. Public services within these areas are describe below.

Unincorporated Areas of Sonoma County

Public services provided in the unincorporated areas of Sonoma County include fire protection, police protection, education, recreation and parks, and libraries.

Fire Protection

The Proposed Project area overlaps several local fire districts, including: Forestville Fire Protection District; Windsor Fire Protection District; Graton Fire Protection District; Sebastopol Fire District; Gold Ridge Fire Protection District; Rancho Adobe Fire Protection District (Sonoma Local Agency Formation Commission, 2020); and Sonoma County Fire District (Sonoma County Fire District, n.d.). For discussion regarding wildfire, refer to Section 3.20, “Wildfire.”

Police Protection

The Sonoma County Sheriff's Office provides the primary law enforcement, court security services, and detention services throughout the unincorporated area of Sonoma County and within the county. The Sheriff’s Office provides these services, covering over 1,600

square miles and population of over 500,000 people (Sonoma County Sheriff's Office, 2020).

Schools

The Proposed Project area is located within the Sonoma County School Districts. There are 40 school districts that provide kindergarten through grade 12 education for Sonoma County: 31 elementary school districts; three high school districts; and six unified districts (Sonoma County Office of Education, n.d.). The Proposed Project area is located within the Cotati-Rohnert Park Unified School District, Gravenstein School District, Sebastopol School District, Oak Grove School District, Forestville School District, Piner-Olivet School District, Wright School District, Santa Rosa City Schools District and Roseland School District boundaries. Refer to the discussion below on Santa Rosa City Schools District for the nearest school to the Proposed Project site. In addition, there are 56 charter schools within Sonoma County. Refer to the discussion below on Santa Rosa Schools for the nearest charter school to the Proposed Project site. (California Department of Education, 2019).

Parks

The Proposed Project area is located near Howarth Memorial Park and Spring Lake Regional Park in Santa Rosa. There are three Proposed Project test station sites along Spring Creek Trail within Spring Lake Regional Park (Test Stations SR 787+00, SR 801+20, and SR 812+25). Each site is approximately 15 feet from the trail. For discussion regarding nearby recreational facilities and parks, refer to Section 3.16, “Recreation.”

Other Public Facilities

Other public facilities within the Proposed Project area include the Sonoma County Library system. There are approximately 14 branches within the library system. The Sonoma County Library serves approximately 495,000 residence in the nine Sonoma County communities and their surrounding areas, as well as the predominantly rural area of west Sonoma County (Sonoma County Library, 2019). The larger branches are located in the largest communities of Santa Rosa (with three locations), Petaluma and Rohnert Park, with small branches and storefront libraries (or rural stations) serving the remainder of Sonoma County (Sonoma County Library, 2019). The Central Library located on 211 E St, Santa Rosa is approximately 0.50 mile from the Cathodic Protection Station SR 633+89.

City of Santa Rosa

Public services provided in the City of Santa Rosa include fire protection, police protection, education, and recreation and parks.

Fire Protection

The City of Santa Rosa Fire Department (SRFD) provides fire suppression, rescue, first response emergency medical services, operations-level hazardous materials response, fire prevention, and life-safety services within the City of Santa Rosa. The SRFD provides these services from ten fire stations covering 42 square miles serving a community population of over 181,000 residents within the service area. The SRFD also serves as the Roseland Fire Protection District Fire Department through contract along with automatic aid agreements with the County of Sonoma and the Sonoma County Fire District (City of Santa Rosa, 2020). The SRFD's Station 1 located on 955 Sonoma Avenue is approximately 79 feet from the Proposed Cathodic Protection Station SR 663+89.

Police

The Santa Rosa Police Department (SRPD) provides police protection services throughout the City of Santa Rosa. SRPD consists of four divisions (Administration, Field Services Division, Special Services Division (Investigations), and Technical Services Division) (City of Santa Rosa, n.d.). The SRPD office is located at 965 Sonoma Avenue (City of Santa Rosa, n.d.) and is approximately 195 feet from the Proposed Cathodic Protection Station SR 663+89.

Schools

As discussed above, the Proposed Project area is located within the jurisdiction of the Santa Rosa City Schools District. The Santa Rosa City Schools District is comprised of 24 schools, including nine elementary schools, five middle schools, five high schools, one continuation high school, four dependent charter schools, a K-8 charter school for the arts, and an accelerated charter school (Santa Rosa City Schools, 2019). The nearest school to a Proposed Project site is Herbert Slater Middle School located at 3500 Sonoma Avenue, Santa Rosa within approximately 204 feet of the Proposed Cathodic Protection Station SR 761+00.

As mentioned above, there are 56 charter schools within Sonoma County. The nearest school to a Proposed Project site is Santa Rosa French American Charter located at 1350 Sonoma Avenue, Santa Rosa (Santa Rosa City Schools, 2019) within approximately 400 feet of the Proposed Cathodic Protection Station SR 677+00.

Parks

For discussion regarding nearby recreational facilities and parks, refer to Section 3.16, "Recreation."

Discussion of Potential Impacts

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

a) ***Would the project 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 public services: fire protection, police protection, schools, parks, or other facilities? - No Impact***

During each of the components proposed construction period (approximately one to three weeks), up to 6 construction workers would be employed at the Proposed Project site, depending on the particular component of the Proposed Project and construction activities taking place (see Project Description). It is expected that construction workers could come from any part of Sonoma County. While it is possible that some workers might temporarily relocate from other areas, the Proposed Project would not result in a substantial increase in the local population. Potential incidents requiring law enforcement, fire protection, or emergency services could occur during construction; however, any temporary increase in incidents would not exceed the capacity of local law enforcement, fire protection, and emergency facilities such that new or expanded facilities would be required, because any temporary increase in the local population during project construction would be negligible and could be accommodated by existing service providers. Additionally, the project's construction would not be expected to significantly affect the City of Santa Rosa Police or the County Sheriff's ability to maintain acceptable service ratios, response times, or performance objectives. Coordination between Sonoma Water and the City of Santa Rosa and the County of Sonoma has taken place and will continue to take place to ensure that construction, operation, and maintenance activities do not affect public services. Therefore, the Proposed Project would have no impact on demand related to fire and police services.

Further, the Proposed Project would not induce growth that requires additional or altered schools, parks or other public facilities to maintain service ratios or performance objectives due to such demands. Therefore, no impact would occur on schools, parks, or other public facilities.

The Proposed Project would not result in a permanent increase in the local population. Operation and post-construction maintenance activities would be similar to existing maintenance activities and would not result in an increase in demand for public services, including fire protection, police protection, schools, hospitals, or other services. Therefore, there would be no operation and maintenance impacts related to public services.

Section 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 Proposed Project area overlaps portions of Sonoma County that are popular for outdoor recreation. Popular recreation within the Proposed Project area includes swimming, boating, and fishing on the Russian River; wine tasting; cycling; hiking; and other activities.

While the majority of Proposed Project components are not located within areas used directly for recreation, three recreation facilities occur within the Proposed Project area. These include Howarth Park, managed by the City of Santa Rosa; Spring Lake Regional Park, managed by Sonoma County Regional Parks; and Sports City Cotati, a private facility specializing in indoor sports such as soccer. Several Proposed Project sites along the Santa Rosa Aqueduct are located within Howarth Park and Spring Lake Regional Park.

Howarth Park is a 138-acre community park that includes a lake, tennis courts, large playground, carousel, miniature train ride, trails, and other facilities (City of Santa Rosa, 2020). Spring Lake Regional Park is a 320-acre community park that includes a lake, swimming lagoon, Environmental Discovery Center, campgrounds, and picnic areas (Sonoma County Regional Parks, 2020). Proposed Project components located within or adjacent to Howarth Park include: Cathodic Protection Station SR 771+40 (located just outside the park boundary next to Summerfield Road); Test Station SR 787+00 (located directly adjacent to a paved access road and multi-use trail); and Test Station SR 801+20 (located directly adjacent to a paved access road and multi-use trail); and Cathodic Protection Station SR 812+25 (located on the boundary between Howarth Park and Spring Lake Regional Park adjacent to a paved multi-use trail).

Spring Lake Regional Park is owned by Sonoma Water (Spring Lake is a flood-control reservoir) and operated for recreation by Sonoma County Regional Parks. Four potable water storage tanks are located within the park and are owned, operated, and maintained by Sonoma Water. Additional Proposed Project components that are located within Spring Lake Regional Park include Test Station SR 821+40 (located at the existing potable water storage tanks).

One Proposed Project site along the Russian River to Cotati Aqueduct, Cathodic Protection Station RR 781+00, would be constructed adjacent to the entrance to Sports City Cotati, located at 6700 Stony Point Road, Cotati. Please see Figures 2-9, 2-10, 2-15, and 2-21 in Section 2.0, “Project Description,” for additional location information.

Discussion of Potential Impacts

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

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? - No Impact***

The Proposed Project would not 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. Construction activities and maintenance activities would last one to two weeks per site and would include the use of heavy equipment within and adjacent to paved trails at Howarth Park and Spring Lake Regional Park as well as the entrance to Sports City Cotati. While these activities would result in minor delays in pedestrian and bicycle movement along trails and vehicle traffic at the sports complex, these delays would be short-term (a few minutes at a time) and temporary. Operation of the Proposed Project would not impact recreation activities in any way. Therefore, it is not anticipated that project-related activities at these facilities would divert recreationists to other facilities and it is not anticipated that other facilities would see increased use as a result. Additionally, project-related activities along trails at Howarth Park and Spring Lake Regional Park and at the Sports City Cotati facility would not lead to substantial physical deterioration at these facilities because surfaces would be restored to their original condition and no trees would be removed. Therefore, the Proposed Project would not 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 and no impact is anticipated.

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? - No Impact***

The Proposed Project does not include construction of new recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. There would be no impact.

Section 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 used (e.g., farm equipment)?	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☒	☐	☐

Transportation Setting

The Proposed Project is located in unincorporated Sonoma County and within the City of Santa Rosa (Figures 2-1 through 2-23).

Highways in the Proposed Project area include State Route 12, State Route 116, and U.S. Highway 101. These highways serve cross-town as well as intra-county trips and provide regional linkages to the San Francisco Bay Area, the coast, and northern California. The State Department of Transportation (CalTrans) is responsible for maintenance of these highways (City of Santa Rosa, 2009). U.S. Highway 101 is the major north-south route in Sonoma County and experiences severe congestion during morning and evening commutes. State Route 12 is the main east-west route in Sonoma County from Sebastopol through the City of Santa Rosa, and Sonoma Valley east to the Napa Valley. State Route 116 connects Jenner on the coast to Russian River communities, such as Guerneville, southeast through Sebastopol, Cotati, and Sonoma Valley. The Santa Rosa Aqueduct crosses under U.S. Highway 101 north of downtown Santa Rosa. The Russian River to Cotati Aqueduct crosses Highway 12 west of Santa Rosa and Highway 116 west of Rohnert Park. No Proposed Project-related activities would take place within Highway 101, but some construction-related activities and access would take place along Highways 12 and 116 as described in Appendix F, “Transportation Site-specific Setting and Potential Impact Tables.”

The Proposed Project area also includes a number of multi-lane regional streets, such as multi-lane boulevards and parkways, which connect town centers to the greater region; transitional streets, such as avenues and main streets, which connect residential neighborhoods to commercial centers and service commercial districts; local streets,

which provide access to neighborhood destinations in quiet neighborhoods, such as alleys, lanes, neighborhood streets, and minor streets; as well as infrastructure related to alternative modes of transportation, such as bicycle lanes, bus routes and bus stops, and recreational trails (City of Santa Rosa, 2009). No Proposed Project-related activities would block traffic along roadways in the area, but some construction-related activities and access would take place within or directly adjacent to roadways including 1st Street, 5th Street, Apache Street, Gold Leaf Lane, Hall Road, Jennings Avenue, Laughlin Road, Madrone Avenue, Mark West Station Road, Meadow Lane, Ripley Street, Russell Lane, Sanford Road, Sonoma Avenue, Steve Olson Lane, Summerfield Road, Vine Hill Road, Walker Avenue, West Steele Lane, and Wilson Street. These locations are described in further detail in Appendix F.

Public transportation services in the Proposed Project area include local and intercity bus service through Sonoma County Transit and Santa Rosa CityBus. Several bus routes use roads in the Proposed Project area. These include Santa Rosa CityBus routes 4, 4B, 6, 7, 8, and 18 as well as Sonoma County Transit bus routes 26 and 52. While no Proposed Project-related activities would prevent bus service from portions of these service areas, construction-related activities within roadways that overlap bus routes could result in temporary delays at locations described in Appendix F.

Bicycle lanes in the Proposed Project area include Class I Bikeways (bike paths) that provide for travel separate from streets and highways; Class II Bikeways (bike lanes) that provide a striped lane for travel on a street or highway; Class IIB Bikeways (buffered bike lanes) that provide a buffer area between the bike lane and a vehicle travel lane or between the bike lane and parked cars; Class III Bikeways (bike route by sign), which provide for shared use with vehicles and pedestrians; Class IIIB Bikeways (bicycle boulevards) that provide for pedestrians and low speed vehicle traffic and include traffic calming treatments; and Class IV Separated Bikeways, which include a bicycle lane that is physically separated from vehicle traffic by a vertical element such as a curb, bollards, or parking aisle. While no bikeways would be removed or permanently modified as a result of the Proposed Project, construction-related activities could cause temporary delays at locations described in Appendix F.

County of Sonoma General Plan 2020

The County of Sonoma General Plan 2020 Circulation and Transit Element includes goals, objectives, and policies that support movement of automobiles and support alternative modes of transportation. Regarding construction of projects that could impact circulation, particularly for bicycles and pedestrians, the General Plan includes the following policy:

> **Policy CT-3z:** Require road construction projects to minimize their impacts on bicyclists and pedestrians through the proper placement of construction signs and

equipment and by providing adequate, safe, well-marked detours. Where it is safe to do so, allow bicyclists and pedestrians to pass through construction areas in order to avoid detours. Where two-way bicycle and pedestrian travel can be safely accommodated in a one-way traffic control zone, adequate signage shall be placed to alert motorists of bicycles and pedestrians in the lane (Sonoma County Permit and Resource Management Department, 2008).

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 (City of Santa Rosa, 2009).

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

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

The City of Santa Rosa Bicycle and Pedestrian Master Plan adds to the City's General Plan 2035 by presenting goals, policies, and recommendations to support current and future facilities available for pedestrians and bicyclists. In particular, the Bicycle and Pedestrian Master Plan proposes to increase access and comfort for people to use pedestrian and bicycle facilities, maintain and expand the network of pathways available, and support a culture of walking and biking (City of Santa Rosa, 2018 Update).

Sonoma County Transportation Authority Moving Forward 2040

The Sonoma County Transportation Authority's (SCTA) Comprehensive Transportation Plan, called Moving Forward 2040, outlines the following goals:

1. Maintain the System
2. Relieve Traffic Congestion
3. Reduce Greenhouse Gas Emissions
4. Plan for Safety and Health
5. Promote Economic Vitality

To support these goals, Moving Forward 2040 proposes road and transit projects that would improve circulation of vehicles and promote alternative modes of transportation (Sonoma County Transportation Authority, 2016).

Senate Bill 743

Senate Bill 743 (Steinberg 2013) (Public Resources Code section 21099) required changes to California Environmental Quality Act analysis of transportation impacts to emphasize reduction of greenhouse gas emissions in place of an emphasis on level of

service. Therefore, the analysis below does not address level of service but does estimate vehicle miles traveled (VMT) for construction-related activities.

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? - Less than Significant Impact with Mitigation***

Operation and maintenance activities of the Proposed Project will not conflict with an applicable plan, ordinance, or policy related to the circulation systems in the project area, including transit, roadway, bicycle and pedestrian facilities. Built components of the Proposed Project would not alter traffic circulation patterns or reduce access to alternative modes of transportation. Additionally, vehicle traffic associated with Project-related operation and maintenance activities would be similar to that of the existing corrosion prevention systems because staff would shift from visiting the existing, aging components to visiting the newly installed Proposed Project components. Further, because newly installed Proposed Project components would likely require less maintenance than the existing, deteriorating corrosion protection systems components, maintenance activities would likely be reduced in frequency. Therefore, no impact related to operation and maintenance of the Proposed Project is anticipated.

Construction activities for the Proposed Project would result in short-term and temporary impacts to traffic in the areas immediately adjacent to project sites. The duration of impacts related to short-term disruption of traffic flow and potential increased congestion generated by construction vehicles would be limited to the period of time needed to complete construction of the Proposed Project components, including up to one week per Test Station, up to two weeks per Cathodic Protection Station, and up to one week per vegetation maintenance site per year. Construction activities for Cathodic Protection Sites and Test Stations that would generate off-site traffic would include the delivery of construction vehicles and equipment to the Proposed Project sites, the daily arrival and departure of construction workers, the delivery of materials throughout the construction period, and removal of excavated material throughout the construction period. Construction equipment would be delivered to and removed from the Proposed Project sites in phases for the different construction activities. Although most excavated materials would be stockpiled and then backfilled after installation in non-roadway areas, it was conservatively assumed for the traffic impact analysis that all excavated materials would be exported and disposed of offsite in accordance with all local, state and federal laws and regulations. Some exported materials would be transferred to the nearest landfill to be determined by the contractor.

There would be up to six construction workers per site on a peak day, and they would commute to and from the worksite primarily before or after peak traffic hours. Parking for worker vehicles and construction vehicles would be available in designated on-site staging areas or adjacent roads and parking lots. Total VMT per construction site is estimated in Table 3.17-1 below.

Table 3.17-1. Vehicle Miles Traveled Due to Project-related Construction Activities

	Workers per Site	Estimated Worker Trips per Construction Day	Construction Days per Site	Trips Related to Equipment and Material Drop-off and Pick-up per Site	Estimated Distance per Trip (miles)	Total VMT per Site
Test Station	6	12	5	10	20	7,400
Cathodic Protection Station	6	12	10	20	20	14,800

Construction-related activities would overlap bikeways and bus routes in some locations, as described in Appendix F. Bus routes that would overlap construction-related activities for the Proposed Project include Santa Rosa CityBus routes 4, 4B, 6, 7, 8, and 18 as well as Sonoma County Transit bus routes 26 and 52. The Montgomery Village Transit hub serving Santa Rosa CityBus routes 4, 4B, 7, 8, and 18 located on Sonoma Avenue adjacent to the Montgomery Village Shopping Center would be impacted temporarily during construction of Test Station SR 721+40. Construction activities would also overlap a Class II Bike lane in this location. Some delays could result during construction activities; however, this effect would be of limited duration. Sonoma Water staff have consulted with the County of Sonoma and the City of Santa Rosa and have determined that these potential impacts to the Montgomery Village Transit hub as well as other City and County public transit and bicycle routes that overlap the Proposed Project would be reduced to less than significant levels through implementation of Mitigation Measure TRAN-1 (Traffic Control Plan) described below. Additionally, implementation of the Proposed Project would neither directly nor indirectly eliminate existing or planned alternative transportation corridors or facilities (e.g., bike paths, lanes, bus turnouts, etc.), or include changes in policies or programs that support alternative transportation.

Additionally, construction-generated traffic would be temporary, and therefore, would not result in any long-term degradation in operating conditions on any locally used roadways. The impact of construction-related traffic would be a temporary and intermittent lessening

of the capacities of streets in the immediate vicinity of the Proposed Project sites due to the slower movements and larger turning radii of construction trucks compared to passenger vehicles. Drivers could experience delays if they were traveling behind a heavy truck. However, such transportation and traffic impacts would be reduced to less than significant levels through implementation of Mitigation Measure TRAN-1 (Traffic Control Plan).

In some locations, construction activity would take place within a County or City roadway (see Appendix F). In these locations, encroachment permits would be required and the contractor would be required to submit a Traffic Control Plan as described below. The following Mitigation Measure TRAN-1 (Traffic Control Plan) would reduce potential construction-related impacts on transportation in the vicinity of the Proposed Project to less than significant. The Proposed Project specifications will require the contractor to comply with Mitigation Measure TRAN-1 (Traffic Control Plan), which will be included in the project specifications.

Mitigation Measure TRAN-1: Traffic Control Plan

Sonoma Water will require contractors, through project contract specifications, to implement the following:

1. Notification:
    a) 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. Provide notice to property owner.

    b) At least seven days prior to commencement of work, post notifications in the Proposed Project area to inform drivers of impending construction work and likely delays and detours.

    c) Notify the property occupants, in writing, at least three days in advance of the trenching across property occupants' driveways. Provide notice to property owner.

    d) At least seven days prior to commencement of work, and in compliance with any additional notice requirements set forth in any applicable permits, coordinate vehicular access with affected entities, including, but not limited to, the following:

        i. CalTrans
        ii. Charles M. Schulz Sonoma County Airport
        iii. City of Santa Rosa

iv. City of Santa Rosa Police Department
v. Hebert Slater Middle School
vi. Montgomery Village Shopping Center
vii. Recology (local recycling, compost, and trash collection hauler)
viii. Santa Rosa CityBus
ix. Santa Rosa Fire Department
x. Santa Rosa French-American Charter School
xi. Santa Rosa Junior College, Shone Farm
xii. Sonoma County Fire and Emergency Services Department
xiii. Sonoma County Regional Parks
xiv. Sonoma County Sherriff
xv. Sonoma County Transit
xvi. Sonoma-Marin Area Rail Transit
xvii. Sports City Cotati

e) If any applicable permits require contractor to notify residents or any organization of traffic detours or delays, provide such notice(s) to property owner.

2. Traffic Control Measures:

a) Traffic control and safety precautions shall conform to the “California Manual on Uniform Traffic Control Devices” (latest edition), and applicable provisions of the County of Sonoma, City of Santa Rosa, and California Department of Transportation encroachment permits.

b) Pay for traffic signage, including flagging and modification of traffic signal operation.

c) Provide safe passage for vehicular and pedestrian traffic through the work at all times.

d) 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. Permit the traffic equal flow time in each direction.

e) Maintain access to public and private buildings, businesses and driveways. Provide approved metal “bridge” or temporary backfill for access when and where required within thirty minutes after request by property owner except that emergency vehicles and personnel shall be provided immediate access at all times.

f) Restore access to residences for non-working hours, holidays, and weekends.

3. Maintain Traffic Control Measures:

   a) Maintain traffic control through the site and provide local access as specified herein regardless of rain or other causes, either within or beyond the control of contractor, which may force suspension or delay of the work. At all times keep on the site such materials, labor forces, and equipment as may be necessary to keep the streets and driveways within the site open to traffic and in good repair. Expedite the passage of such traffic, using such labor forces and equipment as may be necessary.

Long-term project operation and maintenance would be similar to the existing traffic and circulation conditions within the Proposed Project area, consisting of routine maintenance trips, inspection, and vegetation management activities. The impact would be less than significant.

b) *Conflict or be consistent with CEQA Guidelines section 15064.3, subdivision (b)? - No Impact*

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 County of Sonoma has not yet adopted VMT policies. The City of Santa Rosa has published final draft Vehicle Miles Traveled Guidelines (City of Santa Rosa, 2020) to identify key elements required for preparing and reviewing transportation analysis studies in Santa Rosa. The City of Santa Rosa’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” (City of Santa Rosa, 2020).

The City of Santa Rosa'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 2020).
>
> 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 ½ 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, a lead agency may tier from that analysis.
>
> CEQA Guidelines 15064.3(b) describes criteria for analyzing transportation impacts related to land use projects and transportation projects, and addresses the discretion of a lead agency to determine methodology, including qualitative and quantitative methods of analysis. The Proposed Project is neither a land use project nor a transportation project under CEQA Guidelines 15064.3(b). A transportation analysis is not required by the City of Santa Rosa's guidelines

because 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), it is not a project with unique land uses or operating characteristics, the project does not require discretionary planning approval and was not previously analyzed under a prior transportation analysis or similar study, and 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 long-term net increase in VMT. Table 3.17-1 provides a summary of the VMT due to project-related construction activities. As described in Section 3.17(a) above, built components of the Proposed Project would not alter traffic circulation patterns or reduce access to alternative modes of transportation. Vehicle traffic associated with Project-related operation and maintenance activities would be similar to that of the existing corrosion prevention systems because staff would shift from visiting the existing, aging components to visiting the newly installed Proposed Project components. Further, because newly installed Proposed Project components would likely require less maintenance than the existing, deteriorating corrosion protection systems components, maintenance activities would likely be reduced in frequency.

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. As there are fewer than 110 trips per day, this project can be screened as a small project that has a less than significant impact (OPR, 2018).

In addition, the Proposed Project would not exceed the City of Santa Rosa's thresholds of significance as it would not conflict with a program, plan, ordinance, or policy addressing the circulation system, would not conflict with CEQA Guidelines Section 15064.3(b), would not substantially increase hazards due to geometric design or incompatible uses (see Section 3.17c, Transportation), and would not result in inadequate emergency access (see Section 3.17d, Transportation).

Regarding the use of qualitative analysis and methodology, Sonoma Water staff have used both quantitative and qualitative methods to assess potential transportation analysis, consistent with CEQA Guidelines 15064.3(b)(3) and 15064.3(b)(4). Because the Proposed Project is consistent with the provisions of CEQA Guidelines 15064.3, there would be no impact.

c) *Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? - Less than Significant Impact*

The Proposed Project does not include geometric design features or incompatible uses. There would be no increase in hazards generated by the project or any changes to the existing designs or uses of roadways. The Proposed Project would include installation of aboveground and belowground facilities associated with existing Sonoma Water facilities. Activities, such as agricultural practices, currently taking place within these areas could continue to occur within these locations. Designs of aboveground facilities installed in roadways include flush-mounted equipment to avoid obstructing activity. Designs of those facilities located within vineyards or other agricultural lands include bollards and other protective features and are located to avoid incompatible activities. The Proposed Project would not introduce uses that are incompatible with existing uses already served within the Proposed Project area. This potential impact would be less than significant.

d) *Result in inadequate emergency access? - Less than Significant Impact with Mitigation*

As described above, neither Proposed Project construction nor operations and maintenance activities would permanently alter the physical configuration of the existing roadway network serving the area; however, construction activities within roadways could result in temporary delays. Additionally, some construction activities would take place within the Sonoma Avenue entrance to the parking lot that serves both, Santa Rosa Fire District's Fire Station 1 and City of Santa Rosa Police Department located at 955 Sonoma Avenue. Another entrance to this parking lot is located on Brookwood Avenue and would remain unaffected. The entrances to the Fire Station bays would not be affected. The entrance would not be blocked but delays during construction would be possible. Coordination between Sonoma Water and the City of Santa Rosa, Santa Rosa Fire District, City of Santa Rosa Police Department, and the County of Sonoma has taken place and will continue to occur in order to ensure that construction, operation, and maintenance activities do not affect emergency services or access. With implementation of Mitigation Measure TRAN-1 (Traffic Control Plan), such impacts would be reduced to less than significant.

Section 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: (1) 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; (B) included in a local register of historical resources as defined in subdivision (k) of Section 5020.1; (2) 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

As described in Section 3.5, “Cultural Resources,” notification of the Proposed Project under PRC 21080.3(b) (AB52 tribal cultural resources consultation) was sent to seven Native American tribes that are known to have traditional lands or cultural places located within the boundaries of the Proposed Project. Sonoma Water has received a formal request to be informed through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe from the Middletown

Rancheria, Lytton Rancheria, and Federated Indians of Graton Rancheria (FIGR) for projects subject to CEQA. In addition, Sonoma Water staff submitted a letter of request to the Native American Heritage Commission (NAHC) on February 2, 2018, for a list of tribes to consult about potential tribal cultural resources in the Proposed Project areas. The NAHC provided the consultation list of the Native American tribes that are known to have traditional lands or cultural places located within the boundaries of the Proposed Project on February 15, 2018. Formal AB52 consultation letters were sent on February 16, 2018, to the tribes identified on the NAHC consultation list, including Middletown Rancheria, Lytton Rancheria, and FIGR. After an undelivered letter to the Mishewal-Wappo was returned to Sonoma Water, staff sent a follow-up email to Scott Gabaldon on April 9, 2018.

Responses were received from four of the seven tribes contacted. Lytton Rancheria and Stewarts Point Rancheria Kashia Band of Pomo responded that no further consultation was required. Middletown Rancheria responded that they had no comments at that time but would like to be contacted in the case of accidental discovery. Sonoma Water received a formal request from Graton Rancheria for tribal consultation. Consultation with Graton Rancheria included Sonoma Water's sharing of the historical resources study prepared for the Proposed Project, measures proposed for the project, and initial evaluation of potential for cultural and tribal resources impacts.

Discussion of Potential Impacts

Impacts related to TCRs would be potentially significant if the project 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:

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:

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

The archival records searches identified no known historical or archaeological resources sites within the Proposed Cathodic Protection Station and Test Station locations. Historic-period refuse deposits could overlap one of the vegetation maintenance sites but no ground disturbance would occur at vegetation maintenance sites, therefore no impact is

anticipated at vegetation maintenance locations and they are omitted from the analysis below. No tribal cultural resources are known or have been identified that are 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), therefore there would be no impact from the Proposed Project.

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. - Less than Significant with Mitigation***

As described above, there are no known historical, archeological or tribal cultural resources within the Proposed Project area. While no resources have been recorded within the project area, there is potential to uncover previously unidentified tribal cultural resources during ground disturbance. The disturbance or damage of previously unidentified tribal cultural resources would be a potentially significant impact. Implementation of Mitigation Measures CUL-1, CUL-2, CUL-3, and TCR-1 would minimize the potential for the project to adversely affect tribal cultural resources by ensuring that a tribal monitor is present during ground disturbing activities, providing worker awareness training, halting work and implementing recovery or preservation procedures, and would reduce the impact to less than significant.

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

During ground-disturbing construction activities at sites determined by the culturally-affiliated tribe to have an elevated sensitivity to uncover previously unidentified tribal cultural resources, a representative from a culturally affiliated tribe shall be present to monitor ground-disturbing activities.

Section 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 wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
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

Water and wastewater services in the Proposed Project area are provided by Sonoma Water and the City of Santa Rosa. Sonoma Water manages and maintains a water transmission system that provides naturally filtered Russian River water to nine cities and special districts that serve over 600,000 residents in Sonoma and Marin counties. Sonoma Water also manages several county sanitation zones and districts, which provide wastewater collection and treatment as well as recycled water distribution to approximately 22,000 residences and businesses (Sonoma County Water Agency, n.d.). Santa Rosa Water provides drinking water, sewer, and stormwater services to households, businesses, schools, hospitals and other users within the City of Santa Rosa (City of Santa Rosa, n.d.).

Waste management services in the Proposed Project area within Sonoma County involves a number of public and private partners. Sonoma County Department of

Transportation and Public Works (TPW) owns the Sonoma County Central Landfill located north of Petaluma, which includes recycling services and five refuse transfer stations. Republic Services of Sonoma County, Inc. operates the central landfill disposal site, as well as four of the transfer stations, located in Annapolis, Guerneville, Healdsburg, and Sonoma. The transfer stations serve solid waste, construction and demolition debris, and organics. Materials are consolidated at the transfer stations and loaded into large transfer trailers for shipment offsite to the Central Landfill in Petaluma (County of Sonoma, 2020). While these entities provide services within the Proposed Project area, the facilities themselves are located outside of the Proposed Project area.

Recology Sonoma Marin Inc. (Recology Sonoma Marin) provides solid waste collection and recycling in the incorporated and unincorporated areas of Sonoma County within the Proposed Project area. Recology Sonoma Marin collects and transports commercial and solid waste to the Central Landfill (Recology Waste Zero, n.d.). Once at the Central Landfill, the solid waste is sorted and hauled to the following landfills: the Potrero Hills Landfill in Solano County (anticipated to be in operation until approximately 2030), the Redwood Sanitary Landfill in Marin County (anticipated to be in operation until approximately 2039), the Keller Canyon Landfill in Contra Costa County (anticipated to be in operation until approximately 2030) (City of Santa Rosa, 2009).

While the agencies and organizations listed above provide services within the Proposed Project area, the facilities themselves are located outside of the Proposed Project area.

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? - No Impact***

The Proposed Project would involve construction activities relating to the repair and replacement of existing aqueducts' cathodic protection system infrastructure to extend the life of the existing pipelines by up to 50 years. The Proposed Project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunication facilities of which could cause significant environmental effects. No impact would occur.

b) ***Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years? - No Impact***

The Proposed Project would not increase demand for water use and thus would not require expanded water entitlements. Any water use during construction would be minimal and temporary. The Proposed Project would have no impact to existing and reasonably foreseeable future water entitlements and resources. No impact would occur.

c) ***Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? - No Impact***

The Proposed Project would not generate wastewater and as such would not affect the capacity of the wastewater treatment provider beyond existing demand. The Proposed Project directly addresses the repair and replacement of existing aqueducts' cathodic protection system infrastructure. No impact would occur.

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? - No Impact***

Construction and maintenance activities related to the Proposed Project would generate minimal solid waste related to excess construction materials and material removed during site clearing and construction, and as such would not 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. Operation of the Proposed Project would not generate solid waste. No impact would occur.

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

The Proposed Project would not be expected to generate operational waste. Construction activities and maintenance activities related to the Proposed Project would generate minimal solid waste related to excess construction materials and material removed during site clearing and construction. Following construction activities, a majority of the spoils would be used as backfill and would not require disposal.

A majority of the solid waste from construction or maintenance activities would be diverted per California Assembly Bill 939, which requires all cities and counties in California to divert 50 percent of their waste stream away from landfills (CalRecycle, 2018).

The Proposed Project maintenance activities would generate small amount of organic waste as a result of periodic vegetation maintenance activities. Any such wastes would be removed from the Proposed Project area and placed in an approved compost landfill. In addition, small amount of waste materials (e.g., pavement and soil) could be generated

as a result of periodic repair and maintenance activities. Any such wastes would be removed from the Proposed Project area and placed in an approved landfill.

The disposal of all waste would comply with applicable federal, state, and local management and reduction statues and regulations related to solid waste and this potential impact would be less than significant.

Section 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

Recent fires in Sonoma County and throughout the State of California have heightened awareness of the risks that wildfires pose to people and structures in Sonoma County. On October 8, 2017, several wildfires affected the North Bay area. In Sonoma County, these fires eventually consumed more than 5,300 homes and businesses, burned over 110,000 acres, and killed 24 people (County of Sonoma Office of Recovery and Resiliency, 2018).

State Responsibility Area

The California Department of Forestry and Fire Protection (CAL FIRE) is the primary emergency response agency for fire suppression and prevention within the State Responsibility Areas (SRA), which includes much of rural Sonoma County. Approximately 794,000 acres within Sonoma County are SRA lands but 818,000 acres are included in CAL FIRE's Direct Protection Area, including federal and other lands managed by CAL FIRE (Fire Safe Sonoma, 2016). CAL FIRE has ranked most of the SRA within Sonoma County as having a wildfire risk of moderate, high, or very high. The Proposed Project area, in contrast, is ranked as having a low to moderate wildfire risk (California Department of Forestry and Fire Protection, 2007). Portions of the Proposed Project area

that CAL FIRE has ranked as having a moderate fire risk are located near the Russian River and west of Cotati. Along the Santa Rosa Aqueduct, these include: Test Station SR 0+00; Cathodic Protection Station SR 9+66; Test Station SR 14+28; Test Station SR 32+00; Test Station SR 40+50; Test Station SR 49+00; Test Station SR 56+00; Cathodic Protection Station SR 75+00; Test Station SR 90+00; Cathodic Protection Station SR 95+00; and Test Station SR 111+00. Along the Russian River to Cotati Aqueduct, these include: Cathodic Protection Station RR 45+00; Test Station RR 131+00; Cathodic Protection Station RR 714+70; Cathodic Protection Station RR 748+52; Cathodic Protection Station RR 781+00; Test Station RR 798+50; West Sierra Avenue Vegetation Maintenance Site, and Cathodic Protection Station RR 826+55.

The Proposed Project is located within CAL FIRE's Sonoma-Lake-Napa Unit, which includes six counties: Sonoma, Lake, Napa, Yolo, Colusa, and Solano counties. Within this Unit, there are five divisions and ten field battalions. Sonoma County comprises the West Division and Battalion 1410 encompasses much of central Sonoma County, from Bodega Bay to Mount St. Helena, including the majority of the Proposed Project area. The portion of the Proposed Project near Cotati is located within Battalion 1412, which encompasses much of southern Sonoma County from Rohnert Park south to San Pablo Bay and from Two Rock east to Sonoma.

Local Responsibility Area

Local fire districts are responsible for fire suppression and prevention within Local Responsibility Areas (LRAs). Within the LRAs, including much of incorporated Sonoma County and the Santa Rosa plain, the Proposed Project area is generally ranked as having a low fire risk. The City of Santa Rosa has prepared a draft risk assessment map for development of the City's Community Wildfire Protection Plan. This risk assessment indicates that Proposed Project components within the LRA and, in particular, within the City of Santa Rosa, are at low fire risk. A few sites are ranked as having a moderate risk along the Santa Rosa Aqueduct within Howarth Park and Spring Lake Regional Park (Cathodic Protection Station SR 771+40, Test Station SR 801+20, Test Station SR 812+25, and Test Station SR 821+40) (City of Santa Rosa Fire Department, 2020).

The LRAs within the Proposed Project area overlaps several local fire districts, including: Forestville Fire Protection District, Windsor Fire Protection District, Graton Fire Protection District, Sonoma County Fire District, Sebastopol Fire District, Gold Ridge Fire Protection District, and Rancho Adobe Fire Protection District (Sonoma Local Agency Formation Commission, 2020).

Regulatory Background

California Fire Plan

The California Fire Plan addresses wildfire risk reduction at the statewide level and emphasizes community involvement, risk assessment, and proactive pre-fire management actions to reduce risk. The plan also describes California's fire risks as worsening due to a growing population in wildland areas, an accumulation of dry vegetation in the landscape due to large scale fire suppression over time, and increasing costs of firefighting services (California Department of Forestry and Fire Protection, 2018).

California Public Resources Code

Section 4427

PRC Section 4427 limits the use of any motor, engine, boiler, stationary equipment, welding equipment, cutting torch, tarpot, or grinding device from which a spark, fire, or flame may originate, when the equipment is located on or near land covered by forest, brush, or grass during any time of the year when burning permits are required. Before such equipment may be used, all flammable material, including snags, must be cleared away from the area around such operation for a distance of 10 feet. A serviceable round-point shovel with an overall length of not less than 46 inches and a backpack pump water-type fire extinguisher, fully equipped and ready for use, must be maintained in the immediate area during the operation. This section does not apply to portable powersaws and other portable tools powered by a gasoline-fueled internal combustion engine.

Section 4431

PRC Section 4431 requires users of gasoline-fueled internal combustion–powered equipment operating within 25 feet of flammable material on or near land covered by forest, brush, or grass to have a serviceable round-point shovel with an overall length of not less than 46 inches or one serviceable fire extinguisher at the immediate location of use during periods when burn permits are required.

Section 4442

PRC Section 4442 prohibits the use of internal combustion engines running on hydrocarbon fuels on any land covered by forest, brush, or grass unless the engine is equipped with a spark arrestor and is constructed, equipped, and maintained in good working order when traveling on any such land.

Local Plans, Policies, Regulations, and Ordinances

Sonoma County General Plan

The Public Safety Element of the Sonoma County General Plan 2020 (Sonoma County 2014) identifies the following goal, objective, and policy that are applicable to the proposed project.

Goal PS-3: Prevent unnecessary exposure of people and property to risks of damage or injury from wildland and structural fires.

- Objective PS-3.3: Use the Sonoma County Hazard Mitigation Plan to help reduce damages from wildland fire hazards.
    - Policy PS-3f: Encourage strong enforcement of State requirements for fire safety by the California Department of Forestry and Fire Protection.

Sonoma County Community Wildfire Protection Plan

The Healthy Forests Restoration Act of 2003 established the Community Wildfire Protection Plan (CWPP) as a process for enhancing collaboration between stakeholders from federal, state and local agencies and community groups as they search for solutions to Wildland/Urban Interface (WUI) wildfire issues. There are three requirements for a CWPP: it is collaboratively developed with input from agencies and community members; it identifies and prioritizes treatment areas, mitigation strategies and treatments; and it recommends measures to reduce the ignitability of structures (Fire Safe Sonoma, 2016). The Sonoma County CWPP addresses issues such as fire risk and barriers to safe evacuation within the SRA. The Proposed Project area overlaps the SRA.

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 Impact***

Construction, operation, and maintenance of the Proposed Project would not impair an adopted emergency response plan or emergency evacuation plan, such as the Sonoma County CWPP, California Fire Plan, or the Sonoma County General Plan. Construction-related and certain maintenance-related activities would include movement of equipment and vehicles on project area roadways. Project-related traffic impacts are addressed in Section 3.17 Transportation. As described in Mitigation Measure TRANS-1, project specifications will require the contractor to submit and implement a traffic control plan. Construction footprints at sites adjacent to roadways are designed to minimize impacts

to traffic and avoid blocking roadways. Finished above-ground components of the Proposed Project would be small in size and would not block roadways or otherwise be located in areas that could impede emergency response or evacuation activities. Therefore, the Proposed Project would not impede emergency response plans or evacuation plans and this potential impact would be less than significant.

b) ***Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? - Less than Significant Impact with Mitigation***

The Proposed Project area includes landscapes within the SRA and LRA ranked by CAL FIRE and the City of Santa Rosa as having a low to moderate fire risk. The Proposed Project area does not include areas with steep slopes or prevailing winds or topography that add to fire risk. Neither are project components located within areas that have burned in recent wildfires. Although the risk of wildfire is not elevated in the Proposed Project area, Sonoma Water's project specifications will require that contractors comply with Public Resources Code Sections 4427, 4431, and 4442 during construction and maintenance activities to reduce risk of ignition in the Proposed Project areas. Additionally, Sonoma Water's contractor will prepare and implement a Fire Protection Plan during construction activities. With the following mitigation measures, risks will be mitigated to a level that is less than significant.

Mitigation Measure WILD-1. Prepare and implement a Fire Protection Plan to minimize potential for wildland fires during construction activities.

Before construction begins, Sonoma Water and its contractors shall develop a fire protection plan for implementation during construction activities as specified in the project specifications. This plan will require:

- Equipment shall include spark arresters;
- Equipment staging areas and worker parking areas are cleared of all extraneous flammable materials;
- Fire extinguishing equipment will be accessible during vegetation management, construction activities, and maintenance activities;
- Crews are informed of Fire Protection Plan and trained to follow method of operation in case of fire;
- Crews will have relevant contact information on hand to identify who to contact in case of emergency;

- Crews will notify authorities of any fire;
- Sites will be accessible to emergency vehicles during performance of work;
- Require that light trucks and cars with factory-installed (type) mufflers be used only on roads where the roadway is cleared of vegetation. These vehicle types shall maintain their factory-installed (type) muffler in good condition.
- Smoking is prohibited in wildland areas, with smoking limited to paved areas or areas cleared of all vegetation.
- Require that nylon or other non-metal string be used in string trimmers to reduce risk of sparks.

c) ***Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. - Less than Significant Impact***

The Proposed Project includes installation of electrical facilities, including rectifiers and solar panels, in order to provide an electrical supply to cathodic protection equipment. Project specifications shall continue to require compliance with California Fire Code and all State laws and City of Santa Rosa and County of Sonoma ordinances, rules of the State or City of Santa Rosa or County of Sonoma Health Departments, rules of the National Board of Fire Underwriters and National Fire Protection Associations, and local power company regulations for mechanical and electrical work. Therefore, this impact would be less than significant.

d) ***Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes? - No Impact***

The Proposed Project does not include any structures on or near slopes that are vulnerable to post-fire hazards related to landslides or flooding. The Proposed Project area is relatively flat and does not include steep slopes or mapped areas of landslide potential as identified by the City of Santa Rosa or County of Sonoma (City of Santa Rosa, March 2009) (County of Sonoma, 2017). Therefore, there would be no impact.

Section 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 which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

a) ***Does the project have the potential to 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, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? - Less than Significant Impact with Mitigation***

As discussed in the analysis above, potential impacts were identified for biological resources, cultural resources, geology & soils, noise, transportation, tribal cultural resources (refers to CUL mitigation measures), and wildfire. All potential impacts associated with the Proposed Project have been fully identified and mitigated to less than significant levels in this document. Therefore, the Proposed Project does not have the

potential to 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, 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 pre-history.

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)? - No Impact***

The potential for project-generated impacts to contribute to a significant cumulative impact would arise if the impacts are located within the same geographic area and/or occur at the same time. The Proposed Project includes construction, operation, and maintenance of 31 Cathodic Protection Stations and 49 Test Stations over the course of two or more construction seasons. Construction and maintenance activities at each location would be temporary and short-term and operation of the Proposed Project would not substantially change the current operation of the Santa Rosa and Russian River to Cotati aqueducts. With regard to potential impacts related to transportation, as described in Section 3.17, “Transportation,” Sonoma Water and Contractor would work with the County of Sonoma and City of Santa Rosa to acquire encroachment permits where required. These processes would facilitate coordination with the County and City of Santa Rosa to avoid overlap of project-related activities with road improvements, utility-related projects, or other projects that could overlap geographically or temporally with the Proposed Project. The Proposed Project also includes occasional vegetation maintenance activities at four locations. These locations are generally located within and directly adjacent to Sonoma Water easements, therefore it’s unlikely that other projects would overlap in location or timing. These activities would be temporary and short-term and unlikely to result in cumulative impacts.

In order to identify potential related projects that could combine with the Sonoma Water staff consulted with and researched the websites of Permit Sonoma, Sonoma County Regional Parks, the County of Sonoma Transportation and Public Works Department (TPW), Sonoma County Transportation Authority, City of Santa Rosa, and Caltrans. The Sonoma County General Plan was also consulted for specific regional trends and projections.

Results of the analysis determined that there is no cumulative impact anticipated, including no planned road improvements at Proposed Project sites. All impacts associated with the Proposed Project have been fully identified in this document. No impacts have been identified that could be cumulatively considerable.

c) ***Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? - Less than Significant with Mitigation***

As discussed in the above resource sections, potential impacts were identified for biological resources, cultural resources, geology & soils, noise, transportation, tribal cultural resources (refers to CUL mitigation measures), and wildfire. The potentially significant impacts described in these resource sections would be reduced to less than significant with the implementation of the identified mitigation measures. The impacts with potential to adversely affect human beings include construction- and maintenance-related noise, transportation, and wildfire. As described in the noise, transportation and wildfire sections, all potential impacts were reduced to a less than significant level. Therefore, the Proposed Project would result in less-than-significant effects on human beings, directly or indirectly. This impact would be less than significant with mitigation.

Chapter 4 List of Preparers

This IS/MND was prepared by the Sonoma County Water Agency under the direction of Grant Davis, General Manager. The following individuals prepared the document or provided technical assistance or expertise.

Sonoma County Water Agency

Anne Crealock, Senior Environmental Specialist, Lead
Jessica Martini-Lamb, Environmental Resources Manager
Yvette O'Keefe, Senior Environmental Specialist
Connie Barton, Senior Environmental Specialist
David Cook, Senior Environmental Specialist
Patrick Lei, Resource Programs Technician II
Hanna Salafia, Engineer III
Rosario Williams, Office Assistant II

Counsel

Adam Brand, Sonoma Chief Deputy County Counsel
Verne Ball, Sonoma Deputy County Counsel

Chapter 5 References

Association of Bay Area Governments. (2018, November). *Plan Bay Area Projections 2040.* Retrieved March 9, 2020, from Association of Bay Area Governments: http://mtcmedia.s3.amazonaws.com/files/Projections_2040-ABAG-MTC-web.pdf

Bay Area Air Quality Management District. (2017, 1 5). *Air Quality Standards and Attainment Status*. Retrieved July 3, 2019, from Bay Area Air Quality Management District: https://www.baaqmd.gov/about-air-quality/research-and-data/air-quality-standards-and-attainment-status#ten

Bay Area Air Quality Management District. (2017). *CEQA Air Quality Guidelines.* San Francisco: BAAQMD.

Bay Area Air Quality Management District. (2019). *2017 Clean Air Plan.*

Bay Area Air Quality Manangement District. (2017). *CEQA Air Quality Guidelines.*

Bryant W.A., H. E. (2007). *Fault-rupture hazard zones in California: Alquist-Priolo Earthquake Fault Zoning Act with index to earthquake fault zone maps, Interim revision.* Sacramento: California Department of Conservation, California Geological Survey.

Calfornia Geological Survey. (Revised 2018). *Earthquake Fault Zones: A Guide for Government Agencies and Property Owners / Developers, and Geoscience Practitioners for Assessing Fault Rupture Hazards in California.* Sacramento: State of California.

California Air Resources Board. (2008, re-approved 2011). *Climate Change Scoping Plan.* Sacramento: State of California.

California Air Resources Board. (2014). *First Update to the Climate Change Scoping Plan.* Sacramento: State of California.

California Air Resources Board. (2017). *California's 2017 Climate Change Scoping Plan.* Sacramento: State of California.

California Air Resources Board. (2018). *Summaries of Air Quality Data: Top 4 Measurements and Days Above the Standard, 2016-2018*. Retrieved August 5, 2019, from California Air Resources Board: https://www.arb.ca.gov/adam/topfour/topfour1.php

California Air Resources Board. (2020). *Sensitive Receptor Assessment*. Retrieved March 16, 2020, from California Air Resources Board: https://ww2.arb.ca.gov/capp-resource-center/community-assessment/sensitive-receptor-assessment

California Department of Conservation. (2019). *Farmland Mapping and Monitoring Program*. Retrieved March 22, 2019, from California Department of Conservation: https://www.conservation.ca.gov/dlrp/fmmp

California Department of Education. (2019, September 9). *Charter Schools in California Counties*. Retrieved March 4, 2020, from California Department of Education: https://www.cde.ca.gov/ds/si/cs/ap1/countyresults.aspx?id=49

California Department of Fish and Game. (1988). *Pallid Bat Life HIstory Account.* Sacramento, CA: California Wildlife Habitat Relationship System. Retrieved June 2019, from California Department of Fish and WIldlife: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2349&inline=1

California Department of Fish and Game. (1988). *Western Red Bat Life History Account.* Sacramento, CA: California Wildlife Habitat Relationship System. Retrieved June 2019, from https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2339&inline=1

California Department of Fish and Wildlife. (2019). Retrieved from California Natural Diversity Database Maps and Data: https://wildlife.ca.gov/Data/CNDDB

California Department of Fish and Wildlife. (2019). *California Sensitive Natural Communities.* Retrieved 2019, from California Department of Fish and Wildlife: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=153609&inline

California Department of Fish and Wildlife. (2019). *Natural Communities.* Retrieved 2019, from https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=153609&inline

California Department of Fish and Wildlife. (2020). *Selected Elements by Scientific Name, California Natural Diversity Data Base.*

California Department of Fish and Wildlife. (2020). *Selected Elements by Scientific Name, California Natural Diversity Database.*

California Department of Forestry and Fire Protection. (2007, November). *Fire Hazard Severity Zone Maps.* Retrieved March 26, 2020, from California Department of Forestry and Fire Protection: https://osfm.fire.ca.gov/divisions/wildfire-prevention-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/

California Department of Forestry and Fire Protection. (2018). *2018 Strategic Fire Plan for California.* Sacramento: State of California.

California Department of Toxic Substance Control. (2020, Accessed January 17). *EnviroStor Database*. Retrieved from California Department of Toxic Substance Control (DTSC): http://www.envirostor.dtsc.ca.gov/public

California Department of Transportation. (2013). *Technical Noise Supplement.*

California Department of Transportation. (2013). *Transportation and Construction Vibration Guidance Manual.*

California Department of Water Resources. (2020, February 21). *Sustainability Groundwater Management Act*. Retrieved 2020, from California Department of Water Resources: https://water.ca.gov/Programs/Groundwater-Management/SGMA-Groundwater-Management

California Division of Mines and Geology. (1980). *Geology for Planning in Sonoma County.* Sacramento: State of California.

California Energy Commission. (2020). *About the California Energy Commission*. Retrieved March 16, 2020, from State of California Energy Commission: https://www.energy.ca.gov/about

California Environmental Protection Agency. (2019). *Impaired Water Bodies*. Retrieved 2020, from State Water Resources Control Board: https://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2012.shtml

California Geological Survey. (2010b). *Fault Activity Map of California*. Retrieved September 24, 2018, from California Geological Survey: http://maps.conservation.ca.gov/cgs/fam/

California Geological Survey. (2018). *Earthquake Zones of Required Investigation*. Retrieved November 27, 2018, from California Geological Survey: https://maps.conservation.ca.gov/cgs/EQZApp/app/

California Native Plant Society . (2019). *California Native Plant Society Electronic Inventory.*

California Native Plant Society. (2019). *California Native Plant Society Electronic Inventory.*

California State Water Resources Control Board. (2018, May 15). *Municipal Stormwater Program*. Retrieved March 26, 2020, from California State Water Resources

Control Board: https://www.waterboards.ca.gov/water_issues/programs/stormwater/municipal.html

California Water Boards, North Coast Regional Water Quality Control Board. (2019, August 1). *Laguna de Santa Rosa TMDLs*. Retrieved January 7, 2020, from California Water Boards, North Coast Regional Water Quality Control Board: https://www.waterboards.ca.gov/northcoast/water_issues/programs/tmdls/laguna_de_santa_rosa/

CalRecycle. (2018, July 27). *History of California Solid Waste Law, 1985-1989*. Retrieved March 11, 2020, from CalRecycle: https://www.calrecycle.ca.gov/laws/legislation/calhist/1985to1989

Caltrans. (2017). *Construction Site Best Management Practices (BMP) Manual. CTSW-RT-17-314.18.1.* Sacramento: California Department of Transportation. Retrieved from https://dot.ca.gov/-/media/dot-media/programs/construction/documents/environmental-compliance/csbmp-may-2017-final.pdf

CARB. (2020, October 19). *Press Release 20-31: Latest GHG Inventory shows California remains below 2020 emissions target.* Retrieved from California Air Resources Board: https://ww2.arb.ca.gov/news/latest-ghg-inventory-shows-california-remains-below-2020-emissions-target

CARB. (2021, Jan 4). *Local Actions for Climate Change*. Retrieved from California Air Resources Board: https://ww2.arb.ca.gov/our-work/programs/local-actions-climate-change/about

CDFW. (2008). *California Bird Species of Special Concern.* Retrieved from California Department of Fish and Wildlife: https://wildlife.ca.gov/Conservation/SSC/Birds

CDFW. (2014, January 13). *California Threatened and Endangered Plant Profiles*. Retrieved February 11, 2021, from California Department of Fish and Wildlife: https://wildlife.ca.gov/Conservation/Plants/Endangered

CDFW. (2021, January 27). *California Natural Diversity Database Occurrence Report.* Retrieved from California Department of Fish and Wildlife: https://wildlife.ca.gov/Data/CNDDB/Maps-and-Data

CGS. (2013a). Updated Mineral Land Classification Map for Portland Cement Concrete-Grade Aggregate in the North San Francisco Bay Production-Consumption Region, Marin, Napa, Sonoma, and Southwestern Solano Counties, California.

Special Report 205 - Plate 1A. Sacramento, CA: California Geological Survey, State of California.

CGS. (2013b). Updated Mineral Land Classification Map for Asphalt Concrete-Grade Aggregate in the North San Francisco Bay Production-Consumption Region, Marin, Napa, Sonoma, and Southwestern Solano Counties, California. *Special Report 205 - Plate 1B*. Sacramento, CA: California Geological Survey, State of California.

CGS. (2013c). Updated Mineral Land Classification Map for Class II Base-Grade Aggregate in the North San Francisco Bay Production-Consumption Region, Marin, Napa, Sonoma, and Southwestern Solano Counties, California. *Special Report 205 - Plate 1C*. Sacramento, CA: California Geological Survey, State of California.

CGS. (2013d). Updated Aggregate Resource Sector Map for Construction Aggregate in the North San Francisco Bay Production-Consumption Region, Marin, Napa, Sonoma, and Southwestern Solano Counties, California - Northern Part. *Special Report 205 - Plate 2A*. Sacramento, CA: California Geological Survey, State of California.

City of Santa Rosa. (2009, November 3). *City of Santa Rosa General Plan 2035.* Retrieved from City of santa Rosa: https://srcity.org/DocumentCenter/View/24327/Santa-Rosa-General-Plan-2035-PDF---July-2019

City of Santa Rosa. (2009). *Santa Rosa General Plan 2035.* Santa Rosa: City of Santa Rosa.

City of Santa Rosa. (2009). *Santa Rosa General Plan 2035.*

City of Santa Rosa. (2009). *Santa Rosa General Plan 2035.* Santa Rosa: City of Santa Rosa.

City of Santa Rosa. (2009). *Santa Rosa General Plan 2035 Draft EIR.* City of Santa Rosa.

City of Santa Rosa. (2009, March). *Santa Rosa General Plan 2035 Draft Environmental Impact Report.* Draft Environmental Impact Report, Planning & Economic Development, Santa Rosa. Retrieved March 11, 2020, from The North Bay Corporation is the licensed hauler and recycler for the project area. For: https://srcity.org/DocumentCenter/View/3096/Draft-General-Plan-Environmental-Impact-Report-Santa-Rosa-2035-PDF

City of Santa Rosa. (2009). *Santa Rosa General Plan 2035: Noise and Safety Element.* Santa Rosa: City of Santa Rosa.

City of Santa Rosa. (2012). *Climate Action Plan.* Santa Rosa: City of Santa Rosa.

City of Santa Rosa. (2015, November 25). *17-16.030 Ambient base noise level criteria.* Retrieved from Santa Rosa City Code: http://santa-rosa.granicus.com/MetaViewer.php?view_id=6&clip_id=705&meta_id=67706

City of Santa Rosa. (2015, August 14). *Zoning Map of the City of Santa Rosa.* Retrieved May 23, 2019, from City of Santa Rosa: https://www.srcity.org/DocumentCenter/View/5046/Zoning-Map-PDF?bidId=

City of Santa Rosa. (2016, October 18). *General Plan Land Use Diagram.* Retrieved November 21, 2018, from City of Santa Rosa General Plan 2035: https://srcity.org/DocumentCenter/View/3094/General-Plan-Land-Use-Diagram-PDF

City of Santa Rosa. (2018). *Santa Rosa City Profile and Projections Report 2018.* Retrieved March 9, 2020, from City of Santa Rosa: https://srcity.org/2945/Reports-and-Maps

City of Santa Rosa. (2018 Update). *City of Santa Rosa Bicycle & Pedestrian Master Plan.* Santa Rosa: City of Santa Rosa.

City of Santa Rosa. (2019, July). *Santa Rosa General Plan*. Retrieved March 16, 2020, from https://srcity.org/DocumentCenter/View/24327/Santa-Rosa-General-Plan-2035-PDF---July-2019

City of Santa Rosa. (2019, July). *Santa Rosa General Plan*. Retrieved March 16, 2020, from City of Santa Rosa: https://srcity.org/DocumentCenter/View/24327/Santa-Rosa-General-Plan-2035-PDF---July-2019

City of Santa Rosa. (2020). *Fire Stations*. Retrieved March 4, 2020 2020, from Santa Rosa Fire Department: https://srcity.org/598/Fire-Stations

City of Santa Rosa. (2020, February 10). *Howarth Park*. Retrieved from City of Santa Rosa Recreation & Parks: https://srcity.org/1271/Howarth-Park

City of Santa Rosa. (2020). *Strategic Plan*. Retrieved March 2, 2020, from Santa Rosa Fire Department: https://srcity.org/430/Strategic-Plan

City of Santa Rosa. (2020). *Vehicle Miles Traveled (VMT) Guidelines. Final Draft.* Transportation and Public Works Department, Santa Rosa. Retrieved August 4,

2020, from https://srcity.org/DocumentCenter/View/28508/Vehicle-Miles-Traveled-Final-Draft-Guidelines-6520

City of Santa Rosa Fire Department. (2020). *Draft Santa Rosa Community Wildfire Protection Plan, Risk Assessment Map.* Retrieved March 26, 2020, from City of Santa Rosa Fire Department: https://srcity.org/3114/Community-Wildfire-Protection-Plan

City of Santa Rosa. (March 2009). *Santa Rosa General Plan 2035 Draft EIR.* City of Santa Rosa.

City of Santa Rosa. (n.d.). *About Us*. Retrieved March 5, 2020, from Santa Rosa Police Department: https://srcity.org/243/About-Us

City of Santa Rosa. (n.d.). *Police*. Retrieved March 5, 2020, from City of Santa Rosa: https://srcity.org/Directory.aspx?DID=22

City of Santa Rosa. (n.d.). *Santa Rosa City Code*. Retrieved 3 18, 2020, from City of Santa Rosa: http://qcode.us/codes/santarosa/view.php?cite=section_17-16.030&confidence=6

City of Santa Rosa. (n.d.). *Santa Rosa Police Department*. Retrieved March 2, 2020, from Field Services Division: https://srcity.org/279/Field-Services-Division

City of Santa Rosa. (n.d.). *Santa Rosa Police Department*. Retrieved March 2, 2020, from Special Services Division: https://srcity.org/462/Special-Services-Division

City of Santa Rosa. (n.d.). *Santa Rosa Police Department*. Retrieved March 2, 2020, from Special Services Division: https://srcity.org/547/Technical-Services-Division

City of Santa Rosa. (n.d.). *Santa Rosa Water: About Us*. Retrieved March 12, 2020, from City of Santa Rosa: https://srcity.org/677/About-Us

CNPS. (2021, February 23). *Inventory of Rare and Endangered Plants*. Retrieved from California Native Plant Society: http://www.rareplants.cnps.org/detail/1736.html

County of Sonoma. (2010, Last amended December 7). *Sonoma County Aggregate Resources Management (ARM) Plan, Chapter 7.* Retrieved from Permit Sonoma, Long-Range Plans: https://sonomacounty.ca.gov/PRMD/Long-Range-Plans/Aggregate-Resource-Management/

County of Sonoma. (2012). *Sonoma County General Plan 2020.* Santa Rosa: County of Sonoma.

County of Sonoma. (2014, December 9). *Land Use: All Nine Sub-County Planning Areas in One.* Retrieved November 21, 2018, from General Plan 2020: https://sonomacounty.ca.gov/PRMD/Long-Range-Plans/General-Plan/Land-Use-The-Nine-Sub-County-Planning-Areas/

County of Sonoma. (2017, April). *Sonoma County Operational Area Hazard Mitigation Plan.* Santa Rosa: County of Sonoma. Retrieved August 20, 2019, from http://sonomacounty.ca.gov/PRMD/Long-Range-Plans/Hazard-Mitigation/Approved-Update/

County of Sonoma. (2019). *Permit Sonoma GIS: Zoning and Land Use*. Retrieved March 4, 2019, from County of Sonoma: https://sonomacounty.ca.gov/PRMD/Administration/GIS/ActiveMap/

County of Sonoma. (2019). *Permit Sonoma Map Gallery*. Retrieved March 22, 2019, from County of Sonoma: http://sonomacounty.ca.gov/PRMD/Administration/GIS/Map-Gallery/

County of Sonoma. (2019, January). *Visual Assessment Guidelines*. Retrieved May 20, 2019, from County of Sonoma: http://sonomacounty.ca.gov/PRMD/Regulations/Environmental-Review-Guidelines/Visual-Assessment-Guidelines/

County of Sonoma. (2020). *Integrated Waste*. Retrieved March 12, 2020, from County of Sonoma : https://sonomacounty.ca.gov/_templates_portal/DepartmentOrAgency.aspx?id=2147495355

County of Sonoma. (2020). *Renewable Energy*. Retrieved March 16, 2020, from County of Sonoma: https://sonomacounty.ca.gov/PRMD/Regulations/Renewable-Energy/

County of Sonoma. (2020). *Sonoma County General Plane 2020, Noise Element.* Retrieved 3 17, 2020, from County of Sonoma: https://sonomacounty.ca.gov/PRMD/Long-Range-Plans/General-Plan/Noise/

County of Sonoma Office of Recovery and Resiliency. (2018). *Recovery & Resiliency Framework.* Santa Rosa: County of Sonoma.

County of Sonoma Permit Resources Management Department. (2019). *Guidelines for the Preparation of Noise Analysis.*

Department of Water Resources. (2018, January 19). *CA Bulletin 118 Groundwater Basins*. Retrieved March 26, 2020, from Department of Water Resources:

https://www.arcgis.com/home/item.html?id=b5325164abf94d5cbeb48bb542fa616e

DePrimo, J. (2019, August 8). Personal Communication.

DePrimo, J. (2019, August 8). Personal Communication. (A. Crealock, Interviewer)

Environmental Resources Management. (2016). *Phase II Environmental Due Diligence for Proposed Aqueduct Cathodic Rectifier Sites.* San Francisco: Environmental Resources Management.

Federal Emergency Management Agency. (2012, October 16). *FEMA Flood Map Service Center: Welcome*. Retrieved March 26, 2020, from Federal Emergency Management Agency: https://msc.fema.gov/portal/home

Federal Highway Administaration. (2006). *Road Construction Noise Model User's Guide.* U.S. Department of Transportation.

Federal Transit Administration. (2006). *Transit Noise and Vibration Impact Assessment.* United States Department of Transportation, Office of Planning and Environment, Federal Transit Administration.

Field, E.H., and 2014 Working Group on California Earthquake Probabilities. (2015). *UCERF3: A New Earthquake Forecast for California's Complex Fault System.* Denver: U.S. Geological Survey.

Fire Safe Sonoma. (2016). *Sonoma County Community Wildfire Protection Plan.* Santa Rosa: Fire Safe Sonoma.

Fire Safe Sonoma. (2016). *Sonoma County Wildfire Community Protection Plan.* Santa Rosa: Fire Safe Sonoma.

Hecker, S., & Loar, C. E. (2018). *Map of Recently Active Traces of the Rodgers Creek Fault, Sonoma County, California.* Retrieved March 4, 2019, from United States Geological Survey: https://pubs.er.usgs.gov/publication/sim3410

Intergovernmental Panel on Climate Change. (2014). *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)].* Geneva, Switzerland.: IPCC.

Kleinfelder. (2015). *Geotechnical Investigation Report Sonoma Valley County Sanitation District Sewer Trunk Replacement Project-Reach A Ramon Street and Sonoma Highway area Sonoma County, California.* Consultant Report.

Koldis, S. (2019, May 9). Personal Communication.

Madrone Audubon Society. (2020). *Sonoma County Breeding Bird Atlas Species Maps - Atlas #2.* Retrieved from Madrone Audubon Society: http://madroneaudubon.org/pdf/Atlas2_r2.pdf

Office of Environmental Health Hazard Assessment. (2015). *Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments.*

OPR. (2018). *Technical Advisory on Evaluating Transportation Impacts in CEQA.* Sacramento: State of California. Retrieved from https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf

Pacific Gas and Electric. (2020). *About PG&E*. Retrieved March 16, 2020, from Pacific Gas and Electric: https://www.pge.com/en_US/about-pge/about-pge.page

Parmeter, B. D. (2002). *Birds of Sonoma County, California.* Napa: Redwood Region Ornithological Society.

Permit & Resource Management Department. (2001). *Local Coastal Program Policies*. Retrieved March 16, 2020, from http://sonomacounty.ca.gov/PRMD/Long-Range-Plans/Local-Coastal-Program/Current/

Permit & Resource Management Department. (2014). *Sonoma County General Plan 2020 Land Use Element.* County of Sonoma.

Permit Sonoma. (2014). *Sonoma County General Plan 2020 Public Safety Element: Wildland Fire Hazard Areas.* Sonoma County Permit Resource Management Department. Santa Rosa: County of Sonoma.

Polite, C. (2005). *California Habitat Relationship System: White-tailed Kite.* Retrieved from California Departmen of Fish and Wildlife: https://nrm.dfg.ca.gov/Filehandler.ashx?DocumentVersionID=18135

Recology Waste Zero. (n.d.). *Recology Sonoma Marin*. Retrieved March 11, 2020, from Recology Waste Zero: https://www.recology.com/recology-sonoma-marin/

Regional Climate Protection Authority. (2016). *Sonoma County Regional Climate Action Plan.* Santa Rosa: County of Sonoma.

Santa Rosa City Schools. (2019, February). *Our Story.* Retrieved March 2, 2020, from Santa Rosa City Schools: https://drive.google.com/file/d/1c9JxYmWIJnfhHChkC3gxtpZODgw_E5rT/view

Santa Rosa City Schools. (2019). *Santa Rosa French-American Charter School*. Retrieved 3 17, 2020, from Santa Rosa City Schools: https://srfac-santarosa-ca.schoolloop.com/

Santa Rosa Groundwater Sustainability Agency. (n.d.). *Santa Rosa Plain Groundwater Conditions.* Retrieved from Santa Rosa Groundwater Sustainability Agency: http://santarosaplaingroundwater.org/wp-content/uploads/SRP-Basin-Conditions.pdf

Santa Rosa Plain Groundwater Sustainability Agency. (n.d.). *Santa Rosa Plain In-Depth Basin Conditions Fact Sheet*. Retrieved from Santa Rosa Plain Groundwater Sustainability Agency: https://santarosaplaingroundwater.org/fact-sheets/

Society of Vertebrate Paleontology. (2010). *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources.* Retrieved November 20, 2018, from Society of Vertebrate Paleontology: http://vertpaleo.org/Membership/Member-Ethics/SVP_Impact_Mitigation_Guidelines.aspx

Society of Vertebrate Paleontology Impact Mitigation Guidelines Revision Committee. (2010). *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources.* Bethesda: SVP. Retrieved December 5, 2018, from http://vertpaleo.org/The-Society/Governance-Documents/SVP_Impact_Mitigation_Guidelines.aspx

Sonoma County Fire District. (n.d.). *About, 2019 Merger*. Retrieved March 5, 2020, from Sonoma County Fire District Merger: https://www.sonomacountyfd.org/2019-merger

Sonoma County Library. (2019). *About*. Retrieved March 5, 2020, from Sonoma County Library: https://sonomalibrary.org/about-us/about

Sonoma County Library. (2019). *Sonoma County Library*. Retrieved March 5, 2020, from Locations: https://sonomalibrary.org/locations

Sonoma County Office of Education. (n.d.). *Sonoma County School District Map.* Retrieved March 2, 2020, from Sonoma County Office of Education: https://www.scoe.org/files/district_map.pdf

Sonoma County Permit and Resource Management Department. (2008). *Sonoma County General Plan 2020 Circulation and Transit Element.* Santa Rosa: County of Sonoma.

Sonoma County Permit and Resource Management Department. (2008; amended 2016). *Sonoma County General Plan 2020: Open Space & Resource Conservation Element.* Santa Rosa: County of Sonoma.

Sonoma County Permit and Resource Management Department. (2016, August 9). *General Plan Open Space and Resource Conservation Element.* Retrieved from County of Sonoma: https://sonomacounty.ca.gov/PRMD/Long-Range-Plans/General-Plan/Open-Space-and-Resource-Conservation/

Sonoma County Permit and Resource Management Department. (2018, May 8). *Permit Sonoma, Climate Change Action Resolution, Long-Range Plans.* Retrieved from County of Sonoma: https://sonomacounty.ca.gov/PRMD/Long-Range-Plans/Climate-Change-Action-Resolution/

Sonoma County Permit and Resource Managment Department. (2008, last amended July 10, 2018). *General Plan 2020.* Santa Rosa: County of Sonoma.

Sonoma County Regional Parks. (2020, February 10). *Spring Lake Regional Park Map*. Retrieved from Sonoma County Regional Parks: http://parks.sonomacounty.ca.gov/Visit/Spring-Lake-Regional-Park/Park-Map/

Sonoma County Sheriff's Office. (2020). *Sonoma County Sheriff's Office*. Retrieved March 2, 2020, from Sonoma County Sheriff's Office: https://www.sonomasheriff.org/

Sonoma County Transportation Authority. (2016). *Moving Forward 2040.* Santa Rosa: Sonoma County Transportation Authority.

Sonoma County Water Agency. (2020). *Aqueduct Cathodic Protection Project-CTS Habitat Impact Assessment.*

Sonoma County Water Agency. (2020). *Botanical and Wetland Assessment for Cathotic Protection Upgrade, O&M Vegetation Maintenance, and Todd Wells Weld Maintenance.*

Sonoma County Water Agency. (n.d.). *Sonoma Water: About Us*. Retrieved March 12, 2020, from Sonoma County Water Agency: https://www.sonomawater.org/about-us#:~:text=

Sonoma Local Agency Formation Commission. (2020). *Districts, Spheres of Influence Maps for Special Districts.* Retrieved March 5, 2020, from Sonoma Local Agency Formation Commission: http://sonomalafco.org/Cities-and-Districts/Districts/

Sonoma Local Agency Formation Commission. (2020). *Districts, Spheres of Influence Maps for Special Districts.* Retrieved March 26, 2020, from Sonoma Local

Agency Formation Commission: http://sonomalafco.org/Cities-and-Districts/Districts/

State Water Resources Control Board. (2020, Accessed January 17). *GeoTracker*. Retrieved from State Water Resources Control Board: http://geotracker.waterboards.ca.gov/

Tom Origer & Associates. (2018). *Archival Search Results for the Santa Rosa Aqueduct and Cotati Aqueduct Cathodic Protection Project, Sonoma County, California.* Rohnert Park: Tom Origer & Associates.

Tom Origer & Associates. (2018). *Historical Resources Survey of Selected Locations of the Proposed Santa Rosa Aqueduct Cathodic Protection Project, Sonoma County, California.* Consultant Report, Rohnert Park.

Tom Origer & Associates. (2019). *Archival Study and Cultural Resources Survey of Selected Locations of the Proposed Santa Rosa Aqueduct and Cotati Aqueduct Cathodic Protection Project: Sonoma County, California.* Rohnert Park: Tom Origer & Associates.

U.S. Environmental Protection Agency. (1974). *Information of Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an adequate Margin of Safety.*

U.S. Environmental Protection Agency. (2020, Accessed January 17). *Superfund Enterprise Management Search (SEMS)*. Retrieved from U.S. Environmental Protection Agency: https://www.epa.gov/superfund/search-superfund-sites-where-you-live

U.S. Fish & Wildlife Service. (2005, December 1). *Santa Rosa Conservation Strategy.* Retrieved March 24, 2020, from U.S. Fish & Wildlife Service: https://www.fws.gov/sacramento/es/Recovery-Planning/Santa-Rosa/santa-rosa-strategy.php

U.S. Geological Survey. (2018, July 16). *A New Map of Rodgers Creek Fault in Sonoma County, California*. Retrieved September 17, 2018, from U.S. Geological Survey: https://earthquake.usgs.gov/research/everyone/2018/rodgers-creek/

United Stated Department of Fish and Wildlife. (2019). *IPaC Resouese List.*

United States Fish and Wildlife Service. (2019). *IPaC Resource List.*

United States Geological Survey. (2020, February 25). *USGS Current Conditions for California.* Retrieved February 25, 2020, from United States Geological Survey: https://waterdata.usgs.gov/ca/nwis/current?huc_cd=18010110&index_pmcode_S

TATION_NM=1&index_pmcode_DATETIME=2&index_pmcode_00065=4&index_pmcode_00060=3&group_key=NONE&sitefile_output_format=html_table&column_name=agency_cd&column_name=site_no&column_name=s

USFWS. (2005, December 1). *Santa Rosa Plain Conservation Strategy.* Retrieved from U.S. Fish and Wildlife Service: http://www.fws.gov/sacramento/es/santa_rosa_conservation.html

USFWS. (2008). *Birds of Conservation Concern 2008.* Retrieved from U. S. Fish & Wildlife Service: https://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php

USFWS. (2011, August 31). *Revised Designation of Critical Habitat for the Sonoma County Distinct Population Segment of California Tiger Salamander; Final Rule.* Retrieved 2020, from Endangered and Threatened Wildlife and Plants: https://www.fws.gov/policy/library/2011/2011-21945.html

USFWS. (2015). *Draft Recovery Plan for Clarkia imbricata (Vine Hill Clarkia).* Sacramento, California: U.S. Fish & Wildlife Service, Region 8.

[Page left intentionally blank]

APPENDIX A
AESTHETICS RESOURCES SITE-SPECIFIC SETTING AND POTENTIAL IMPACT TABLES

Appendix A Aesthetics Resources

Table A-1. Site Sensitivity per Sonoma County Visual Assessment Guidelines

Sensitivity	Characteristics
Low	The site is within an urban land use designation and has no land use or zoning designations protecting scenic resources. The project vicinity is characterized by urban development or the site is surrounded by urban zoning designations and has no historic character and is not a gateway to a community. The project site terrain has visible slopes less than 20 percent and is not on a prominent ridgeline and has no significant natural vegetation of aesthetic value to the surrounding community.
Moderate	The site or portion thereof is within a rural land use designation or an urban designation that does not meet the criteria above for low sensitivity, but the site has no land use or zoning designations protecting scenic resources. The project vicinity is characterized by rural or urban development but may include historic resources or be considered a gateway to a community. This category includes building or construction sites with visible slopes less than 30 percent or where there is significant natural features of aesthetic value that is visible from public roads or public use areas (i.e. parks, trails etc.).
High	The site or any portion thereof is within a land use or zoning designation protecting scenic or natural resources, such as General Plan designated scenic landscape units, coastal zone, community separators, or scenic corridors. The site vicinity is generally characterized by the natural setting and forms a scenic backdrop for the community or scenic corridor. This category includes building and construction areas within the SR designation located on prominent hilltops, visible slopes less than 40 percent or where there are significant natural features of aesthetic value that are visible from public roads or public use areas (i.e. parks, trails etc.). This category also includes building or construction sites on prominent ridgelines that may not be designated as scenic resources but are visible from a designated scenic corridor.
Maximum	The site or any portion thereof is within a land use or zoning designation protecting scenic resources, such as General Plan designated scenic landscape units, coastal zone, community separators, or scenic corridors. The site vicinity is generally characterized by the natural setting and forms a scenic backdrop for a designated scenic corridor. This category includes building or construction sites within the scenic resource designation on or near prominent ridgelines, visible slopes greater than 40 percent or where there are significant natural features of aesthetic value that are visible from a designated scenic corridor.

Table A-2. Visual Dominance of Proposed Project per Sonoma County Visual Assessment Guidelines

Dominance	Characteristics
Inevident	Project is generally not visible from public view because of intervening natural land forms or vegetation.
Subordinate	Project is minimally visible from public view. Element contrasts are weak – they can be seen but do not attract attention. Project generally repeats the form, line, color, texture, and night lighting of its surroundings.
Co-Dominant	Project elements are moderate – they can be prominent within the setting, but attract attention equally with other landscape features. Form, line, color, texture, and night lighting are compatible with their surroundings.
Dominant	Project elements are strong – they stand out against the setting and attract attention away from the surrounding landscape. Form, line, color, texture, and night lighting contrast with existing elements in the surrounding landscape.

Table A-3. Aesthetic Resources at Proposed Project Sites along the Santa Rosa Aqueduct

Proposed Project Site	Aesthetic Resources Setting	Designated Scenic Resources	Site Sensitivity	Visual Dominance
SR0+00 Test Station	Existing equipment on site and visible. On Sonoma Water property. Adjacent vegetation includes grasses and trees, Russian River riparian corridor. Not visible from public roads or nearby residences due to topography and mature trees and other vegetation.		Moderate	Inevident
SR9+66 Cathodic Protection Station	Existing equipment on site and visible. Adjacent to grasses, trees, Shone Farm. Not visible from public roads or nearby residences due to topography and mature trees and other vegetation.		Moderate	Inevident
SR14+28 Test Station	Existing equipment on site and visible. Adjacent to grasses, trees, Shone Farm. Not visible from public roads or nearby residences due to topography and mature trees and other vegetation.		Moderate	Inevident
SR21+00 Test Station	Existing equipment on site and visible. Adjacent to vineyard, vineyard road, and forested area. Not visible from public roads or nearby residences due to topography and mature trees and other vegetation.		Moderate	Inevident
SR32+00 Test Station	Existing equipment on site and visible. Adjacent to vineyard, vineyard road, and forested area. Not visible from public roads or nearby residences due to topography and mature trees and other vegetation.		Moderate	Inevident
SR40+50 Test Station	Existing equipment on site and visible. Adjacent to roadway and forested area. Visible from Steve Olson Lane, Sonoma County Probation Camp, and Shone Farm. Not visible from nearby residences due to topography and mature trees and other vegetation.		Moderate	Subordinate

Proposed Project Site	Aesthetic Resources Setting	Designated Scenic Resources	Site Sensitivity	Visual Dominance
SR49+00 Test Station	Existing equipment on site but not visible. In grazed, irrigated field. Visible from Steve Olson Lane, Sonoma County Probation Camp, and Shone Farm. Not visible from nearby residences due to topography and mature trees and other vegetation.		Moderate	Subordinate
SR56+00 Test Station	Existing equipment on site but not visible. In grazed, irrigated field. Visible from Steve Olson Lane, Sonoma County Probation Camp, and Shone Farm. Not visible from nearby residences due to topography and mature trees and other vegetation.		Moderate	Subordinate
SR75+00 Cathodic Protection Station	Existing equipment on site and visible. Adjacent to forested area, road, fence, existing visible equipment. Potentially visible to drivers of vehicles on Mark West Station Road. Not visible from nearby residences.	Scenic Landscape Unit	High	Subordinate
SR90+00 Test Station	Between recycled water reservoir and Mark West Station Road. Adjacent vegetation includes trees and shrubs. Potentially visible to drivers on Mark West Station Road. Not visible from nearby residences.	Scenic Landscape Unit	High	Subordinate
SR95+00 Cathodic Protection Station	Existing equipment on site and visible. Adjacent to recycled water reservoir, access road, existing above-ground equipment, and Mark West Station Road. Adjacent vegetation includes annual grasses, weeds, and potentially jurisdictional drainage and wetland. Visible from Mark West Station Road. Not visible from nearby residences.	Scenic Landscape Unit	High	Subordinate
SR111+00 Test Station	Existing equipment on site and visible. Adjacent to vineyard, vineyard road, forested creek corridor. Not visible to public or from nearby residences.	Scenic Landscape Unit	High	Inevident

Proposed Project Site	Aesthetic Resources Setting	Designated Scenic Resources	Site Sensitivity	Visual Dominance
SR123+43 Test Station	Adjacent to vineyard, vineyard road, forested creek corridor. Not visible to public or from nearby residences.		Moderate	Inevident
SR129+09 Test Station	Existing equipment on site and visible. Adjacent to vineyard and vineyard road. Not visible to public or from nearby residences.		Moderate	Inevident
SR134+83 Test Station	Adjacent to vineyard and vineyard road. Not visible to public or from nearby residences.		Moderate	Inevident
SR146+50 Test Station	Existing equipment on site and visible. Adjacent to vineyard and vineyard road. Not visible to public or from nearby residences.		Moderate	Inevident
SR150+03 Test Station	Existing equipment on site and visible. Adjacent to vineyard and vineyard road. Not visible to public or from nearby residences.		Moderate	Inevident
SR159+61 Test Station	Existing equipment on site and visible. Adjacent to access road between oak savannah and vineyard. Not visible to public or from nearby residences.		Moderate	Inevident
SR170+00 Cathodic Protection Station	Existing equipment on site and visible. Adjacent to Slusser Road, chain-link fence. On Charles M. Schulz Sonoma County Airport property. Adjacent vegetation includes grasses and shrubs. Not visible to public or nearby residences.		Low	Inevident
SR203+45 Test Station	Existing equipment on site and visible. On Charles M. Schulz Sonoma County Airport property, adjacent to storage sheds. Adjacent vegetation includes grasses, shrubs, and trees. Distance to nearest residence: approximately 375 feet. Not visible to public or nearby residences due to presence of mature trees.		Moderate	Inevident

Proposed Project Site	Aesthetic Resources Setting	Designated Scenic Resources	Site Sensitivity	Visual Dominance
SR207+35 Cathodic Protection Station	Existing equipment on site and visible. On Charles M. Schulz Sonoma County Airport property, adjacent to power pole and dumpsters. Adjacent vegetation includes grasses and shrubs. Distance to nearest residence: approximately 450 feet. Not visible to public or nearby residences due to presence of mature trees.		Moderate	Inevident
SR212+00 Test Station	On Charles M. Schulz Sonoma County Airport property, adjacent to grass fields, access road, parked airplanes. Distance to nearest residence: approximately 700 feet. Potentially visible from nearest residence.		Moderate	Surbordinate
SR231+00 Test Station	Existing equipment on site and visible. On Charles M. Schulz Sonoma County Airport property, adjacent to grass field and paved access road. Adjacent vegetation includes grasses and shrubs. Not visible to public or from nearby residences.		Moderate	Inevident
SR242+97 Cathodic Protection Station	Existing equipment on site and visible. Adjacent to Laughlin Road, beverage distribution building, and parking lot. Adjacent vegetation includes grasses, shrubs, and trees that are part of the riparian corridor associated with Mark West Creek. Visible from Laughlin Road but not visible from nearby residences.		Low	Subordinate
SR247+94 Test Station	Existing equipment on site and visible. Adjacent to beverage distribution building and parking lot. Adjacent vegetation includes grasses, shrubs, and trees along Mark West Creek. Not visible to public or nearby residences.		Moderate	Inevident

Proposed Project Site	Aesthetic Resources Setting	Designated Scenic Resources	Site Sensitivity	Visual Dominance
SR259+60 Test Station	Adjacent to vineyard road and vineyards. May be visible from nearby residences and drivers on Laughlin Road but test station post would not stand out among existing vines and posts. Distance to nearest residence: approximately 300 feet.	Scenic Landscape Unit	High	Subordinate
SR264+00 Test Station	Adjacent to vineyard road and vineyards. May be visible from nearby residences and drivers on Laughlin Road. Distance to nearest residence: approximately 250 feet.	Scenic Landscape Unit	High	Subordinate
SR285+50 Test Station	Existing signage on site and visible. Adjacent to vineyard road and vineyards. Not visible from nearby residences or to the public. Not visible from nearby residences or public roadways.	Scenic Landscape Unit	High	Inevident
SR320+52 Cathodic Protection Station	Existing equipment on site and visible. Adjacent to River Road, SMART rail line, SMART equipment staging area, vineyard, paved and unpaved roads. Adjacent vegetation includes grasses and trees. Distance to nearest residence: approximately 275 feet. Unlikely to be visible from nearby residences or public roadways, including River Road.		Moderate	Inevident
SR415+50 Cathodic Protection Station	Existing equipment on site and visible. Adjacent to residential neighborhoods, Gold Leaf Lane, power lines, fencing, and SMART rail line. Distance to nearest residence: approximately 75 feet. Visible from nearby residences and public roads.		Low	Surbordinate
SR479+70 Test Station	Existing equipment on site and visible. Adjacent to residential neighborhoods, Apache Street, fencing, and SMART rail line. Distance to nearest residence: approximately 40 feet. Visible from nearby residences and public roads.		Low	Surbordinate

Proposed Project Site	Aesthetic Resources Setting	Designated Scenic Resources	Site Sensitivity	Visual Dominance
SR496+95 Cathodic Protection Station	Adjacent to commercial properties, Steele Lane, SMART rail line and associated road crossing signage. Distance to nearest residence: approximately 250 feet. Visible from nearby commercial properties and Steele Lane but unlikely to be visible from nearby residences.		Low	Subordinate
SR530+00 Cathodic Protection Station	Adjacent to commercial properties, Jennings Avenue, and SMART rail line. Distance to nearest residence: approximately 70 feet. Visible from nearby roads, commercial properties, and residences.		Low	Subordinate
SR572+67 Cathodic Protection Station	Adjacent to College Avenue, Ripley Street, Highway 101, and gas station. Distance to nearest residence: approximately 140 feet. Finished project would be visible from nearby roads, commercial properties, and residences.		Low	Subordinate
SR588+00 Test Station	Adjacent to Wilson Street, commercial buildings, homes, weedy/gravel lot surrounded by barbed wire fencing. Distance to nearest residence: under 50 feet. Visible from nearby roads, commercial properties, and residences.		Low	Subordinate
SR602+00 Test Station	Adjacent to commercial buildings, parking lot, Wilson Street, and Fifth Street. Visible from nearby roads and commercial properties.		Low	Subordinate
SR622+70 Test Station	Adjacent to Santa Rosa Plaza shopping center, A St, and 1st St. Adjacent to commercial buildings. Visible from nearby roads and commercial properties.		Low	Subordinate
SR663+89 Cathodic Protection Station	Existing equipment on site and visible. Adjacent to Sonoma Avenue. Visible from nearby roads, commercial properties, and residences. Distance to nearest residence: 100 feet.		Low	Subordinate

Proposed Project Site	Aesthetic Resources Setting	Designated Scenic Resources	Site Sensitivity	Visual Dominance
SR677+00 Test Station	Existing equipment on site and visible. Adjacent to Sonoma Avenue. Visible from nearby roads, commercial properties, and residences. Distance to nearest residence: 300 feet.		Low	Subordinate
SR713+80 Cathodic Protection Station	Existing equipment onsite and visible. At Farmer's Lane and Sonoma Avenue. Adjacent to commercial and government buildings. Visible from nearby roads, commercial properties, and residences.		Low	Subordinate
SR721+40 Test Station	Adjacent to Sonoma Avenue, shopping center, bus stop, and parking lots. Distance to nearest residence: over 275 feet. Visible from nearby roads and commercial properties.		Low	Subordinate
SR761+00 Cathodic Protection Station	Adjacent to Sonoma Avenue and entrance to church parking lot. Visible from nearby roads, commercial properties, and residences. Distance to nearest residence: approximately 120 feet.		Low	Subordinate
SR771+40 Cathodic Protection Station	Existing equipment on site and visible. Intersection of Summerfield Road and Sonoma Avenue. Adjacent to traffic lights and other equipment at southwest edge of Howarth Park. Visible from nearby roads and residences.		Low	Surbordinate
SR787+00 Test Station	Adjacent to paved access road at southern edge of Howarth Park. Surrounding vegetation includes annual grasses and mixed oak woodland. Visible to users of access road.		Low	Surbordinate
SR801+20 Test Station	Existing equipment on site and visible. Adjacent to a popular paved access road / multi-use trail in Howarth Park. Surrounding vegetation includes annual grasses, shrubs, and mixed oak woodland. Visible to users of paved access road / multi-use trail.		Moderate	Surbordinate

Proposed Project Site	Aesthetic Resources Setting	Designated Scenic Resources	Site Sensitivity	Visual Dominance
SR812+25 Test Station	Existing equipment on site and visible. At base of earthen dam between Lake Ralphine and Spring Lake. Surrounding vegetation includes annual grasses, shrubs, and mixed oak woodland.		Moderate	Surbordinate
SR821+40 Test Station	Existing equipment on site and visible. Adjacent to gravel trail and water storage tanks at Spring Lake Park. Surrounding vegetation includes annual grasses, shrubs, coast live oak.		Moderate	Subordinate

Table A-4. Aesthetic Resources at Proposed Project Sites along the Russian River to Cotati Aqueduct

Proposed Project Site	Existing Aesthetic Resources Setting	Designated Scenic Resource	Sensitivity	Visual Dominance
RR31+22 Test Station	Existing equipment and signage on site and visible. Adjacent to vineyard road, mature trees adjacent. Not visible from public roadways. Distance to nearest residence: approximately 700 feet. Not visible from nearest residence.		Moderate	Inevident
RR45+00 Test Station	Located at Sonoma Water facility, including chlorination building and related equipment. Adjacent to River Road (Scenic Corridor). Not visible from River Road or other public roads. Not visible from nearest residence. Distance to nearest residence: approximately 200 feet.	Adjacent to Scenic Corridor	High	Inevident
RR89+99 Cathodic Protection Station	Adjacent to rural road (Russell Lane), power lines and power poles, trees, landscaping. Visible from Russell Lane, potentially visible from nearest residence. Distance to nearest residence: approximately 150 feet.	Scenic Landscape Unit	High	Subordinate
RR131+00 Test Station	Existing above-ground equipment and signage onsite and visible. Adjacent to vineyard road and vineyard. Not visible from nearest public roads or residences due to vineyard rows and other vegetation. Distance to nearest residence: over 700 feet.	Scenic Landscape Unit	High	Inevident
RR141+58 Cathodic Protection Station	Existing above-ground equipment and signage onsite and visible. Adjacent to rural road, residential driveway, grasses, weeds, landscaping, vineyards. Likely visible from nearest residence. Distance to nearest residence: approximately 150 feet.	Scenic Landscape Unit	High	Subordinate

Proposed Project Site	Existing Aesthetic Resources Setting	Designated Scenic Resource	Sensitivity	Visual Dominance
RR151+50 Test Station	Adjacent to rural road, grasses, trees. Distance to nearest residence: approximately 200 feet. Not visible from public roads or nearest residences due to existing vegetation.	Scenic Landscape Unit	High	Inevident
RR200+00 Test Station	Adjacent to vineyard road, vineyard, mature trees. Not visible from public roads. May be partly visible from nearest residence. Distance to nearest residence: approximately 400 feet.		Moderate	Subordinate
RR224+00 Cathodic Protection Station	Adjacent to Laguna Road, power pole, rural residences, trees. Visible from public road. Not visible from nearby residences due to existing trees and other vegetation.		Moderate	Subordinate
RR245+00 Test Station	Adjacent to Guerneville Road (Scenic Corridor), trees, power lines, vineyard road, vineyards. Not visible from nearest public road or residence due to topography, vegetation, and vineyard rows. Distance to nearest residence: 450 feet.	Scenic Corridor, Scenic Landscape Unit	High	Inevident
RR286+50 Test Station	Adjacent to grazed grassland and dirt road. Not visible from public road. May be partially visible from nearest residence. Distance to nearest residence: over 1,500 feet.	Scenic Landscape Unit	High	Subordinate
RR302+00 Cathodic Protection Station	Existing equipment on site and visible. Adjacent to grasses, wetlands, grazed lands, and rural road (Hall Road). May be visible from nearest public road and residence. Distance to nearest residence: approximately 300 feet.	Scenic Landscape Unit	High	Subordinate
RR312+50 Test Station	Adjacent to agricultural lands, trees, fencing, private drive. May be visible from nearest residence. Distance to nearest residence: approximately 500 feet.	Scenic Landscape Unit	High	Subordinate

Proposed Project Site	Existing Aesthetic Resources Setting	Designated Scenic Resource	Sensitivity	Visual Dominance
RR323+00 Cathodic Protection Station	Adjacent to public road, fencing, and private drive. Visible from public road (Sanford Road). Unlikely to be visible from nearby residences due to existing fencing and trees. Distance to nearest residence: approximately 200 feet.	Scenic Landscape Unit	High	Subordinate
RR336+40 Test Station	Adjacent to rural road (Bravo Toro Lane), fencing, trees. Visible from Bravo Toro Lane. May be visible from nearby residences. Distance to nearest residence: approximately 200 feet.	Scenic Landscape Unit	High	Subordinate
RR367+00 Cathodic Protection Station	At existing Sonoma Water facility, including fencing, several structures, and equipment. Likely visible from Occidental Road (Scenic Corridor). Not visible from nearby residences due to distance, topography, and vineyard rows. Distance to nearest residence: approximately 300 feet.	Scenic Corridor	High	Subordinate
RR376+00 Test Station	Existing equipment on site and visible. Adjacent to vineyard road, vineyards, existing Sonoma Water equipment. Unlikely to be visible from nearest public road. Not visible from nearest residences due to distance and vineyard rows. Distance to nearest residence: approximately 1,000 feet.	Community Separator	High	Inevident
RR436+80 Cathodic Protection Station	At existing Sonoma Water facility, including fencing, several structures, equipment. Adjacent to Highway 12/Sebastopol Avenue (Scenic Corridor). Potentially visible from Highway 12/Sebastopol Avenue and neighboring residences. Distance to nearest residence: approximately 400 feet.	Scenic Corridor	High	Subordinate

Proposed Project Site	Existing Aesthetic Resources Setting	Designated Scenic Resource	Sensitivity	Visual Dominance
RR448+00 Test Station	Existing equipment on site and visible. Adjacent to gravel road, irrigated field, grassland, oak savannah. Not visible from public roads. Not visible from nearby residences due to distance and vegetation. Distance to nearest residence: approximately 2,000 feet.		Moderate	Inevident
RR502+27 Test Station	Existing equipment on site and visible. Adjacent to gravel road, grasslands, oak savannah. Not visible from public roads. Not visible from residences due to distance and vegetation. Distance to nearest residence: approximately 1,300 feet.		Moderate	Inevident
RR541+20 Cathodic Protection Station	Adjacent to Todd Road, wetlands, trees, wetlands, existing Sonoma Water facility, including fencing and several structures. May be visible from public road (Todd Road) and nearby residences. Distance to nearest residence: approximately 350 feet.		Moderate	Subordinate
RR592+00 Test Station	Adjacent to farm road, fencing, farm equipment, debris, grazed grassland. Unlikely to be visible from public road. May be visible from nearest residence. Distance to nearest residence: approximately 200 feet.	Scenic Landscape Unit	High	Subordinate
RR606+00 Cathodic Protection Station	Adjacent to public road (Meadow Lane), wetlands, wastewater storage pond, grassland. Visible from public road (Meadow Lane). May be visible from nearby residence. Distance to nearest residence: approximately 200 feet.	Scenic Landscape Unit	High	Subordinate
RR608+00 Cathodic Protection Station	Adjacent to public road (Walker Ave), equipment and fencing associated with Laguna wastewater treatment plant. Not visible from public road. Not visible from nearby residences due to topography, fencing, and vegetation. Distance to nearest residence: approximately 300 feet		Moderate	Subordinate

Proposed Project Site	Existing Aesthetic Resources Setting	Designated Scenic Resource	Sensitivity	Visual Dominance
RR616+75 Test Station	Adjacent to agricultural roads and buildings. Not visible from public road. Not visible from nearby residences due to adjacent buildings and vegetation. Distance to nearest residence: approximately 450 feet.		Moderate	Inevident
RR630+00 Test Station	Adjacent to unpaved road, fencing, grassland. Not visible from public road. Visible from nearby residence. Distance to nearest residence: approximately 100 feet.		Moderate	Subordinate
RR643+75 Cathodic Protection Station	Adjacent to unpaved road, grassland, potentially jurisdictional wetlands, fencing, equipment. Existing Sonoma Water equipment onsite and visible. Not visible from public roadway. Potentially visible from nearby residence. Distance to nearest residence: approximately 1,100 feet.		Moderate	Subordinate
RR669+30 Test Station	Adjacent to grassland, potential wetlands, riparian corridor, fencing, equipment. Existing Sonoma Water equipment onsite and visible. Not visible from public road. Not visible from nearby residence due to distance and vegetation. Distance to nearest residence: approximately 1,500 feet.		Moderate	Inevident
RR677+80 Cathodic Protection Station	Adjacent to grassland, unpaved private road, riparian corridor, trees. Not visible from public road. Unlikely to be visible from nearby residences due to distance and vegetation. Distance to nearest residence: over 2,200 feet.	Scenic Landscape Unit	High	Inevident

Proposed Project Site	Existing Aesthetic Resources Setting	Designated Scenic Resource	Sensitivity	Visual Dominance
RR748+52 Cathodic Protection Station	Existing equipment on site and visible. Adjacent to Highway 116 (Scenic Corridor), powerlines, driveway, trees, grasses. Potentially visible from Highway (116) but unlikely to be noticeable due to existing equipment and structures onsite. Potentially visible from nearest residence. Distance to nearest residence: approximately 100 feet.	Scenic Corridor, Scenic Landscape Unit	High	Subordinate
RR781+00 Cathodic Protection Station	Existing equipment on site and visible. Adjacent to Stony Point Road and Madrone Avenue, fencing, power poles, grasses, entrance to indoor recreation facility. May be visible from Stony Point Road or Madrone Avenue but unlikely to be noticeable due to existing infrastructure on site. Not visible from nearby residences due to mature trees. Distance to nearest residence: approximately 800 feet.	(Adjacent to Scenic Landscape Unit)	High	Subordinate
RR798+50 Test Station	Adjacent to private road, landscaping, riparian corridor. Not visible from public road. Visible from private road but not from residence. Test station will be installed as flush mount to eliminate visibility. Distance to nearest residence: approximately 100 feet.		Moderate	Subordinate
RR808+45 Test Station	Existing equipment on site and visible, including gate and signage. Adjacent to vineyard, vineyard road, and property, which includes significant debris and several inoperable vehicles. Unlikely to be visible from West Sierra Ave. Potentially visible from nearest residence. Distance to nearest residence: approximately 150 feet.		Moderate	Subordinate

Proposed Project Site	Existing Aesthetic Resources Setting	Designated Scenic Resource	Sensitivity	Visual Dominance
RR826+55 Cathodic Protection Station	Located at Sonoma Water facility. Existing equipment on site and visible, including large water storage tanks, fencing, signage. Not visible from residences or public roadways due to topography and mature trees and other vegetation. Distance to nearest residence: approximately 500 feet.	Community Separator	High	Inevident

Table A-5. Aesthetic Resources at Proposed Vegetation Maintenance Sites

Proposed Project Site	Aesthetic Resources Setting	Designated Scenic Resources	Sensitivity	Visual Dominance
Vine Hill Road Vegetation Maintenance	Vegetation includes trees, shrubs, and grasses. May be from nearby residences but no trees will be removed and visual character of the site is unlikely to change. Distance to nearest residence: approximately 125 feet.	Scenic Landscape Unit	High	Subordinate
Laguna Vegetation Maintenance	Vegetation includes trees and shrubs. Not visible from nearby residences but no trees will be removed and visual character of the site is unlikely to change. Distance to nearest residence: over 2,200 feet.		Moderate	Inevident
West Sierra Avenue Vegetation Maintenance	Existing equipment on site and visible, including gate and signage. Adjacent to vineyard and vineyard road, grasses, shrubs, trees. Unlikely to be visible from West Sierra Ave. May be visible from nearby residences but no trees will be removed and visual character of the site is unlikely to change. Distance to nearest residence: approximately 150 feet.		Moderate	Subordinate
Penngrove Vegetation Maintenance Site (Petaluma AQ)	Adjacent to railroad, industrial buildings, and residences. Vegetation includes grasses, shrubs, trees. Visible from nearby residences but no trees will be removed and visual character of the site is unlikely to change. Distance to nearest residence: approximately 20 feet.		Moderate	Subordinate

APPENDIX B
AGRICULTURE AND FOREST RESOURCES SITE-SPECIFIC SETTING AND POTENTIAL IMPACT TABLES

Appendix B Agriculture and Forestry Resources

Table B-1. Farmland and Land Use at Proposed Project Sites along Santa Rosa Aqueduct

Proposed Project Site	CA Department of Conservation Farmland Designation	Williamson Act Contracts	County of Sonoma General Plan Land Use	City of Santa Rosa General Plan Land Use
SR0+00 Test Station	Other Land		Resources Rural Development	
SR9+66 Cathodic Protection Station	Other Land / Farmland of Local Importance		Land Intensive Agriculture	
SR14+28 Test Station	Other Land		Land Intensive Agriculture	
SR21+00 Test Station	Other Land, Unique Farmland, Prime Farmland		Land Intensive Agriculture	
SR32+00 Test Station	Other Land, Unique Farmland		Land Intensive Agriculture	
SR40+50 Test Station	Other Land		Land Intensive Agriculture, Resources Rural Development	
SR49+00 Test Station	Farmland of Local Importance		Resources Rural Development	
SR56+00 Test Station	Farmland of Local Importance		Resources Rural Development	
SR75+00 Cathodic Protection Station	Farmland of Local Importance		Public road right-of-way; adjacent to undesignated parcel owned by Town of Windsor	
SR90+00 Test Station	Farmland of Local Importance	Aqueduct right-of-way is omitted from adjacent Type I contracts	Public road right-of-way; adjacent to undesignated parcel owned by Town of Windsor	
SR95+00 Cathodic Protection Station	Farmland of Local Importance		Public road right-of-way; adjacent to Public/Quasi-Public, Diverse Agriculture	
SR111+00 Test Station	Farmland of Local Importance, Other Land, Prime Farmland	Aqueduct right-of-way is omitted from surrounding Type I and Type II contracts	Diverse Agriculture	

Proposed Project Site	CA Department of Conservation Farmland Designation	Williamson Act Contracts	County of Sonoma General Plan Land Use	City of Santa Rosa General Plan Land Use
SR123+43 Test Station	Prime Farmland, Other Land	Aqueduct right-of-way is omitted from surrounding Type I and Type II contracts	Diverse Agriculture	
SR129+09 Test Station	Farmland of Local Importance, Unique Farmland	Aqueduct right-of-way is omitted from surrounding Type I contracts	Diverse Agriculture	Agriculture
SR134+83 Test Station	Farmland of Local Importance		Diverse Agriculture	Agriculture
SR146+50 Test Station	Farmland of Local Importance, adjacent to Unique Farmland	Aqueduct right-of-way is omitted from surrounding Type II [Phase-Out Status] contracts	Diverse Agriculture	Agriculture
SR150+03 Test Station	Farmland of Local Importance, Unique Farmland	Aqueduct right-of-way is omitted from surrounding Type I and Type II [Phase-Out Status] contracts	Diverse Agriculture	Agriculture
SR159+61 Test Station	Farmland of Local Importance		Diverse Agriculture	Agriculture
SR170+00 Cathodic Protection Station	Farmland of Local Importance		Public/Quasi-Public	Public/Institutional
SR203+45 Test Station	Farmland of Local Importance, adjacent to Urban and Built Up		Public/Quasi-Public	Public/Institutional
SR207+35 Anode Well and Rectifier	Farmland of Local Importance / Urban and Built Up		Public/Quasi-Public	Public/Institutional
SR212+00 Test Station	Farmland of Local Importance		Public/Quasi-Public	Public/Institutional
SR231+00 Test Station	Farmland of Local Importance		Public/Quasi-Public	Public/Institutional
SR242+97 Cathodic Protection Station	Urban and Built Up		Public road right-of-way, Limited Industrial	Business Park

Proposed Project Site	CA Department of Conservation Farmland Designation	Williamson Act Contracts	County of Sonoma General Plan Land Use	City of Santa Rosa General Plan Land Use
SR247+94 Test Station	Other Land		Limited Industrial	Business Park
SR259+60 Test Station	Farmland of Statewide Importance		Land Intensive Agriculture	Agriculture
SR264+00 Test Station	Unique Farmland	Aqueduct right-of-way is omitted from surrounding Type I contracts	Land Intensive Agriculture	Agriculture
SR285+50 Test Station	Prime Farmland, Unique Farmland	Aqueduct right-of-way is omitted from surrounding Type I contracts	Land Intensive Agriculture	Agriculture
SR320+52 Cathodic Protection Station	Prime Farmland, Other Land			Very Low Residential
SR415+50 Cathodic Protection Station	Urban and Built Up			Public road right-of-way; adjacent to Low Residential
SR479+70 Test Station	Urban and Built Up			Medium Residential; adjacent to General Industry
SR496+95 Cathodic Protection Station	Urban and Built Up			Public road right-of-way; adjacent to General Industry and Medium Residential
SR530+00 Cathodic Protection Station	Urban and Built Up			Public road right-of-way; adjacent to Business Park, Medium Residential, General Industry
SR572+67 Cathodic Protection Station	Urban and Built Up			Public road right-of-way; adjacent to Retail and Business Service
SR588+00 Test Station	Urban and Built Up			Public road right-of-way; adjacent to Transit Village Medium
SR602+00 Test Station	Urban and Built Up			Public road right-of-way; adjacent to Mixed Use and Parks/Recreation

Proposed Project Site	CA Department of Conservation Farmland Designation	Williamson Act Contracts	County of Sonoma General Plan Land Use	City of Santa Rosa General Plan Land Use
SR622+70 Test Station	Urban and Built Up			Public road right-of-way; adjacent to Retail and Business Service
SR663+89 Cathodic Protection Station	Urban and Built Up			Public road right-of-way; adjacent to Public/Institutional, Medium Residential, and Low Residential
SR677+00 Test Station	Urban and Built Up			Public road right-of-way; adjacent to Office
SR713+80 Cathodic Protection Station	Urban and Built Up			Public road right-of-way; adjacent to Medium Residential and Office
SR721+40 Test Station	Urban and Built Up			Public road right-of-way; adjacent to Retail and Medium Residential
SR761+00 Cathodic Protection Station	Urban and Built Up			Public road right-of-way; adjacent to Medium Residential
SR771+40 Cathodic Protection Station	Urban and Built Up			Public road right-of-way; adjacent to Parks/Recreation
SR787+00 Test Station	Other Land			Parks/Recreation
SR801+20 Test Station	Other Land			Parks/Recreation
SR812+25 Test Station	Other Land			Parks/Recreation
SR821+40 Test Station	Other Land			Parks/Recreation

Table B-2. Farmland and Land Use at Proposed Project Sites along the Russian River to Cotati Aqueduct

Proposed Project Site	CA Department of Conservation Farmland Designation	Williamson Act Contracts	County of Sonoma General Plan Land Use	City of Santa Rosa General Plan Land Use
RR31+22 Test Station	Unique Farmland / Prime Farmland	Aqueduct property is omitted from adjacent Type I contracts	Land Intensive Agriculture and Mixed Use	
RR45+00 Test Station	Other Land		Rural Residential	
RR89+99 Cathodic Protection Station	Other Land		Rural Residential	
RR131+00 Test Station	Prime Farmland	Aqueduct property is omitted from adjacent Type I contracts	Diverse Agriculture; adjacent to Mixed Use	
RR141+58 Cathodic Protection Station	Other Land		Diverse Agriculture; adjacent to Mixed Use	
RR151+50 Test Station	Other Land / Farmland of Local Importance		Diverse Agriculture	
RR200+00 Test Station	Other Land / Unique Farmland		Diverse Agriculture	
RR224+00 Cathodic Protection Station	Other Land		Rural Residential	
RR245+00 Test Station	Unique Farmland	Aqueduct property is omitted from adjacent Type I contracts	Public road right-of-way and Land Intensive Agriculture	
RR286+50 Test Station	Farmland of Statewide Importance	Aqueduct property is omitted from surrounding Type II contracts	Land Extensive Agriculture	
RR302+00 Cathodic Protection Station	Farmland of Local Importance / Farmland of Statewide Importance	Aqueduct property is omitted from adjacent Type II, Type II [Phase-Out Status] contracts	Land Extensive Agriculture	

Proposed Project Site	CA Department of Conservation Farmland Designation	Williamson Act Contracts	County of Sonoma General Plan Land Use	City of Santa Rosa General Plan Land Use
RR312+50 Test Station	Other Land		Diverse Agriculture; adjacent to Land Extensive Agriculture	
RR323+00 Cathodic Protection Station	Other Land / Farmland of Statewide Importance		Public road right-of-way and Land Extensive Agriculture; adjacent to Diverse Agriculture	
RR336+40 Test Station	Other Land		Diverse Agriculture	
RR367+00 Cathodic Protection Station	Farmland of Statewide Importance / Other Land	Aqueduct property is omitted from adjacent Type I contract, vehicle movement and/or staging could overlap roadside graveled area within Type I	Public road right-of-way, Land Extensive Agriculture, and Mixed Use	
RR376+00 Test Station	Farmland of Statewide Importance	Aqueduct property is omitted from adjacent Type I contracts	Land Extensive Agriculture; adjacent to Mixed Use	
RR436+80 Cathodic Protection Station	Farmland of Local Importance		Public road right-of-way and Land Extensive Agriculture	Adjacent to undesignated City of Santa Rosa parcel
RR448+00 Test Station	Farmland of Statewide Importance		Land Extensive Agriculture	Undesignated City of Santa Rosa parcel
RR502+27 Test Station	Farmland of Local Importance		Land Extensive Agriculture	Undesignated City of Santa Rosa parcel
RR541+20 Cathodic Protection Station	Farmland of Local Importance		Land Extensive Agriculture	
RR592+00 Test Station	Other Land		Diverse Agriculture	Agriculture
RR606+00 Cathodic Protection Station	Farmland of Statewide Importance		Public road right-of-way; adjacent to Diverse Agriculture	Adjacent to Agriculture and Public/Institutional
RR608+00 Anode Well and Rectifier	Public road right-of-way		Public road right-of-way; adjacent to Diverse Agriculture	Adjacent to Public/Institutional and Agriculture

Proposed Project Site	CA Department of Conservation Farmland Designation	Williamson Act Contracts	County of Sonoma General Plan Land Use	City of Santa Rosa General Plan Land Use
RR616+75 Test Station	Other Land		Diverse Agriculture	Agriculture
RR630+00 Test Station	Farmland of Local Importance		Diverse Agriculture	Agriculture
RR643+75 Cathodic Protection Station	Grazing Land / Farmland of Local Importance		Diverse Agriculture	Agriculture
RR669+30 Test Station	Farmland of Local Importance		Land Extensive Agriculture	Agriculture
RR677+80 Cathodic Protection Station	Farmland of Statewide Importance	Aqueduct right-of-way is omitted from adjacent Type II contracts	Land Extensive Agriculture	
RR748+52 Cathodic Protection Station	Other Land	Aqueduct right-of-way is omitted from adjacent Type II contract	Rural Residential	
RR781+00 Anode Well and Rectifier	Farmland of Local Importance		Public road right-of-way; adjacent to Rural Residential and Mixed Use	
RR798+50 Test Station	Other Land		Rural Residential	
RR808+45 Test Station	Other Land / Unique Farmland		Rural Residential	
RR826+55 Anode Well and Rectifier	Urban and Built Up		Land Extensive Agriculture (Sonoma Water storage tanks near West Sierra Ave)	

Table B-3. Farmland and Land Use at Proposed Maintenance Sites along Russian River to Cotati Aqueduct

Proposed Maintenance Site	CA Department of Conservation Farmland Designation	Williamson Act Contracts	County of Sonoma General Plan Land Use	City of Santa Rosa General Plan Land Use
Vine Hill Road Vegetation Maintenance	Farmland of Local Importance, Other land		Diverse Agriculture	
Laguna Vegetation Maintenance	Farmland of Local Importance, Prime Farmland	Aqueduct right-of-way is omitted from surrounding Type I and Type II contracts	Land Extensive Agriculture	
West Sierra Vegetation Maintenance	Other land, Urban and Built Up, Unique Farmland		Rural Residential	
Penngrove Vegetation Maintenance			Urban Residential	

APPENDIX C
AIR QUALITY AND GREENHOUSE GAS EMISSIONS ESTIMATES

Table Set C-1: Estimated Construction-related Air Quality and Greenhouse Gas Emissions Totals

Road Construction Emissions Model, Version 9.0.0

Annual Construction Emissions: Combined Test Stations and Cathodic Protection Stations

	ROG	CO	NOX	PM10 - Total	PM10 - Exhaust	PM10 - Fugitive Dust	PM2.5 - Total	PM2.5 - Exhaust	PM2.5 - Fugitive Dust	SOX	CO2	CH4	N2O	CO2e
Total Cathodic Protection Emissions (tons)	0.0630	0.5890	0.6512	0.0340	0.0322	0.0017	0.0286	0.0283	0.0004	0.0013	125.5883	0.0329	0.0029	115.4535
Total Test Station Emissions (tons)	0.1105	1.0103	1.1106	0.0622	0.0594	0.0027	0.0538	0.0532	0.0006	0.0017	166.4202	0.0451	0.0037	153.0050
Total Rectifier + Test Station Emissions (tons)	0.1734	1.5994	1.7618	0.0961	0.0916	0.0045	0.0824	0.0815	0.0009	0.0030	292.0085	0.0780	0.0066	268.4585
Total Annual Emissions Over 30-year project lifespan (tons/year)	0.0058	0.0533	0.0587	0.0032	0.0031	0.0001	0.0027	0.0027	0.0000	0.0001	9.7336	0.0026	0.0002	8.9486
Total Rectifier + Test Station Emissions (metric tons)														243.541543
Total Annual CO2e Emissions Over 30-year Project Life (MT CO2e/year)														8.11805144

Maximum Daily Construction Emissions: Combined Test Station and Cathodic Protection Stations*

	ROG	CO	NOX	PM10 - Total	PM10 - Exhaust	PM10 - Fugitive Dust	PM2.5 - Total	PM2.5 - Exhaust	PM2.5 - Fugitive Dust	SOX	CO2	CH4	N2O	CO2e
Maximum (lbs/day)	1.9160	18.7421	19.3366	1.0263	0.9803	0.0460	0.8605	0.8510	0.0096	0.0402	3935.5380	0.9916	0.0943	3988.4395
Maximum (lbs/day)	2.1174	20.0468	20.9199	1.1711	1.1251	0.0460	1.0089	0.9993	0.0096	0.0347	3375.9394	0.8877	0.0799	3421.9560
Total Maximum Daily Emissions (lbs/day)	4.0334	38.7889	40.2565	2.1974	2.1054	0.0920	1.8694	1.8502	0.0191	0.0749	7311.4773	1.8793	0.1743	7410.3955

**Assumes that test stations and cathodic protection stations are constructed concurrently*

Air Quality: BAAQMD Thresholds

	Max Daily Project Emissions	BAAQMD Threshold: Average Daily Construction-Related Emissions	Above Threshold?
ROG (lbs/day)	4.0334	54	No
NOx (lbs/day)	40.2565	54	No
PM10 - Exhaust (lbs/day)	2.1054	82	No
PM2.5 (lbs/day)	1.8502	54	No

Air Quality: NSCAPCD Thresholds

	Emissions Amortized over 30-year Lifespan of Project	NSCAPCD Operational Threshold	Above Threshold?
ROG (tons/year)	0.0058	40	No
NOx (tons/year)	0.0587	40	No
PM10 (tons/year)	0.0032	15	No
CO (tons/year)	0.0533	100	No

Greenhouse Gas Emissions:BAAQMD Thresholds

	Construction-Related Annual GHG Emissions over 30-year Project Lifetime	BAAQMD GHG Threshold, non-stationary	Above Threshold?
GHG (MT CO2e/yr)	8.1181	1100	No

Table Set C-2. Model Results for Construction-related Emissions for Test Stations

Road Construction Emissions Model, Version 9.0.0

Daily Emission Estimates for ->	**Test Station Construction**													
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)
Grubbing/Land Clearing	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grading/Excavation	1.2943	12.1411	13.1317	0.7176	0.6946	0.0230	0.6313	0.6266	0.0048	0.0200	1939.2614	0.5548	0.0360	1963.8605
Drainage/Utilities/Sub-Grade	0.5553	4.7513	5.4800	0.3242	0.3012	0.0230	0.2696	0.2648	0.0048	0.0086	840.3380	0.1995	0.0260	853.0816
Paving	0.2678	3.1543	2.3082	0.1294	0.1294	0.0000	0.1080	0.1080	0.0000	0.0061	596.3399	0.1333	0.0179	605.0140
Maximum (pounds/day)	2.1174	20.0468	20.9199	1.1711	1.1251	0.0460	1.0089	0.9993	0.0096	0.0347	3375.9394	0.8877	0.0799	3421.9560
Total (tons/construction project)	0.1105	1.0103	1.1106	0.0622	0.0594	0.0027	0.0538	0.0532	0.0006	0.0017	166.4202	0.0451	0.0037	168.6574
Notes: Project Start Year ->	2020													
Project Length (months) ->	12													
Total Project Area (acres) ->	0.12													
Maximum Area Disturbed/Day (acres) ->	0.0023													
Water Truck Used? ->	Yes													

Phase	Total Material (Soil) Imported/Exported Volume (yd3/day)	Asphalt	Daily VMT (miles/day): Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	0	0	0	0	0	0
Grading/Excavation	10	0	15	0	180	10
Drainage/Utilities/Sub-Grade	10	0	15	0	180	10
Paving	10	0	15	0	180	0

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 ->	**Test Station Construction**													
Project Phases (Tons for all except CO2e. Metric tonnes 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grading/Excavation	0.0769	0.7212	0.7800	0.0426	0.0413	0.0014	0.0375	0.0372	0.0003	0.0012	115.1921	0.0330	0.0021	105.8272
Drainage/Utilities/Sub-Grade	0.0330	0.2822	0.3255	0.0193	0.0179	0.0014	0.0160	0.0157	0.0003	0.0005	49.9161	0.0118	0.0015	45.9703
Paving	0.0006	0.0069	0.0051	0.0003	0.0003	0.0000	0.0002	0.0002	0.0000	0.0000	1.3119	0.0003	0.0000	1.2075
Maximum (tons/phase)	0.0769	0.7212	0.7800	0.0426	0.0413	0.0014	0.0375	0.0372	0.0003	0.0012	115.1921	0.0330	0.0021	105.8272
Total (tons/construction project)	0.1105	1.0103	1.1106	0.0622	0.0594	0.0027	0.0538	0.0532	0.0006	0.0017	166.4202	0.0451	0.0037	153.0050

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.

Table Set C-3. Model Results for Construction Emissions for Cathodic Protection Stations

Road Construction Emissions Model, Version 9.0.0

Daily Emission Estimates for ->	**Cathodic Protection Station Construction**													
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 PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)
Grubbing/Land Clearing	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grading/Excavation	1.0830	10.3469	11.4705	0.5531	0.5301	0.0230	0.4748	0.4700	0.0048	0.0240	2339.7499	0.6566	0.0438	2369.2041
Drainage/Utilities/Sub-Grade	0.5604	4.9984	5.5356	0.3346	0.3116	0.0230	0.2739	0.2692	0.0048	0.0095	929.8235	0.2006	0.0309	944.0474
Paving	0.2725	3.3968	2.3304	0.1386	0.1386	0.0000	0.1118	0.1118	0.0000	0.0068	665.9645	0.1344	0.0197	675.1880
Maximum (pounds/day)	1.9160	18.7421	19.3366	1.0263	0.9803	0.0460	0.8605	0.8510	0.0096	0.0402	3935.5380	0.9916	0.0943	3988.4395
Total (tons/construction project)	0.0630	0.5890	0.6512	0.0340	0.0322	0.0017	0.0286	0.0283	0.0004	0.0013	125.5883	0.0329	0.0029	127.2644
Notes: Project Start Year ->	2020													
Project Length (months) ->	7													
Total Project Area (acres) ->	0.07													
Maximum Area Disturbed/Day (acres) ->	0.0023													
Water Truck Used? ->	Yes													

Phase	Total Material (Soil) Imported/Exported Volume (yd3/day)	Asphalt	Daily VMT (miles/day): Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	0	0	0	0	0	0
Grading/Excavation	10	0	15	0	270	15
Drainage/Utilities/Sub-Grade	10	0	15	0	270	15
Paving	10	0	15	0	270	0

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 ->	**Cathodic Protection Station Construction**													
Project Phases (Tons for all except CO2e. Metric tonnes 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grading/Excavation	0.0417	0.3984	0.4416	0.0213	0.0204	0.0009	0.0183	0.0181	0.0002	0.0009	90.0804	0.0253	0.0017	82.7491
Drainage/Utilities/Sub-Grade	0.0210	0.1869	0.2070	0.0125	0.0117	0.0009	0.0102	0.0101	0.0002	0.0004	34.7754	0.0075	0.0012	32.0306
Paving	0.0003	0.0037	0.0026	0.0002	0.0002	0.0000	0.0001	0.0001	0.0000	0.0000	0.7326	0.0001	0.0000	0.6738
Maximum (tons/phase)	0.0417	0.3984	0.4416	0.0213	0.0204	0.0009	0.0183	0.0181	0.0002	0.0009	90.0804	0.0253	0.0017	82.7491
Total (tons/construction project)	0.0630	0.5890	0.6512	0.0340	0.0322	0.0017	0.0286	0.0283	0.0004	0.0013	125.5883	0.0329	0.0029	115.4535

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.

APPENDIX D
SUPPORTING INFORMATION RELATED TO BIOLOGICAL RESOURCES

Appendix D Biological Resources

Table D-1. Potential for Special-Status Plant Species to Occur Within Santa Rosa Aqueduct and Russian River to Cotati Aqueduct Cathodic Protection Project Area.

Species	Status* Federal/State CA Rank/CNPS	Habitat Requirements	Potential To Occur In The Project Area
Alopecurus aequalis var. *sonomensis* Sonoma alopecurus	FE/-- S1/1B.1	Freshwater marshes, riparian scrub. Elevation range 15 – 1190 feet. Blooms: May - July	**Moderate.** Suitable habitat in adjacent areas but not within construction footprints. No recent known occurrences adjacent to project sites. No populations detected in project area during surveys 2018-2019.
Amorpha californica var. *napensis* Napa false indigo	--/-- S2/1B.2	Canopy openings in broadleaf upland forest, chaparral, cismontane woodland. Elevation range: 390 – 6500 feet. Blooms: April – June.	**Unlikely.** Suitable habitat adjacent to project sites at Spring Lake but heavily impacted by foot traffic. No populations detected in project area during surveys 2018 - 2019.
Amsinckia lunaris Bent-flowered fiddleneck	--/-- S3/1B.2	Cismontane woodland, valley and foothill grassland, coastal bluff scrub; often on serpentine substrate. Elevation range: 15 - 985 feet. Blooms: March - June.	**Unlikely.** No suitable habitat within project sites. No known populations within or adjacent to project sites. Not detected during surveys 2018 – 2019.
Arctostaphylos bakeri ssp. *bakeri* Baker's manzanita	--/Rare S1/1B.1	Chaparral. Serpentine soil, often in talus. Elevation range: 485 – 3475 feet. Blooms: May – July.	**Unlikely.** Habitat not favorable for species. RR 151+50 in proximity to known occurrences lack serpentine soil. Known occurrences located further west than project area**.** Not detected during surveys 2018-2019.

Species	Status* Federal/State CA Rank/CNPS	Habitat Requirements	Potential To Occur In The Project Area
Arctostaphylos bakeri ssp. *sublaevis* The Cedars manzanita	--/Rare S2.1B.2	Chaparral, closed-cone coniferous forest. Strict serpentine endemic. Elevation: 600 – 2470 feet. Blooms: February – May.	**None.** No suitable habitat within or adjacent to project sites.
Arctostaphylos densiflora Vine Hill manzanita	--/SE S1/1B.1	Chaparral. On acidic marine sands. Elevation range: 160 – 390 feet. Blooms: February – April.	**None.** Suitable habitat and known occurrences greater than 2500 feet of RR 151+50 (closest project site). No individuals observed during plant surveys 2018 - 2019.
Arctostaphylos stanfordiana ssp. *decumbens* Rincon ridge manzanita	--/-- S1/1B.1	Chaparral. Restricted to red rhyolite soils. Elevation range: 240 – 1220 feet. Blooms: Feb – April.	**None.** No suitable habitat within or adjacent to project sites. Soil type not present within project areas.
Astragalus claranus Clara Hunt's milk-vetch	FE/ST S1/1B.1	Cismontane woodland, chaparral, valley and foothill grassland. Exposed open grassy hillsides. Usually on thin volcanic clay substrate; serpentine. Elevation range: 240 – 895 feet. Blooms: March – May.	**Unlikely.** Very marginal and degraded habitat within some project sites. No known occurrences in project area.

Species	Status* Federal/State CA Rank/CNPS	Habitat Requirements	Potential To Occur In The Project Area
Balsamorhiza macrolepis Big-scale balsamroot	--/-- S2/1B.2	Valley and foothill grassland, cismontane woodland, openings in ponderosa pine forest. Sometimes on serpentine or basalt. Elevation range: 225 – 2975 feet. Blooms: May – August.	**Unlikely.** Potentially marginal suitable habitat within some project sites, however disturbance associated with frequent pedestrian and maintenance activities limit opportunities for plants to establish. No known occurrences near project sites. No individuals observed during plant surveys 2018 - 2019.
Blennosperma bakeri Sonoma sunshine	FE/SE S1/1B.1	Wetlands. Vernal pools and swales in valley and foothill grassland. Elevation range: 30 – 350 feet. Blooms: March – May.	**Moderate.** Suitable habitat and occurrences in close proximity to many project sites within the Santa Rosa Plain. Construction footprints unlikely to support populations, but access routes could cross depressions that could support plants. No individuals observed during plant surveys 2018 - 2019.
Brodiaea leptandra Narrow-anthered brodiaea	--/-- S3/1B.2	Broadleaf upland forest, chaparral, lower montane coniferous forest. Elevation range: 355 – 2975 feet. Blooms: May – July.	**Moderate.** Suitable habitat and known population in close proximity to some project sites. Closest population is considered extirpated due to development. No individuals observed during plant surveys 2018 - 2019.
Calamagrostis crassiglumis Thurber's reed grass	--/-- S2/2B.1	Coastal scrub, freshwater marsh and swales surrounded by grassland or scrub. Elevation range: 15 – 150 feet. Blooms: May – July.	**None.** Known from Pitkin Marsh, outside of project sites. Suitable habitat adjacent to sites within Santa Rosa Plain but construction footprints avoid any such habitat.

Species	Status* Federal/State CA Rank/CNPS	Habitat Requirements	Potential To Occur In The Project Area
Calochortus raichei The Cedars fairy-lantern	--/-- S2/1B.2	Chaparral, closed-cone coniferous forest. Strict serpentine endemic. Elevation: 650 – 1595 feet. Blooms: May – August.	**None.** No suitable habitat within or adjacent to project sites.
Campanula californica Swamp harebell	--/-- S3/1B.2	Bogs, fens, closed-cone coniferous forests, coastal prairie, meadows and seeps, freshwater marshes and swamps. Elevation: 0 – 1300 feet. Blooms: June – October.	**None.** Mostly restricted to coastal areas. Known from Pitkin Marsh outside of project sites. No suitable habitat within project sites.
Carex comosa Bristly sedge	--/-- S2/2B.1	Lake margins, wetlands. Elevation range: 0 – 2035 feet. Blooms: May - September	**Unlikely.** No occurrences within close proximity to project sites. Marginal habitat present in adjacent areas but not within construction footprints. No individuals observed during plant surveys 2018 - 2019.
Castilleja uliginosa Pitkin marsh paintbrush	--/SE SX/1A	Freshwater marsh, wetlands. Elevation: 195 feet. Blooms: June – July.	**None.** Known from Pitkin Marsh outside of project sites.

Species	Status* Federal/State CA Rank/CNPS	Habitat Requirements	Potential To Occur In The Project Area
Ceanothus confusus Rincon Ridge ceanothus	--/-- 1B.1	Closed-cone coniferous forest, chaparral, cismontane woodland; known from volcanic and serpentine substrate; typically on dry shrubby slopes. Elevation range: 245 – 3495 feet. Blooms: February – April.	**None.** Some project sites contain marginally suitable habitat. Suitable habitat present at sites SR 787+00, SR 801+20, SR 812+25, SR 821+40. Surveys did not detect species in 2018-2019.
Ceanothus divergens Calistoga ceanothus	--/-- S2/1B.2	Chaparral, cismontane woodland. Rocky areas. Serpentine or volcanic substrate. Elevation range: 550 – 3085 feet. Blooms: February – April.	**None.** Some project areas contain marginally suitable habitat. Most suitable habitat at sites SR 787+00, SR 801+20, SR 812+25, SR 821+40. Surveys did not detect species 2018 – 2019.
Ceanothus foliosus var. *vineatus* Vine Hill ceanothus	--/-- S1/1B.2	Chaparral. Sandy, acidic substrate. Elevation range: 145 – 995 feet. Blooms: March – May.	**None.** Suitable habitat located within project areas. Site RR 151+50 in relatively close proximity to known occurrences in Vine Hill area. Surveys did not detect species 2018 – 2019.
Ceanothus purpureus Holly-leaved ceanothus	--/-- S2/1B.2	Chaparral. Volcanic slopes. Elevation range: 390 – 2080 feet. Blooms: February – June.	**None.** Suitable habitat not present within project areas. None detected during 2018 – 2019 surveys.

Species	Status* Federal/State CA Rank/CNPS	Habitat Requirements	Potential To Occur In The Project Area
Ceanothus sonomensis Sonoma ceanothus	--/-- S2/1B.2	Chaparral; located on sandy serpentine or volcanic substrates. Elevation range: 705 – 2625 feet. Blooms: February – April.	**None.** Suitable habitat not present within project areas. None detected during 2018 – 2019 surveys.
Centromadia parryi ssp. *parryi* Pappose tarplant	--/-- S2/1B.2	Seasonal wetlands, alkali sites in coastal prairie, meadows, seeps, salt marsh, and valley and foothill grassland. Elevation range: 10 – 1300 feet. Blooms: May – November.	**Unlikely.** Very marginal habitat located adjacent to project sites. Two known occurrences within Charles M. Schulz Sonoma County Airport property but within wetlands and not in close proximity to project sites. Surveys did not detect species 2018 – 2019.
Chorizanthe valida Sonoma spineflower	FE/SE S1/1B.1	Coastal prairie. Sandy soils. Elevation range: 30 – 995 feet. Blooms: June – August.	**None.** Suitable habitat not found within project sites.
Clarkia imbricata Vine Hill clarkia	FE/SE S1/1B.1	Chaparral, valley and foothill grassland. Acidic, sandy substrate. Vine hill area. Elevation range: 160 – 245 feet. Blooms: June – August.	**Moderate.** Suitable habitat located within project sites. Known occurrences in Vine Hill area. Surveys did not detect species 2018 – 2019.

Species	Status* Federal/State CA Rank/CNPS	Habitat Requirements	Potential To Occur In The Project Area
Cordylanthus tenuis ssp. *capillaris* Pennell's bird's-beak	FE/Rare S1/1B.2	Open or disturbed areas in closed-cone coniferous forest, chaparral. Serpentine substrate. Elevation range: 145 – 995 feet. Blooms: June – September.	**None.** Serpentine soils not present within project sites.
Cuscuta obtusiflora var. *glandulosa* Peruvian dodder	--/-- SH/2B.2	Freshwater marshes and swamps. Elevation range: <1600 feet. Blooms: June – August.	**Unlikely.** Considered extirpated in California by some sources (State rank SH). Suitable habitat not found within project sites. The Laguna Vegetation Maintenance Site is close to historical occurrence that had high uncertainty as to location. Species not detected in 2018 or 2019.
Delphinium bakeri Baker's larkspur	FE/SE S1/1B.1	Grassy areas in broadleaf upland forest, costal scrub, valley and foothill grassland. NW facing slopes underlain by decomposed shale. Elevation range: 260 – 995 feet. Blooms: March – May.	**Unlikely.** Some suitable grassland habitat found in project sites. No known occurrences adjacent to project sites.

Species	Status* Federal/State CA Rank/CNPS	Habitat Requirements	Potential To Occur In The Project Area
Delphinium luteum golden larkspur	FE/Rare S1/1B.1	Chaparral, coastal prairie, scrub. N facing rocky slopes. Elevation: 0 – 325 feet. Blooms: March – May.	**Unlikely.** No suitable habitat within project sites. Species not detected during 2018 – 2019 surveys.
Downingia pusilla dwarf downingia	--/-- S2/2B.2	Valley and foothill grassland, vernal pools; located in mesic grassy sites, pool and lake margins. Elevation range: 3 – 1450 feet. Blooms: March – May.	**Unlikely.** Although several project sites are adjacent to seasonal wetlands, this species is known from wetlands with a longer duration and deeper inundation period to preclude the emergence of non-native vegetation. Surveys did not detect species 2018 – 2019.
Erigeron greenei Greene's narrow-leaved daisy	--/-- S3/1B.2	Chaparral. Serpentine and volcanic substrate. Elevation range: 260 -945 feet. Blooms: May – September.	**None.** Project sites do not contain required habitat or soils.
Erigeron serpentinus Serpentine daisy	--/-- S2/1B.3	Chaparral, serpentine shrubland. Strict serpentine endemic. Elevation: 195 – 2180 feet. Blooms: May – August.	**None.** No suitable habitat within or adjacent to project sites.

Species	Status* Federal/State CA Rank/CNPS	Habitat Requirements	Potential To Occur In The Project Area
Fritillaria liliacea fragrant fritillary	--/-- S2/1B.2	Coastal scrub, valley and foothill grassland, coastal prairie, cismontane woodland; located in grassy sites underlain by clay, typically derived from volcanics or serpentine. Elevation range: 10 – 1335 feet. Blooms: February – April.	**Moderate.** Marginally suitable habitat present within various project sites. Known occurrences in proximity to project sites. Species not detected during 2018 – 2019 surveys.
Gilia capitata ssp. *tomentosa* woolly-headed gilia	--/-- S1/1B.1	Rocky areas within coastal bluff scrub. Elevation range: 30 – 600 feet. Blooms: May – July.	**None.** Project sites do not contain required habitat or soils.
Hemizonia congesta ssp. *congesta* congested hayfield tarweed	--/-- S2/1B.2	Coastal scrub, valley and foothill grassland. Elevation range: 65 – 1840 feet. Blooms: April – October.	**Moderate.** The project area contains open grasslands that may support this species. This species is relatively tolerant of disturbance (e.g., mowing, grazing, tilling). Species not detected during 2018 – 2019 surveys.
Horkelia tenuiloba thin-lobed horkelia	--/-- S2/1B.2	Broadleaf upland forest, coastal scrub, valley and foothill grassland, chaparral; in mesic openings, on sandy substrate. Elevation range: 165 – 1640 feet. Blooms: May – July.	**Unlikely.** Suitable habitat contained within project sites. No known occurrences in close proximity to project sites.

Species	Status* Federal/State CA Rank/CNPS	Habitat Requirements	Potential To Occur In The Project Area
Kopsiopsis hookeri small groundcone	--/-- S1S2/2B.3	Redwood forest, open woodland, mixed-conifer forest. Parasitic generally on *Gaultheria shallon*, occasionally *Arbutus menziesii* or *Arctostaphylos uva-ursi*. Elevation: 0 – 2100 feet. Blooms: April – August.	**None.** Host plants do not occur in project areas.
Lasthenia burkei Burke's goldfields	FE/SE S1/1B.1	Vernal pools, swales in valley and foothill grassland and cismontane woodland. Elevation range: 45 – 1000 feet. Blooms: April – June.	**Moderate.** Suitable habitat and occurrences in close proximity to many project sites on the Santa Rosa Plain. Construction footprints unlikely to support populations, but access routes could cross depressions that could support plants.
Lasthenia californica ssp. bakeri Baker's goldfields	--/-- S1/1B.2	Openings in closed-cone coniferous forests, coastal scrub. Elevation range: 195 – 1690 feet. Blooms: April – October.	**None.** No suitable habitat within project sites.
Layia septentrionalis Colusa layia	--/-- S2/1B.2	Chaparral, cismontane woodland, valley and foothill grassland. Sandy, serpentine substrate. Elevation range: 330 – 3595 feet. Blooms: April – May.	**None.** Project sites do not contain serpentine substrate. Close proximity to Annadel SP occurrence boundary based upon a 2015 photo and not confirmed. Species not detected during surveys 2018 – 2019.

Species	Status* Federal/State CA Rank/CNPS	Habitat Requirements	Potential To Occur In The Project Area
Legenere limosa legenere	--/-- S2/1B.1	Vernal pools; typically located in the deepest portions of pools. Elevation range: 3 – 2860 feet. Blooms: April – June.	**None.** Although the project sites are adjacent to seasonal wetlands, no suitable habitat is within the construction footprint.
Leptosiphon jepsonii Jepson's leptosiphon	--/-- S2/1B.2	Chaparral, cismontane woodland; on open to partially shaded grassy slopes on volcanic or the periphery of serpentine substrate. Elevation range: 330 – 1640 feet. Blooms: April – May.	**Moderate.** Marginally suitable habitat and substrate within some project sites. Known occurrences in Annadel SP. Species not detected during surveys 2018 – 2019.
Lessingia arachnoidea Crystal Springs lessingia	--/-- S2/1B.2	Cismontane woodland, coastal scrub, grassland. Often roadsides. Grassy slopes on serpentine soil. Elevation range: 125 – 950 feet. Blooms: July – October.	**None.** Project sites do not contain serpentine substrate.
Lilium pardalinum ssp. *pitkinense* Pitkin Marsh lily	FE/SE S1/1B.1	Cismontane woodland, meadows and seeps, wetlands. Saturated sandy soils. Elevation range: 110 – 215 feet. Blooms: June – July.	**None.** Few known occurrences restricted to Pitkin marsh and Cunningham Marsh. Not detected during surveys 2018 – 2019.

Species	Status* Federal/State CA Rank/CNPS	Habitat Requirements	Potential To Occur In The Project Area
Limnanthes vinculans Sebastopol meadowfoam	FE/SE S1/1B.1	Vernal pools, swales, wet meadows in valley and foothill grassland, valley oak woodland. Poorly drained soils of clay and sandy loam. Elevation range: 35 - 950 feet. Blooms: April – May.	**Moderate.** Rectifier site 541+20has robust population immediately adjacent to, but outside of project site. Suitable habitat and occurrences in close proximity to many project sites within the Santa Rosa Plain. Construction footprints unlikely to support populations, but access routes could cross depressions that contain habitat suitable for species. Surveys did not detect species onsite in 2018 and 2019.
Microseris paludosa marsh microseris	--/-- S2/1B.2	Closed-cone coniferous forests, cismontane woodland, coastal scrub, valley and foothill grassland. Elevation: 15 – 975 feet. Blooms: April – June.	**Unlikely.** Areas adjacent to project sites contain suitable habitat, especially in Santa Rosa Plain. Uncertain location information for known occurrences. Species not detected during surveys 2018 – 2019.
Navarretia leucocephala ssp. *bakeri* Baker's navarretia	--/-- S2/1B.1	Cismontane woodland, meadows and seeps, vernal pools, valley and foothill grassland, lower montane coniferous forests. Adobe or alkaline soils. Elevation range: 15 – 5710 feet. Blooms: April – July.	**Unlikely.** Associated with vernal pools and wetlands. No habitat within project sites. Soils not present within project sites. Adjacent areas could support populations, especially in Santa Rosa Plain. Known occurrences in Annadel SP.
Navarretia leucocephala ssp. *plieantha* many-flowered navarretia	FE/SE S1/1B.2	Vernal pools. Volcanic ash flows and volcanic substrates. Elevation range: 95 – 3090 feet. Blooms: May – June.	**Unlikely.** Associated with vernal pools. No habitat within project sites. Adjacent areas could support populations, especially in Santa Rosa Plain.

Species	Status* Federal/State CA Rank/CNPS	Habitat Requirements	Potential To Occur In The Project Area
Piperia candida white-flowered rain orchid	--/-- S3/1B.2	North coast and lower montane coniferous forest, broadleaf upland forest. Forest duff, mossy banks, rock outcrops, muskeg. Elevation: 95 – 4260 feet. Blooms: May – September.	**None.** Project sites do not contain suitable habitat. Distribution generally to north of project area.
Pleuropogon hooverianus North Coast semaphore grass	--/ST S2/1B.1	Broadleaf upland forest, meadows and seeps, North Coast coniferous forests. Mesic sites, sometimes freshwater marshes. Elevation range: 30 – 2180 feet. Blooms: May – July.	**Unlikely.** Most project sites do not contain suitable habitat. Where marginally suitable, construction footprints remain out of wetland areas or vernal pools.
Potentilla uliginosa Cunningham Marsh cinquefoil	--/-- SH/1A	Freshwater marshes and swamps, permanent wetlands. Elevation range: 95 – 125 feet. Blooms: May – August.	**None.** No suitable habitat in project sites near historical occurrences. Presumed extinct.
Rhynchospora alba white beaked-rush	--/-- S2/2B.2	Freshwater marshes, sphagnum bogs, fens. Elevation range: 195 – 6630 feet. Blooms: July – August.	**None.** Project sites do not contain suitable habitat.
Rhynchospora californica California beaked-rush	--/-- S1/1B.1	Bogs and fens, marshes and swamps, lower montane coniferous forest. Freshwater seeps and open marshy areas. Elevation range: 145 – 860 feet. Blooms: May – July.	**None.** Project sites do not contain suitable habitat.

Species	Status* Federal/State CA Rank/CNPS	Habitat Requirements	Potential To Occur In The Project Area
Rhynchospora capitellata brownish beaked-rush	--/-- S1/2B.2	Lower/upper montane coniferous forests, meadows and seeps, marshes and swamps. Pitkin marsh. Mesic sites. Elevation range: 145 – 6500 feet. Blooms: July – August.	**None.** Project sites do not contain suitable habitat.
Rhynchospora globularis round-headed beaked-rush	--/-- S1/2B.1	Freshwater marshes and swamps. Elevation range: 145 – 195 feet. Blooms: July – August.	**None.** Project sites do not contain suitable habitat.
Trifolium amoenum two-fork clover	FE/-- S1/1B.1	Open sites and swales in coastal bluff scrub, valley and foothill grassland. Often in wetlands Sometimes on serpentine soils. Elevation range: 15 – 1350 feet. Blooms: April – June.	**Moderate.** Very marginal habitat within project sites and potential habitat adjacent to project sites. Species not detected during surveys 2018 – 2019.
Trifolium buckwestiorum Santa Cruz clover	--/-- S2/1B.1	Broadleaf upland forest, cismontane woodland, coastal prairie. Moist grasslands. Elevation range: 340- 1985 feet. Blooms: April – October.	**Unlikely.** Marginally suitable habitat within project sites. No known occurrences in close proximity to project sites. Species not detected during surveys 2018 – 2019.

Species	Status* Federal/State CA Rank/CNPS	Habitat Requirements	Potential To Occur In The Project Area
Trifolium hydrophilum saline clover	--/-- S2/1B.2	Mesic, alkaline sites in marshes, swamps, valley and foothill grassland, vernal pools. Elevation range: 0 – 1495 feet. Blooms: April – June.	**Unlikely.** Project sites adjacent to suitable habitat, especially in Santa Rosa Plain. No known occurrences adjacent to project sites.
Triquetrella californica coastal triquetrella	--/-- S2/1B.2	Coastal bluff and scrub. Within 30 meters of coast, grasslands, open gravels on rocky slopes or roadsides. Elevation range: 30 – 330 feet. Blooming period: N/A (bryophyte).	**Unlikely.** Marginal habitat within some project sites at Spring Lake Regional Park. Known occurrence in Annadel SP.
Viburnum ellipticum oval-leaved viburnum	--/-- S3/2B.3	Chaparral, cismontane woodland, lower montane coniferous forest. Elevation range: 900 – 4600 feet. Blooms: May – June.	**Unlikely.** Although the Proposed Project area contains woodland habitat, the elevation range is higher than project sites and species is typically found in dense forest, or woodland habitat in montane or hillslope settings.

* Key to status codes:

FE	Federal Endangered
FT	Federal Threatened
SE	State Endangered
ST	State Threatened
SR	State Rare
SX	Presumed extirpated in CA. Not located despite exhaustive searches. Low likelihood species will be rediscovered.
SH	Possibly extirpated in CA. All sites are historical, element has not been seen for 20 years. Habitat still exists.
S1	Critically imperiled. Extreme rarity or steep declines in populations.
S2	Imperiled. Rarity due to restricted range, few populations, steep declines, or other factors.

S3	Vulnerable. Vulnerable due to restricted range, few populations, steep declines, or other factors.
Rank 1A	CNPS Rank 1A: Plants presumed extinct in California
Rank 1B	CNPS Rank 1B: Plants rare, threatened or endangered in California and elsewhere
Rank 2A	CNPS Rank 2A: Plants presumed extirpated in California, but more common elsewhere
Rank 2B	CNPS Rank 2B: Plants rare, threatened, or endangered in California, but more common elsewhere
Rank 0.1	Threat rank modifier for CNPS Ranks representing seriously threatened in CA
Rank 0.	Threat rank modifier for CNPS Ranks representing moderately threatened in CA
Rank 0.3	Threat rank modifier for CNPS Ranks representing low threat in CA

Potential to Occur:
None. Habitat on and adjacent to the site is clearly unsuitable for the species requirements (cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
Unlikely. Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
Moderate. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
High. All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.

SOURCES: The California Department of Fish and Wildlife Natural Diversity Database (California Department of Fish and Wildlife, 2020), U.S. Fish and Wildlife Service Species Lists (United States Fish and Wildlife Service, 2019), California Native Plant Society Electronic Inventory (California Native Plant Society, 2019) for the Camp Meeker, Cotati, Healdsburg, Santa Rosa, Sebastopol, and Two Rock USGS 7.5' Quadrangles.

Table D-2. Potential for Special-status Wildlife Species to Occur Within Santa Rosa Aqueduct and Russian River to Cotati Aqueduct Cathodic Protection Project Area.

Species	Status* Federal/State CA Rank/Other (BCC)	Habitat Requirements	Potential To Occur In The Project Area
Invertebrates			
Bombus occidentalis ssp. *occidentalis* Western bumble bee	--/CSE S1/--	Meadows and grasslands with abundant floral resources. Historically known throughout mountains and north coast of California, now largely confined to high elevation sites and a few occurrences on northern California coast.	**Unlikely.** Suitable habitat present within project areas. Historical occurrences throughout Santa Rosa plain and adjacent areas. No recent observations of species in area, thought to now be restricted to higher elevation sites.
Callophrys mossii ssp. *bayensis* San Bruno elfin butterfly	FE/-- S1/--	Inhabits rocky outcrops and cliffs in coastal scrub on the San Francisco Peninsula. Host plant is the Broadleaf Stonecrop (Sedum spathulifolium).	**Unlikely.** Outside of known range and no suitable habitat in the project areas.
Speyeria zerene ssp. *myrtleae* Myrtle's silverspot butterfly	FE/-- S1/--	Coastal dunes, coastal terrace, coastal bluff scrub and associated coastal dunes/grasslands in Sonoma and Marin counties. Larvae have a single host, western dog violet (*Viola adunca*).	**Unlikely**. Reported from Goat Rock State Beach south of the Russian River mouth. No suitable habitat in the project areas.

Species	Status* Federal/State CA Rank/Other (BCC)	Habitat Requirements	Potential To Occur In The Project Area
Syncaris pacifica California freshwater shrimp	FE/SE S2/--	Perennial creeks with slow flows and developed bank vegetation. Needs deep undercut banks with exposed roots for winter refugia.	**None.** No suitable aquatic habitat within project areas.
Fish			
Hysterocarpus traskii ssp. *pomo* Russian River tule perch	--/-- S4/SSC	Low elevation streams of the Russian River system. Clear flowing water with abundant cover and deep pool habitat.	**None.** No suitable aquatic habitat within project areas.
Lavinia symmetricus ssp. *navarroensis* Navarro roach	--/-- S2S3/SSC	Found in warm intermittent streams as well as cold, well aerated systems.	**None.** No suitable aquatic habitat within project areas.
Oncorhynchus kisutch Coho salmon, Central California Coast	FE/SE S2/--	Requires beds of loose, silt - free, coarse gravel for spawning. Also cover, cool water, and sufficient dissolved oxygen.	**None.** No suitable aquatic habitat within project areas.
Oncorhynchus mykiss ssp. *irideus* Steelhead, Central California Coast	FT/-- S2S3/--	Found in aquatic habitat in cool waters with sufficient oxygen.	**None.** No suitable aquatic habitat within project areas.

Species	Status* Federal/State CA Rank/Other (BCC)	Habitat Requirements	Potential To Occur In The Project Area
Amphibians			
Ambystoma californiense California tiger salamander, Sonoma County	FE/ST S2S3/WL	Grasslands and valley foothill woodland habitats with appropriate subterranean refuge sites (burrows). Breeds in fishless vernal pools and seasonal ponds.	**Present.** Presumed present adjacent to Todd Road Wells. Proposed Project areas found within CTS Critical Habitat.
Dicamptodon ensatus California giant salamander	--/-- S2S3/SSC	Adults prefer damp coniferous forests near streams. Adults breed in perennial mountainous streams with rocky substrate. Larvae are aquatic for one or more years. Occasionally occurs in lakes and ponds, but usually at higher elevations.	**Unlikely.** No suitable habitat within project areas.
Rana boylii Foothill yellow-legged frog	--/CST S3/SSC	Moderate to high gradient streams with gravel to cobble substrate. Breeds in areas with slower moving water. Tadpoles use rocky shallow creek margins for cover and grazing.	**Unlikely.** No suitable habitat within project areas. Adjacent to moderately suitable habitat in Mark West Creek area.
Rana draytonii California red-legged frog	FT/-- S2S3/SSC	Creeks, ponds, and marshes with permanent or temporary water bordered by emergent or riparian vegetation. Requires 4-6 months of permanent water for larval development.	**None**. No suitable habitat within project areas.

Species	Status* Federal/State CA Rank/Other (BCC)	Habitat Requirements	Potential To Occur In The Project Area
Taricha rivularis Red-bellied newt	--/-- S2/SSC	Streams and mesic upland habitats primarily within redwood forest, but also mixed-conifer, valley-foothill woodland, montane hardwood and hardwood-conifer habitats. Requires rapid streams with rocky substrate for breeding and egg laying.	**Unlikely.** No suitable habitat within project areas. Requires higher gradient streams in proximity to redwood forest.
Reptiles			
Emys marmorata Western pond turtle	--/-- S3/SSC	Streams, ponds, and lakes with basking habitat features such as logs, rocks, sandy beaches in open sun.	**None.** No suitable aquatic habitat within project areas.
Birds			
Accipiter cooperii Cooper's hawk	--/-- S4/WL	Dense tree stands, patchy woodland habitat. Nests in second-growth conifer stands or deciduous riparian areas, usually near streams.	**Low.** Suitable woodland habitat within and adjacent to project areas. Known to nest in Santa Rosa Plain and riparian areas associated with Laguna de Santa Rosa. Project areas small and mostly lack mature trees.
Aechmophorus clarkii Clark's grebe	BBC	Require bodies of water approx. 4 ft deep for feeding. Require large, open bodies of water for courtship and tall emergent vegetation for nesting. Mostly breed in NE California and Clear Lake.	**Unlikely.** Not known to breed in Sonoma County. Project areas do not contain suitable habitat. Adjacent areas could provide nesting habitat but no known nesting occurrences.

Species	Status* Federal/State CA Rank/Other (BCC)	Habitat Requirements	Potential To Occur In The Project Area
Agelaius tricolor Tricolored blackbird	--/ST S1S2/SSC	Generally cattail or tule marshes, but can forage in fields, farms, and open habitats. Breeds in large freshwater marshes.	**Unlikely.** Potentially suitable habitat in adjacent areas, however no nesting habitat within project areas. Small project footprints likely preclude presence of this species. Last known occurrences in general area from 1976.
Athene cunicularia Burrowing owl	--/-- S3/SSC BCC	Primarily grassland species that is tolerant of human dominated landscapes. Mostly nest and roost in burrows within short vegetation or sparse shrubs and trees. Known to occur in developed areas such as airfields, urban parks and adjacent to roads or canals.	**Low.** Species tolerant to human activities, and suitable habitat within project areas. Small construction footprints minimize likelihood of presence, and maximize likelihood of detection. Most recent occurrence in Cotati and Healdsburg USGS quads in 2002 and 2017, respectively. Healdsburg occurrence just north of Sonoma County Airport. Most observations are of over wintering migrant owls. No recent nesting sites in Sonoma County.
Aquila chrysaetos Golden eagle	--/-- S3/FP BCC	Rolling foothills, mountainous areas, and sage-juniper flats from sea level to 11500 feet. Nests on cliffs and in large trees in open areas.	**Unlikely**. Species can be found in area but is unlikely to nest or occur within project areas.
Baeolophus inornatus Oak titmouse	--/-- S4/-- BCC	Oak and pinyon-juniper woodlands, especially around river woods and shade trees. Very common in parts of range.	**High.** Suitable habitat within and adjacent to project areas. Species commonly observed by Sonoma Water staff biologists.
Brachyramphus marmoratus Marbled murrelet	FT/SE S2/WL	This coastal seabird from the North Pacific nests in old-growth coniferous forests. Foraging occurs in open ocean for small fish.	**Unlikely.** No old-growth forest or Critical Habitat within the project areas.

Species	Status* Federal/State CA Rank/Other (BCC)	Habitat Requirements	Potential To Occur In The Project Area
Calidris pusilla Semipalmated sandpiper	BCC	Breeds on open tundra. Migrates and winters in mudflats, lake and pond shores, and wet meadows.	**None.** No suitable habitat within or adjacent to project areas. Rarely seen in California.
Carduelis lawrencei Lawrence's goldfinch	BCC	Open woodlands, chaparral, and weedy fields.	**Unlikely.** Potentially suitable habitat in and adjacent to project areas, however this species is rare summer visitant and even more seldom nests in Sonoma County.
Chamaea fasciata Wrentit	BCC	California chaparral and coastal scrub. Nests in various dense low growth.	**Unlikely**. Suitable habitat present adjacent to project areas, however not commonly seen or heard by Sonoma Water biologists in general, and not observed within project areas during site visits.
Coccyzus americanus Yellow-billed cuckoo	FT/SE S1/--	Requires patches of at least 25 acres of dense riparian forest with a canopy cover of at least 50 percent in both the understory and overstory; nests typically in mature willows.	**Unlikely**. Some project areas adjacent or within suitable habitat, especially around Laguna de Santa Rosa and Russian River. Historic occurrence in Cotati and Two Rock area considered possibly extirpated.
Contopus cooperi Olive-sided flycatcher	--/-- S4/SSC BCC	Breed in late-successional conifer forests with open canopy, mid- to high elevations. Forages in openings in dense forest.	**Moderate**. Suitable breeding and foraging habitat in mixed-conifer and oak woodland found adjacent to some project areas, however species appears to prefer higher elevation forests. No occurrences documented near project areas.

Species	Status* Federal/State CA Rank/Other (BCC)	Habitat Requirements	Potential To Occur In The Project Area
Coturnicops noveboracensis Yellow rail	--/-- S1/SSC	Breed in sedge marshes or wet meadows with moist soil or shallow standing water. Likely inhabit wet meadows or coastal marsh in winter.	**Unlikely.** Marginally suitable habitat in areas adjacent to project areas. No nesting habitat within project areas.
Cypseloides niger Black swift	--/-- S2/SSC BCC	Limited nesting locations restricted to behind waterfalls or on vertical cliffs near water.	**None.** No habitat within project areas and only known in this area for winter range.
Elanus leucurus White-tailed kite	--/-- S3S4/FP	Forages in grasslands, open woodlands, agricultural fields, and marshes. Nests in trees with dense foliage.	**Low to Moderate.** Known to nest and forage throughout Santa Rosa Plain and adjacent to project areas. Cathodic Protection Station and Test Station project areas small in scale and unlikely to support nesting kites or significant foraging. Vegetation maintenance sites includes may include some nesting and foraging habitat.
Gavia stellata Red-throated loon	BCC	Breed in northern latitudes. Typically found in coastal areas during overwintering.	**None.** Suitable habitat not present within project areas.
Geothlypis trichas ssp. *sinuosa* Common yellowthroat	--/-- S3/SSC BCC	Uncommon on north coast. Breeds and winters in wet meadow, fresh and saline emergent wetland habitats, valley foothill riparian, and occasionally desert riparian, and annual and perennial grassland habitats.	**Unlikely.** Locally uncommon. Marginally suitable habitat present with project areas (i.e. grassland), but nesting and foraging likely precluded due to existing facilities, roads, or other human-caused disturbance such as agriculture.

Species	Status* Federal/State CA Rank/Other (BCC)	Habitat Requirements	Potential To Occur In The Project Area
Haliaeetus leucocephalus Bald eagle	FD/SE S3/FP BCC	Nests high in trees near rivers, lakes, and reservoirs. Forages for waterfowl and fish in the same areas. Tends to avoid human disturbance.	**Unlikely.** Project areas could serve as small mammal foraging habitat during winter.
Limnodromus griseus Short-billed dowitcher	BCC	Breed in northern latitudes. Common in saltwater and brackish environments during winter and nonbreeding seasons.	**None.** Suitable habitat not present within project areas.
Limosa fedoa Marbled godwit	BCC	Breed in shortgrass prairies near wetlands. Forage and rest along coastal mudflats, estuaries, and sandy beaches on wintering grounds.	**None.** Suitable habitat not present within project areas.
Melanerpes lewis Lewis's woodpecker	--/-- S4/-- BCC	Scattered or logged forest, river groves, burns, foothills. Requires open country for aerial foraging and large trees for nesting and perching.	**Unlikely**. Potential nesting habitat adjacent to project areas, but not known to breed in Sonoma County.
Numenius americanus Long-billed curlew	--/-- S2/WL BCC	Commonly overwinters on central CA coast. Coastal estuaries, upland herbaceous areas, and croplands. Nests on elevated interior grasslands and wet meadows adjacent to lakes or marshes.	**Unlikely.** Suitable foraging habitat in nearby areas, but mostly during overwintering times not coinciding with project activities. Project areas not within breeding range.

Species	Status* Federal/State CA Rank/Other (BCC)	Habitat Requirements	Potential To Occur In The Project Area
Numenius phaeopus Whimbrel	BCC	Forage in saltmarsh, lagoons, estuaries, and rocky shorelines. Roost and migrate through in marshes, meadows and fields.	**Unlikely.** Project areas contain marginally suitable habitat, and are adjacent to suitable habitat, but area is only known as migration habitat.
Pandion haliaetus Osprey	--/-- S4/WL	Occurs in ponderosa pine and mixed conifer habitats along sea coasts, lakes, and rivers. Foraging (fishing) areas require large snags and open trees near large, clear, open water.	**Unlikely.** Nests along Russian River. Unlikely to be present within project areas, but could be found in adjacent areas. Not expected to nest near project areas.
Picoides nuttallii Nuttall's woodpecker	BCC	Oak woodlands 900 – 5500 feet in elevation. Also can use suburban areas and woodlands near streams. Known to nest in Sonoma County.	**Unlikely to Moderate**. No suitable habitat present in most locations. Suitable habitat present within some vegetation maintenance locations and some project sites adjacent to wooded areas.
Pipilo maculatus ssp. clementae San Clemente Spotted towhee	--/-- S1S2/SSC BCC	Endemic to CA Channel Islands.	**None.** Spotted towhees locally common but this subspecies has no potential to occur within project areas.
Selasphorus sasin Allen's hummingbird	--/-- S4/-- BCC	Common summer resident and migrant along CA coast. Coastal scrub, valley foothill woodland and riparian habitats. Known to nest in Sonoma County.	**Low to Moderate.** No suitable habitat present in most locations. Suitable habitat potentially present adjacent in some vegetation maintenance locations.

Species	Status* Federal/State CA Rank/Other (BCC)	Habitat Requirements	Potential To Occur In The Project Area
Strix occidentalis ssp. *caurina* Northern spotted owl	FT/ST S2S3/SSC BCC	Old growth forests or mixed stands of old growth and mature trees. High, multistory canopy dominated by big trees, many trees w/cavities or broken tops, woody debris, and space under canopy.	**Unlikely.** No reports from the project areas, but likely uses mature forests in the vicinity of Russian River. May be infrequent visitor in the vicinity of the project areas. No suitable habitat in the project areas.
Tringa flavipes Lesser yellowlegs	BCC	Breed in open boreal forest with scattered shallow wetlands. Winters in variety of shallow fresh and saline habitats.	**Unlikely.** No suitable habitat within project areas.
Toxostoma redivivum California thrasher	BCC	Chaparral, foothills, valley thickets, parks, and gardens. Prefers thick vegetation and does utilize suburban neighborhoods with suitable vegetation.	**Moderate.** Not observed within project areas but suitable habitat is present, especially in oak woodlands with a mix of chaparral (e.g. Howarth Park area).
Mammals			

Species	Status* Federal/State CA Rank/Other (BCC)	Habitat Requirements	Potential To Occur In The Project Area
Antrozous pallidus Pallid bat	--/-- S3/SSC	Forages in a variety of habitats. Roosts in caves, crevices, mines, and occasionally hollow trees and buildings. Young born mostly from May – July, capable of flight at 7 weeks old. Very sensitive to disturbance of roosting sites.	**Low to Moderate.** Marginally suitable habitat found in residential forested areas, such as Vine Hill and Howarth Park, but less likely due to preference for wetter sites. Unlikely to occur within project footprints but could possibly be found in adjacent areas.
Arborimus pomo Sonoma tree vole	--/-- S3/SSC	Old growth and other forests, mainly Douglas-fir, redwood, and montane hardwood-conifer habitats along the coast from Sonoma County north to the Oregon border. Restricted to the fog belt. Eats almost exclusively Douglas fir needles.	**Unlikely.** Marginal habitat adjacent to some project areas closer to Russian River. Mostly restricted to old growth forests which are not present adjacent to project areas.
Corynorhinus townsendii Townsend's big-eared bat	--/-- S2/SSC	Occurs throughout most of California in mesic sites. Roosts in the caves, mines, tunnels, buildings, etc. Extremely sensitive to human disturbance	**None.** No suitable habitat within project area and human activities preclude presence. Five records from Guerneville, Healdsburg, and Hopland from 1946 to 1987.

Species	Status* Federal/State CA Rank/Other (BCC)	Habitat Requirements	Potential To Occur In The Project Area
Lasiurus blossevillii Western red bat	--/-- S3/SSC	Occurs throughout most of central and southern California, except alpine and desert regions, and coastal California from SF bay region to south. Roosts in trees and forages in a variety of open habitats. Preference for sites in proximity to riparian areas. Usually solitary but sometimes nurse in colonies. Young nursing period generally May – August. Young typically capable of flight at 3 - 6 weeks.	**Low to Moderate.** Low potential to occur at most sites. Suitable habitat adjacent to project areas near the Russian River and Vine Hill areas. Few occurrences near project areas. Occurrence from west of Forestville area observed in 2003.
Taxidea taxus American badger	--/-- S3/SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Somewhat tolerant of human activity.	**Moderate.** Suitable habitat found within and adjacent to project areas. A few isolated occurrences in Santa Rosa Plain but not in close proximity to project areas (less than one mile). No sign of badger during site visits.

*** Key to status codes:**

FE	Federal Endangered
FT	Federal Threatened
FD	Federal Delisted
SE	State Endangered
ST	State Threatened
CSE	Candidate State Endangered
CST	Candidate State Threatened
FP	CDFW Fully Protected in California
SSC	CDFW Species of Special Concern
WL	CDFW Watch List
BCC	USFWS Birds of Conservation Concern
S1	Critically imperiled. Extreme rarity or steep declines in populations.

S2	Imperiled. Rarity due to restricted range, few populations, steep declines, or other factors.
S3	Vulnerable. Vulnerable due to restricted range, few populations, steep declines, or other factors.
S4	Uncommon but not rare in California; some cause for long-term concern due to declines or other factors.

Potential to Occur:
None. Habitat on and adjacent to the site is clearly unsuitable for the species requirements.
Unlikely. Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
Moderate. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
High. All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.

SOURCES: The California Department of Fish And Wildlife Natural Diversity Database (California Department of Fish and Wildlife, 2020), and U.S. Fish And Wildlife Service Species Lists (United Stated Department of Fish and Wildlife, 2019) for Camp Meeker, Cotati, Guerneville, Healdsburg, Santa Rosa, Sebastopol, and Two Rock USGS 7.5' Quadrangles.

Table D-3. Biological Resources, Special-status Species, and Sensitive Communities at Proposed Project Sites for Cathodic Protection Upgrades along the Santa Rosa Aqueduct. This table provide a brief description of construction areas, special-status species that need additional assessment, and site-specific mitigation measures, including BIO-2 (Protective Measures for Sebastopol Meadowfoam), BIO-3 (Avoid, Minimize, and Compensate for Temporary Impacts to California Tiger Salamander Winter Migration, Upland Refugia, and Breeding Habitats), and BIO-5 (Avoid, Minimize, or Compensate for Impacts to Jurisdictional Wetlands, Other Protected Waters, and Riparian Habitat). Additional mitigation measures applicable more broadly are described in Section 3.4, "Biological Resources".

Proposed Project Site	Biological Resources Setting	Special-status species	Wetlands/Sensitive Communities	Notes	BIO-2	BIO-3	BIO-5
SR 0+00 Test Station	Oak woodland, developed; gravel road; adjacent areas dominated by oaks and mixed-conifer; existing Sonoma Water facility on site.		Oak Woodland	- Avoid areas within dripline of trees			
SR 9+66 Cathodic Protection	Oak woodland, developed; gravel road, concrete pad, existing appurtenances on site; sparse herbaceous vegetation		Oak Woodland	- Avoid areas within dripline of trees			
SR14+28 Test Station	Grassland; dirt road and paths; mixed native and non-native grasses, sparse broom; existing above-ground equipment on site	Congested hayfield tarweed	None	- Preconstruction plant survey			

Proposed Project Site	Biological Resources Setting	Special-status species	Wetlands/Sensitive Communities	Notes	BIO-2	BIO-3	BIO-5
SR21+00 Test Station	Vineyard, oak and mixed conifer woodland; margin of dirt road and canopy; ruderal forbs and grasses; existing appurtenances on site		Oak Woodland	- Avoid areas within dripline of trees			
SR32+00 Test Station	Vineyard; dirt road; sparse ruderal forbs and grasses; adjacent to woodland, dense broom and single pacific madrone tree; existing appurtenances on site	Congested hayfield tarweed	None	- Preconstruction plant survey			
SR40+50 Test Station	Grassland, oak woodland; native and non-native grasses at site; adjacent to paved road; existing appurtenances on site	Congested hayfield tarweed	Oak woodland	- Avoid areas within dripline of trees - Preconstruction plant survey			
SR49+00 Test Station	Irrigated pasture; grazed grasses and forbs; existing in-ground appurtenances on site	None	None				
SR56+00 Test Station	Irrigated pasture; grazed grasses and forbs; existing in-ground appurtenances on site	None	None				

Proposed Project Site	Biological Resources Setting	Special-status species	Wetlands/Sensitive Communities	Notes	BIO-2	BIO-3	BIO-5
SR75+00 Cathodic Protection	Oak woodland; adjacent to paved road; existing Sonoma Water facility and equipment on or adjacent to site		Oak woodland	- Avoid areas within dripline of trees			
SR90+00 Test Station	Oak woodland; adjacent to paved road; dense poison oak, CA blackberry, native and non-native grasses and forbs		Oak woodland	- Avoid areas within dripline of trees			
SR95+00 Cathodic Protection	Oak woodland, grassland; dominated by non-native grasses, mix oaks; adjacent to concrete lined ditch down from potentially jurisdictional ditch outside of project footprint; existing equipment and Sonoma Water facility on site	Congested hayfield tarweed	Oak woodland	- Avoid areas within dripline of trees - Avoid drainage to north of construction footprint - Preconstruction plant survey			
SR111+00 Test Station	Vineyard, oak woodland; dirt vineyard road, outside of tree canopy; existing above-ground equipment on site		Oak woodland	- Avoid areas within dripline of trees			

Proposed Project Site	Biological Resources Setting	Special-status species	Wetlands/Sensitive Communities	Notes	BIO-2	BIO-3	BIO-5
SR123+43 Test Station	Vineyard, oak woodland; project footprint within dirt vineyard road, staging area slightly within riparian canopy; grass and forb understory; proposed test station outside of canopy		Oak woodland	- Avoid areas within dripline of trees			
SR129+09 Test Station	Vineyard; dirt road; existing above-ground equipment on site	CTS	CTS winter migration habitat impact			X	
SR134+83 Test Station	Vineyard, grassland; dirt road; native and non-native forbs and grasses	CTS Congested hayfield tarweed	CTS winter migration habitat impact	- Preconstruction plant survey		X	
SR146+50 Test Station	Vineyard; dirt and gravel road vineyard road; native and non-native grasses and forbs	CTS	CTS winter migration habitat impact			X	
SR146+50 alternative location	Grassland, vineyard; existing above-ground equipment on site; native and non-native grasses and forbs	CTS Congested hayfield tarweed	CTS winter migration habitat impact	- Preconstruction plant survey		X	
SR150+03 Test Station	Grassland, pasture; native and non-native grasses and forbs, no trees or shrubs; existing above-ground equipment on site	CTS Congested hayfield tarweed	Temporary impact to CTS grassland and migration habitat	- Preconstruction plant survey		X	

Proposed Project Site	Biological Resources Setting	Special-status species	Wetlands/Sensitive Communities	Notes	BIO-2	BIO-3	BIO-5
SR159+61 Test Station	Grassland, pasture; adjacent to vineyard; potentially jurisdictional to north of project footprint; Existing above-ground equipment on site and visible. Adjacent to access road between oak savannah and vineyard	CTS Congested hayfield tarweed	Adjacent to wetland area; see constraints map Temporary impact to CTS grassland and migration habitat	- Biologist will flag wetland area; avoid wetland areas - Preconstruction plant survey		X	
SR170+00 Cathodic Protection	Grassland; shrubs and ruderal vegetation present; access for airport property; existing above-ground equipment on site; airport property	CTS Congested hayfield tarweed	CTS winter migration habitat impact	- Preconstruction plant survey if work area extends beyond hardscape		X	
SR203+45 Test Station	Grassland; adjacent to oak woodland; native and non-native grasses and forbs; ruderal vegetation; PJA to north away from site; existing above-ground equipment on site; airport property	CTS Congested hayfield tarweed	Temporary impact to CTS grassland and migration habitat	- Preconstruction plant survey - Biologist will flag depressions to avoid		X	
SR207+35 Cathodic Protection	Developed; gravel and paved road; existing above-ground equipment on site; airport property	CTS Congested hayfield tarweed	CTS winter migration habitat impact	- Preconstruction plant survey if work area extends beyond road		X	

Proposed Project Site	Biological Resources Setting	Special-status species	Wetlands/Sensitive Communities	Notes	BIO-2	BIO-3	BIO-5
SR212+00 Test Station	Developed, grassland; paved road; temporary construction area possible on grasses; native and non-native grasses and forbs; airport property	CTS Congested hayfield tarweed	Temporary impact to CTS grassland and migration habitat	- Preconstruction plant survey if work area extends beyond road		X	
SR231+00 Test Station	Developed, grassland; paved road; existing above-ground equipment on site; airport property	CTS Congested hayfield tarweed		- Preconstruction plant survey if work area extends beyond road		X	
SR242+97 Cathodic Protection	Oak woodland, developed; adjacent to vineyard, paved lot and within gravel/dirt access road; native and non-native grasses and forbs; existing above-ground equipment on site; outside of riparian corridor	Congested hayfield tarweed	Oak woodland	- Preconstruction plant surveys required if working outside of hardscape - Avoid areas within dripline of trees			
SR247+94 Test Station	Riparian woodland, grassland; apparent mitigation plantings on site; native and non-native grasses and forbs; existing above-ground equipment on site.	Existing Mitigation Plantings Congested hayfield tarweed	Riparian woodland; Mark West Creek adjacent to site.	- Biologist will flag native plantings - Avoid areas within dripline of trees - Preconstruction plant survey			
SR259+60 Test Station	Vineyard; junction of gravel and dirt roads; sparse ruderal grasses and forbs	CTS	CTS winter migration habitat impact			X	

Proposed Project Site	Biological Resources Setting	Special-status species	Wetlands/Sensitive Communities	Notes	BIO-2	BIO-3	BIO-5
SR264+00 Test Station	Vineyard; gravel road; sparse ruderal grasses and forbs	CTS	CTS winter migration habitat impact			X	
SR285+50 Test Station	Vineyard; within vegetated dirt road; ruderal forbs and grasses	CTS	CTS winter migration habitat impact			X	
SR320+52 Cathodic Protection	Vineyard, developed; within dirt path between vineyard and gravel lot (SMART facility); mostly non-native forbs and grasses; existing above-ground equipment on site	CTS	CTS winter migration habitat impact			X	
SR415+50 Cathodic Protection	Developed (residential area); paved road, vegetated road margin; ruderal grasses and forbs; existing above-ground equipment on site						
SR479+70 Test Station	Developed (residential area); paved road; ruderal forbs and grasses; existing above-ground equipment on site	None	None				
SR496+95 Cathodic Protection	Developed (commercial); paved road and sidewalk; ruderal forbs and grasses in adjacent area	None	None				

Proposed Project Site	Biological Resources Setting	Special-status species	Wetlands/Sensitive Communities	Notes	BIO-2	BIO-3	BIO-5
SR530+00 Cathodic Protection	Developed (residential, commercial); paved road; ruderal forbs and grasses, oak canopy; existing above-ground equipment on site	None	None				
SR572+67 Cathodic Protection	Developed; paved road and sidewalk; oak with bare dirt beneath	None	None				
SR588+00 Test Station	Developed (residential, commercial); paved road	None	None				
SR602+00 Test Station	Developed (commercial); paved road	None	None				
SR622+70 Test Station	Developed (commercial); paved road	None	None				
SR663+89 Cathodic Protection	Developed (commercial); paved road and sidewalk; ornamental shrubs, ruderal grasses and forbs off pavement; existing above-ground equipment on site	None	None				
SR677+00 Test Station	Developed (commercial); paved road.	None	None				

Proposed Project Site	Biological Resources Setting	Special-status species	Wetlands/Sensitive Communities	Notes	BIO-2	BIO-3	BIO-5
SR713+80 Cathodic Protection	Developed (commercial); paved road; ornamental trees, herbaceous plantings.	None	None				
SR721+40 Test Station	Developed (commercial); paved road; ornamental trees, herbaceous plantings.	None	None				
SR761+00 Cathodic Protection	Developed (church); paved road and parking lot.	None	None				
SR771+40 Cathodic Protection	Developed; paved road and sidewalk; adjacent oak canopy; adjacent to southwest edge of Howarth Park. Existing above-ground equipment on site.	None	None				
SR787+00 Test Station	Oak woodland; adjacent to Spring Creek trail (paved); native and non-native grasses and forbs present.	Narrow-anthered brodiaea Fragrant Fritillary Jepson's leptosiphon	Oak woodland	- Avoid areas within dripline of trees			

Proposed Project Site	Biological Resources Setting	Special-status species	Wetlands/Sensitive Communities	Notes	BIO-2	BIO-3	BIO-5
SR801+20 Test Station	Oak woodland; adjacent to Spring Creek Trail (paved); native and non-native grasses and forbs, oak canopy; existing above-ground equipment on site.	Narrow-anthered brodiaea Fragrant Fritillary Jepson's leptosiphon	Oak woodland	- Avoid areas within dripline of trees			
SR812+25 Test Station	Oak woodland; adjacent to Spring Creek Trail (paved/gravel) and user-made trail; native and non-native forbs; existing above-ground equipment on site.	Narrow-anthered brodiaea Fragrant Fritillary Jepson's leptosiphon	Oak woodland	- Avoid areas within dripline of trees			
SR821+40 Test Station	Developed; gravel road/parking adjacent to water tanks; oak woodland in surrounding areas; native and non-native grasses and forbs; existing above-ground equipment on site.	Narrow-anthered brodiaea Fragrant Fritillary Jepson's leptosiphon	Oak woodland	- Avoid areas within dripline of trees			

Table D-4. Biological Resources, Special-status Species, and Sensitive Communities at Proposed Project Sites for Cathodic Protection Upgrades along the Russian River to Cotati Aqueduct. This table provide a brief description of construction areas, special-status species that need additional assessment, and site-specific mitigation measures, including BIO-2 (Protective Measures for Sebastopol Meadowfoam), BIO-3 (Avoid, Minimize, and Compensate for Temporary Impacts to California Tiger Salamander Winter Migration, Upland Refugia, and Breeding Habitats), and BIO-5 (Avoid, Minimize, or Compensate for Impacts to Jurisdictional Wetlands, Other Protected Waters, and Riparian Habitat). Additional mitigation measures applicable more broadly are described in Section 3.4, "Biological Resources".

Proposed Project Site	Biological Resources Setting	Special-status Species	Wetlands/Sensitive Communities	Notes	BIO-2	BIO-3	BIO-5
RR31+22 Test Station	Vineyard; dirt road with ruderal grasses and forbs.	None	None				
RR45+00 Test Station	Oak woodland; Mostly coast live oak, dense blackberry and English ivy; existing building and appurtenances.		Oak woodland	- Avoid areas within dripline of trees			
RR89+99 Cathodic Protection	Developed; paved driveway, roadside with grass and small coast live oaks	None	None				
RR131+00 Test Station	Vineyard; roadside with ruderal forbs/grasses; existing appurtenances	None	None				

Proposed Project Site	Biological Resources Setting	Special-status Species	Wetlands/Sensitive Communities	Notes	BIO-2	BIO-3	BIO-5
RR141+58 Cathodic Protection	Adjacent to gravel road within private yard; sparse vegetation	None	None				
RR151+50 Test Station	Mixed-confer; within paved driveway with sparse annual grasses along roadside.	Vine Hill clarkia	None	- Plant survey			
RR200+00 Test Station	Vineyard; road adjacent to Douglas fir and coast live oak trees.		None				
RR224+00 Cathodic Protection	Grassland; adjacent to coast live oak woodland.	Congested hayfield tarweed	Oak woodland	- Avoid areas within dripline of trees -Preconstruction plant survey			
RR245+00 Test Station	Vineyard; gravel road adjacent to Guerneville Road.	None	None				
RR286+50 Test Station	Irrigated pasture; dirt path.	None	None				

Proposed Project Site	Biological Resources Setting	Special-status Species	Wetlands/Sensitive Communities	Notes	BIO-2	BIO-3	BIO-5
RR302+00 Cathodic Protection	Agricultural field, developed; Raised area of gravel/fill; Dense ruderal invasive species at immediate site; wetland vegetation surrounding work area.	None	Adjacent to wetland; see constraints map	- Biologist will flag wetland area; avoid wetland areas			
RR312+50 Test Station	Agricultural field, grassland; seep-like feature supporting hydrophytic vegetation.	CTS Congested hayfield tarweed	Adjacent to wetland; see constraints map Temporary impact to CTS grassland and migration habitat	- Biologist will flag wetland area; avoid wetland areas -Preconstruction plant survey		X	
RR323+00 Cathodic Protection	Gravel driveway, paved road; junction with Sanford Road; mowed grasses and forbs along roadside	None	None	- Work only within hardscape			
RR336+40 Test Station	Gravel road with non-native annual grasses along roadside.	None	None	- Work only within hardscape			

Proposed Project Site	Biological Resources Setting	Special-status Species	Wetlands/Sensitive Communities	Notes	BIO-2	BIO-3	BIO-5
RR367+00 Cathodic Protection	Vineyard; fenced graveled area with minimal ruderal grasses and forbs; existing Sonoma Water facility - includes fencing, structures, equipment.	CTS	None CTS winter migration habitat impact	- Work only within hardscape		X	
RR376+00 Test Station	Vineyard; gravel road and roadside area; Ruderal grasses and forbs; existing equipment on site.	CTS	None CTS winter migration habitat impact	- Work only within hardscape		X	
RR436+80 Cathodic Protection	Developed; gravel area with sparse ruderal forbs and grasses; existing appurtenances	CTS	None CTS winter migration habitat impact	- Work only within hardscape		X	
RR448+00 Test Station	Irrigated field, grassland; gravel road; Existing appurtenances.	CTS	None CTS winter migration habitat impact	- Work only within hardscape		X	
RR502+27 Test Station	Gravel road, irrigated pasture	CTS	None CTS winter migration habitat impact	- Work only within hardscape		X	

Proposed Project Site	Biological Resources Setting	Special-status Species	Wetlands/Sensitive Communities	Notes	BIO-2	BIO-3	BIO-5
RR541+20 Cathodic Protection	Developed (grassland); gravel road, concrete pad; Immediately adjacent to vernal pool; existing Sonoma Water facility, includes fencing and structures.	Sebastopol meadowfoam Sonoma Sunshine Congested hayfield tarweed CTS	Adjacent to wetland; see constraints map. Vernal pool complex in adjacent areas Winter migration habitat impact.	- Pre-construction plant survey - Biologist will flag wetland area; avoid wetland areas	X	X	
RR592+00 Test Station	Pasture; dirt road; native and non-native grasses and forbs	CTS	Temporary impact to CTS grassland and migration habitat			X	
RR606+00 Cathodic Protection	Paved road (Meadow Ln); native and non-native grasses and forbs; ditch to north and depression to south off of road	Sonoma alopecurus Congested hayfield tarweed CTS	Adjacent to PJA; see constraints map Temporary impact to CTS breeding, grassland, and migration habitat	- Plant survey - Biologist will flag wetland area; avoid wetland areas - Work only within hardscape - CTS BIOL-1 Mitigation Measure required.		X	X
RR608+00 Cathodic Protection	Paved road, grassland; coast-live oak and dense grasses, forbs, some hydrophytic vegetation; existing fence.	CTS Congested hayfield tarweed	Soils must be dry to work Temporary impact to CTS grassland and migration habitat	- Biologist to verify soil is dry prior to construction -Preconstruction plant survey		X	

Proposed Project Site	Biological Resources Setting	Special-status Species	Wetlands/Sensitive Communities	Notes	BIO-2	BIO-3	BIO-5
RR616+75 Test Station	Dirt and gravel roads, developed, agricultural facility	CTS	CTS winter migration habitat impact	- Work only within hardscape		X	
RR630+00 Test Station	Gravel and dirt road	CTS	CTS winter migration habitat impact	- Work only within hardscape		X	
RR643+75 Cathodic Protection	Gravel and dirt road, grassland; wetland complex to north (off site); existing appurtenances on site	Sonoma sunshine CTS	Vernal pool complex to NE across road Temporary impact to CTS grassland and migration habitat	-Preconstruction plant survey - Avoid areas north of gravel/dirt road		X	
RR669+30 Test Station	Grassland, irrigated pasture; existing fences on site	CTS Congested hayfield tarweed	Temporary impact to CTS grassland and migration habitat	-Preconstruction plant survey		X	
RR677+80 Cathodic Protection	Irrigated pasture	CTS Congested hayfield tarweed	Adjacent to PJAs; see constraints map Temporary impact to CTS grassland and migration habitat	- Biologist will flag wetland area; avoid wetland areas -Preconstruction plant survey		X	
RR748+52 Cathodic Protection	Grassland, gravel and dirt road; ruderal grasses and forbs	CTS Congested hayfield tarweed	Temporary impact to CTS grassland and migration habitat	- Work only within hardscape - Preconstruction plant survey if working out of hardscape		X	

Proposed Project Site	Biological Resources Setting	Special-status Species	Wetlands/Sensitive Communities	Notes	BIO-2	BIO-3	BIO-5
RR781+00 Cathodic Protection	Roadside, paved and gravel road; grassland; existing facility on site	CTS Congested hayfield tarweed Two-fork clover	Temporary impact to CTS grassland and migration habitat	- Work only within hardscape -Preconstruction plant survey if working out of hardscape		X	
RR798+50 Test Station	Paved and gravel road; oak woodland in adjacent area; non-native grasses	CTS	CTS winter migration habitat impact	- Work only within hardscape		X	
RR808+45 Test Station	Grassland, vineyard; ruderal forbs and grasses, non-native ornamentals; existing appurtenances on site	CTS Congested hayfield tarweed Two-fork clover	Temporary impact to CTS grassland and migration habitat	-Preconstruction plant survey if working out of hardscape		X	
RR826+55 Cathodic Protection	Grassland; graveled road and disturbed area; ruderal forbs and grasses, adjacent to eucalyptus stand; existing Sonoma Water facility includes large water storage tanks	CTS Congested hayfield tarweed Two-fork clover	Temporary impact to CTS grassland and migration habitat	- Work only within hardscape -Preconstruction plant survey if working out of hardscape		X	

Table D-5. Biological Resources, Special-status Species, and Sensitive Communities at Proposed Project Sites for Vegetation Maintenance along the Russian River to Cotati Aqueduct and Petaluma Aqueduct. This table provide a brief description of construction areas, special-status species that need additional assessment, and site-specific mitigation measures, including BIO-2 (Protective Measures for Sebastopol Meadowfoam), BIO-3 (Avoid, Minimize, and Compensate for Temporary Impacts to California Tiger Salamander Winter Migration, Upland Refugia, and Breeding Habitats), and BIO-5 (Avoid, Minimize, or Compensate for Impacts to Jurisdictional Wetlands, Other Protected Waters, and Riparian Habitat). Additional mitigation measures applicable more broadly are described in Section 3.4, "Biological Resources".

Proposed Project Site	Biological Resources Setting	Special-status species	Wetlands/ Sensitive Communities	Notes	BIO-2	BIO-3	BIO-7
Vine Hill Vegetation Maintenance	Mixed-conifer woodland; openings with sparse grasses and forbs, mostly dense Himalayan blackberry	Vine Hill clarkia	None	- Preconstruction plant survey - No tree removal			
Laguna Vegetation Maintenance	Riparian woodland; forest opening; wild rose and poison oak; seasonally inundated wetland		Wetland Riparian woodland	- Plant survey - No tree removal			X
West Sierra Avenue Vegetation Maintenance	Grassland, vineyard; Ruderal forbs and grasses, cultivars; existing appurtenances on site	CTS	Temporary impact to CTS grassland and migration habitat.	- No tree removal		X	

Proposed Project Site	Biological Resources Setting	Special-status species	Wetlands/ Sensitive Communities	Notes	BIO-2	BIO-3	BIO-7
Penngrove Vegetation Maintenance	Grassland, riparian woodland; depressional areas present and adjacent to a Lichau Creek and SMART Train tracks; native and non-native grasses, forbs, and bramble; wetland vegetation.	Congested hayfield tarplant	Wetland area within construction footprint. Riparian woodland	- Pre-construction plant survey - Biologist will flag wetland area; avoid wetland areas - No tree removal			X

Table D-6. Potential for Vernal Pools and Associated Special-status Plants to Occur within Proposed Project Sites Cathodic Protection Upgrades and Vegetation Maintenance along the Santa Rosa Aqueduct and the Russian River to Cotati Aqueduct.

Proposed Project Site	Special-status Vernal Pool Plants in Project Vicinity and/or Project Site	Vernal Pools and Other Potentially Jurisdictional Wetlands in Project Site	Potential for Impact to Special-status Vernal Pool Plants and/or Potentially Jurisdictional wetlands
SR 170+00	Burke's goldfields (*Lasthenia burkei*) approximately 2,500 feet from project site.	None	**Unlikely.** Project activities within disturbed upland location with ruderal vegetation that does not support this species' requirements.
SR 203+45	Burke's goldfields (*Lasthenia burkei*) approximately 1,400 feet from project site.	Potentially jurisdictional wetlands in vicinity, but not within or directly adjacent to project site.	**Unlikely.** No special-status species detected during 2018-2019 botanical surveys within construction footprint or access.
SR 207+35	Burke's goldfields (*Lasthenia burkei*) approximately 1,000 feet from project site.	Potentially jurisdictional wetlands in vicinity, but not within or directly adjacent to project site.	**Unlikely.** Construction footprint is largely within paved roadway that does not support this species' requirements. No special-status species detected during 2018-2019 botanical surveys.
SR 212+00	Burke's goldfields (*Lasthenia burkei*) approximately 200 feet from project site.	Potentially jurisdictional wetlands in vicinity, but not within or directly adjacent to project site.	**Unlikely.** Construction footprint is within paved roadway that does not support this species' requirements. No special-status species detected during 2018-2019 botanical surveys.
SR 231+00	Burke's goldfields (*Lasthenia burkei*) approximately 500 feet from project site.	Potentially jurisdictional wetlands in vicinity, but not within or directly adjacent to project site.	**Unlikely.** Construction footprint is within paved roadway that does not support this species' requirements. No special-status species detected during 2018-2019 botanical surveys.
SR 242+97	Burke's goldfields (*Lasthenia burkei*) approximately 1,500 feet from project site.	None. No potentially jurisdictional wetlands within or adjacent to project site.	**Unlikely.** Construction footprint is adjacent to roadway, generally bare soil, and does not support this species' requirements.
SR 247+94	Burke's goldfields (*Lasthenia burkei*) approximately 2,000 feet from project site.	None. No potentially jurisdictional wetlands within or adjacent to project site.	**Unlikely.** Site does not support this species' requirements.

Proposed Project Site	Special-status Vernal Pool Plants in Project Vicinity and/or Project Site	Vernal Pools and Other Potentially Jurisdictional Wetlands in Project Site	Potential for Impact to Special-status Vernal Pool Plants and/or Potentially Jurisdictional wetlands
RR 286+50	Baker's navarretia (*Navarretia leucocephala* ssp. *bakeri*) and Burke's goldfields (*Lasthenia burkei*) adjacent to project site. Occurrence is non-specifically mapped and last observed in 1974, with non-detections in 1985 and 1988. Site converted to agriculture.	Potentially jurisdictional wetlands in vicinity, but not within project site or directly adjacent to the project site.	**Unlikely.** Site is largely bare ground due to livestock and unsuitable and does not support these species' requirements.
RR 302+00	Baker's navarretia (*Navarretia leucocephala* ssp. *bakeri*) and Burke's goldfields (*Lasthenia burkei*) approximately 400 feet from project site.	Potentially jurisdictional wetlands in vicinity, none within project footprint.	**Unlikely.** Site is elevated area in agricultural field with frequent mowing and/or tilling. Potentially jurisdictional wetlands in adjacent area but not within project site.
RR 312+50	Baker's navarretia (*Navarretia leucocephala ssp. bakeri*) and Burke's goldfields (*Lasthenia burkei*) approximately 1,700 feet from project site. Sebastopol meadowfoam (*Limnanthes vinculans*) approximately 1,650 feet from project site. No special-status species detected at project site during botanical surveys.	Potentially jurisdictional roadside ditch adjacent to project site, but none within project footprint.	**Low.** Pasture with invasive grasses and potentially jurisdictional roadside ditch adjacent to project site. Project activities will avoid roadside ditch. No special-status species detected during 2019 botanical surveys. Pre-construction botanical surveys recommended.

Proposed Project Site	Special-status Vernal Pool Plants in Project Vicinity and/or Project Site	Vernal Pools and Other Potentially Jurisdictional Wetlands in Project Site	Potential for Impact to Special-status Vernal Pool Plants and/or Potentially Jurisdictional wetlands
RR 323+00	Baker's navarretia (*Navarretia leucocephala ssp. bakeri*) and Burke's goldfields (*Lasthenia burkei*) approximately 2,500 feet from project site. Sebastopol meadowfoam (*Limnanthes vinculans*) approximately 1,000 feet from project site.	None	**Unlikely.** Construction footprint is within paved roadway and private driveway that does not support these species' requirements. No special-status species detected during 2018-2019 botanical surveys.
RR 336+40	Burke's goldfields (*Lasthenia burkei*) approximately 1,000 feet from project site.	None	**Unlikely.** Construction footprint is largely within gravel roadway but will overlap roadside vegetation that does not support this species' requirements. No depression or roadside ditch present. No special-status species detected during 2018-2019 botanical surveys.
RR 367+00	Burke's goldfields (*Lasthenia burkei*) approximately 750 feet from project site.	None	**Unlikely.** Construction footprint is within gravel roadway and hardscape of existing Sonoma Water facility surrounded by vineyard and roadway that does not support this species' requirements. No special-status species detected during 2018-2019 botanical surveys.
RR 376+00	Burke's goldfields (*Lasthenia burkei*) approximately 850 feet from project site.	None	**Unlikely.** Within and adjacent to vineyard road, surrounded by vineyard that does not support this species' requirements.
RR 436+80	Sebastopol meadowfoam (*Limnanthes vinculans*) approximately 250 feet from project site.	None	**Unlikely.** Construction footprint is within gravel hardscape of existing Sonoma Water facility that does not support this species' requirements. No special-status species detected during 2018-2019 botanical surveys.
RR 448+00	Sebastopol meadowfoam (*Limnanthes vinculans*) and approximately 750 feet from project site.	None	**Unlikely.** Construction footprint is within gravel access road that does not support this species' requirements. No suitable habitat for Sebastopol meadowfoam within or directly adjacent to project site.

Proposed Project Site	Special-status Vernal Pool Plants in Project Vicinity and/or Project Site	Vernal Pools and Other Potentially Jurisdictional Wetlands in Project Site	Potential for Impact to Special-status Vernal Pool Plants and/or Potentially Jurisdictional wetlands
RR 502+27	Sebastopol meadowfoam (*Limnanthes vinculans*) and Sonoma sunshine (*Blennosperma bakeri*) approximately 1,500 feet from project site.	None	**Unlikely.** Construction footprint is within gravel access road that does not support these species' requirements. No suitable habitat for Sebastopol meadowfoam or Sonoma sunshine within or directly adjacent to project site.
RR 541+20	Burke's goldfields (*Lasthenia burkei*), Sebastopol meadowfoam (*Limnanthes vinculans*), and Sonoma sunshine (*Blennosperma bakeri*) are present in the Todd Road Ecological Reserve adjacent to project site. Vernal pool supporting existing population of Sebastopol meadowfoam adjacent to, but not within, the project site. Many occurrences non-specifically mapped.	Vernal pools present in adjacent CDFW Todd Road Ecological Reserve. Vernal pool containing existing population of Sebastopol meadowfoam adjacent to, but not within, project site.	**Unlikely.** RR 541+20 is within hardscape that does not support these species' requirements. Project site does not overlap adjacent vernal pool supporting existing population of Sebastopol meadowfoam or other suitable habitat for special-status plants. No special-status species detected within project site during 2018-2019 botanical surveys.
RR 592+00	Sonoma alopecurus (*Alopecurus aequallis* var. *sonomensis*), Sebastopol meadowfoam (*Limnanthes vinculans*), Sonoma sunshine (*Blennosperma bakeri*) within approximately 850 feet from project site.	None.	**Unlikely.** Site consists of ruderal vegetation and bare soils within ranch road that does not support these species' requirements.

Proposed Project Site	Special-status Vernal Pool Plants in Project Vicinity and/or Project Site	Vernal Pools and Other Potentially Jurisdictional Wetlands in Project Site	Potential for Impact to Special-status Vernal Pool Plants and/or Potentially Jurisdictional wetlands
RR 606+00	Sebastopol meadowfoam (*Limnanthes vinculans*) approximately 1,400 feet from site. Sonoma alopecurus (*Alopecurus aequalis* var. *sonomensis*) approximately 900 feet from site, historic occurrence. Sonoma sunshine (*Blennosperma bakeri*) approximately 1,500 feet from site.	Potentially jurisdictional roadside ditch within project site.	**Unlikely.** Roadside ditch present but no special-status species detected during 2018-2019 botanical surveys. Project includes trenching through roadside ditch. Ditch is dominated by ruderal vegetation and no suitable habitat is present within the project site for these species.
RR 608+00	Sebastopol meadowfoam (*Limnanthes vinculans*) approximately 1,500 feet from site. Sonoma alopercurus (*Alopecurus aequalis* var. *sonomensis*) approximately 1,000 feet from site. Sonoma sunshine (*Blennosperma bakeri*) approximately 1,400 feet from site.	Vernal pools present in vicinity but no potentially jurisdictional wetlands within or adjacent to project site.	**Unlikely.** Roadside ruderal vegetation present and no wetland features present that would support these species' requirements. No special-status species detected during 2018-2019 botanical surveys.
RR 616+75	Sebastopol meadowfoam (*Limnanthes vinculans*) approximately 450 feet from site. Sonoma sunshine (*Blennosperma bakeri*) approximately 850 feet from site.	Vernal pools present in vicinity but no potentially jurisdictional wetlands within or directly adjacent to project site.	**Unlikely.** Site and access are within ranch road and parking area denuded of vegetation that does not support these species' requirements.

Proposed Project Site	Special-status Vernal Pool Plants in Project Vicinity and/or Project Site	Vernal Pools and Other Potentially Jurisdictional Wetlands in Project Site	Potential for Impact to Special-status Vernal Pool Plants and/or Potentially Jurisdictional wetlands
RR 630+00	Sebastopol meadowfoam (*Limnanthes vinculans*) approximately 150 feet from site. Sonoma sunshine (*Blennosperma bakeri*) approximately 350 feet from site.	Vernal pools present in vicinity but no potentially jurisdictional wetlands within or directly adjacent to project site.	**Unlikely.** Site and access are within ranch road denuded of vegetation that does not support these species' requirements.
RR 643+75	Sebastopol meadowfoam (*Limnanthes vinculans*) approximately 1,200 feet from site. Sebastopol meadowfoam (*Limnanthes vinculans*) and Sonoma alopercurus (*Alopecurus aequalis* var. *sonomensis*) approximately 3,000 feet from site. Sonoma sunshine (*Blennosperma bakeri*) approximately 100 feet from site on opposite side of road. Mapped occurrences referenced are generalized and non-specifically mapped.	Vernal pools present in vicinity but no potentially jurisdictional wetlands within or directly adjacent to project site.	**Unlikely.** Construction footprint and access is contained within existing hardscape and adjacent ruderal vegetation that does not support these species' requirements. No wetland features present. No special-status species detected during 2018-2019 botanical surveys.
RR 669+30	Sonoma sunshine (*Blennosperma bakeri*) approximately 1,250 feet from site.	None. Flood control channel, riparian corridor is located adjacent to project site.	**Unlikely.** Ruderal, non-native annual grassland that does not support this species' requirements.
Laguna Vegetation Maintenance Site	Baker's navarretia (*Navarretia leucocephala ssp. Bakeri*) and Burke's goldfields (*Lasthenia burkei*) approximately 400 feet from project site.	Site is inundated regularly during winter and consists largely of potentially jurisdictional wetland.	**Unlikely.** Dense canopy and lack of appropriate hydrology likely excludes special-status species. No soil disturbance or tree removal proposed. No special-status species detected during 2018-2019 botanical surveys.

APPENDIX E
LAND USE DESIGNATIONS AND CITY ZONING ALONG THE SANTA ROSA AND RUSSIAN RIVER TO COTATI AQUEDUCTS

Appendix E Land Use Designations and City Zoning Along the Santa Rosa and Russian River to Cotati Aqueducts

Table E-1. Land Use Designations and City Zoning along the Santa Rosa Aqueduct

Proposed Project Site	County of Sonoma General Plan Land Use Designation	City of Santa Rosa Zoning
SR0+00 Test Station	Resources Rural Development (Sonoma Water facility)	
SR9+66 Cathodic Protection Station	Land Intensive Agriculture	
SR14+28 Test Station	Land Intensive Agriculture	
SR21+00 Test Station	Land Intensive Agriculture	
SR32+00 Test Station	Land Intensive Agriculture	
SR40+50 Test Station	Land Intensive Agriculture, Resources Rural Development	
SR49+00 Test Station	Resources Rural Development	
SR56+00 Test Station	Resources Rural Development	
SR75+00 Cathodic Protection Station	Public road right-of-way.	
SR90+00 Test Station	Public road right-of-way.	
SR95+00 Cathodic Protection Station	Public road right-of-way. Adjacent to Public/Quasi-Public	
SR111+00 Test Station	Public road right-of-way. Adjacent to Diverse Agriculture	
SR123+43 Test Station	Diverse Agriculture	
SR129+09 Test Station	Diverse Agriculture	Agriculture
SR134+83 Test Station	Diverse Agriculture	Agriculture
SR146+50 Test Station	Diverse Agriculture	Agriculture
SR150+03 Test Station	Diverse Agriculture	Agriculture
SR159+61 Test Station	Diverse Agriculture	Agriculture
SR170+00 Cathodic Protection Station	Public/Quasi-Public	Public/Institutional
SR203+45 Test Station	Public/Quasi-Public	Public/Institutional
SR207+35 Cathodic Protection Station	Public/Quasi-Public	Public/Institutional
SR212+00 Test Station	Public/Quasi-Public	Public/Institutional
SR231+00 Test Station	Public/Quasi-Public	Public/Institutional

Proposed Project Site	County of Sonoma General Plan Land Use Designation	City of Santa Rosa Zoning
SR242+97 Cathodic Protection Station	Public road right-of-way, Limited Industrial	Business Park
SR247+94 Test Station	Limited Industrial	Business Park
SR259+60 Test Station	Land Intensive Agriculture	Agriculture
SR264+00 Test Station	Land Intensive Agriculture	Agriculture
SR285+50 Test Station	Land Intensive Agriculture	Agriculture
SR320+52 Cathodic Protection Station		Very Low Residential
SR415+50 Cathodic Protection Station		Public road right-of-way. Adjacent to Low Residential
SR479+70 Test Station		Medium Residential. Adjacent to General Industry
SR496+95 Cathodic Protection Station		Public road right-of-way (W Steele Ln). Adjacent to General Industry
SR530+00 Cathodic Protection Station		Public road right-of-way (Jennings Ave). Adjacent to Business Park, Med Residential, General Industry
SR572+67 Cathodic Protection Station		Public road right-of-way. Adjacent to Retail and Business Service
SR588+00 Test Station		Public road right-of-way. Adjacent to Transit Village Medium
SR602+00 Test Station		Public road right-of-way. Adjacent to Mixed Use and Parks/Recreation
SR622+70 Test Station		Public road right-of-way. Adjacent to Retail and Business Service
SR663+89 Cathodic Protection Station		Public road right-of-way. Adjacent to Public/Institutional, Med Residential, and Low Residential
SR677+00 Test Station		Public road right-of-way, adjacent to Office
SR713+80 Cathodic Protection Station		Public road right-of-way, adjacent to Medium Residential and Office
SR721+40 Test Station		Public road right-of-way, adjacent to Retail and Medium Residential
SR761+00 Cathodic Protection Station		Public road right-of-way, adjacent to Medium Residential
SR771+40 Cathodic Protection Station		Public road right-of-way, adjacent to Parks/Recreation
SR787+00 Test Station		Parks/Recreation
SR801+20 Test Station		Parks/Recreation
SR812+25 Test Station		Parks/Recreation
SR821+40 Test Station		Sonoma Water Ralphine tanks site

SOURCE: (Permit Resource Management Department, 2014) (City of Santa Rosa, 2019)

Table E-2. Land Use Designations and City Zoning along the Russian River to Cotati Aqueduct

Proposed Project Site	County of Sonoma General Plan Land Use Designation	City of Santa Rosa Zoning
RR31+22 Test Station	Land Intensive Agriculture, Mixed Use	
RR45+00 Test Station	Rural Residential	
RR89+99 Cathodic Protection Station	Rural Residential	
RR131+00 Test Station	Diverse Agriculture. Adjacent to Mixed Use	
RR141+58 Cathodic Protection Station	Diverse Agriculture	
RR151+50 Test Station	Diverse Agriculture	
RR200+00 Test Station	Diverse Agriculture	
RR224+00 Cathodic Protection Station	Rural Residential	
RR245+00 Test Station	Public road right-of-way, Land Intensive Agriculture	
RR286+50 Test Station	Land Extensive Agriculture	
RR302+00 Cathodic Protection Station	Land Extensive Agriculture	
RR312+50 Test Station	Diverse Agriculture	
RR323+00 Cathodic Protection Station	Public road right-of-way, Land Extensive Agriculture, Diverse Agriculture	
RR336+40 Test Station	Diverse Agriculture	
RR367+00 Cathodic Protection Station	Public road right-of-way, Land Extensive Agriculture, Mixed Use	
RR376+00 Test Station	Land Extensive Agriculture, adjacent to Mixed Use	
RR436+80 Cathodic Protection Station	Land Extensive Agriculture	
RR448+00 Test Station	Land Extensive Agriculture	
RR502+27 Test Station	Land Extensive Agriculture	
RR541+20 Cathodic Protection Station	Land Extensive Agriculture, immediately adjacent to reserve owned by California Department of Fish and Wildlife	
RR592+00 Test Station	Diverse Agriculture	
RR606+00 Cathodic Protection Station	Public road right-of-way. Adjacent to Land Extensive Agriculture	Public road right-of-way. Adjacent to Public/Institutional

Proposed Project Site	County of Sonoma General Plan Land Use Designation	City of Santa Rosa Zoning
RR608+00 Cathodic Protection Station		Public road right-of-way. Adjacent to Public/Institutional and Agriculture
RR616+75 Test Station	Diverse Agriculture	
RR630+00 Test Station	Diverse Agriculture	
RR643+75 Anode Well and Rectifier	Diverse Agriculture	
RR669+30 Test Station	Land Extensive Agriculture	
RR677+80 Anode Well and Rectifier	Land Extensive Agriculture	
RR714+70 Anode Well and Rectifier	Land Extensive Agriculture / Diverse Agriculture	
RR748+52 Anode Well and Rectifier	Rural Residential	
RR781+00 Anode Well and Rectifier	Public road right-of-way. Adjacent to Rural Residential and Mixed Use	
RR798+50 Test Station	Rural Residential	
RR808+45 Test Station	Rural Residential	
RR826+55 Anode Well and Rectifier	Land Extensive Agriculture (location is existing Sonoma Water Cotati Tanks)	

SOURCE: (Permit and Resource Management Department, 2014) (City of Santa Rosa, 2019)

Table E-3. Land Use Designations and City Zoning at Proposed Maintenance Sites

Proposed Project Site	County of Sonoma General Plan Land Use Designation	City of Santa Rosa Zoning
Vine Hill Vegetation Maintenance	Diverse Agriculture	
Laguna Vegetation Maintenance	Land Extensive Agriculture	
West Sierra Avenue Vegetation Maintenance	Rural Residential	
Penngrove Vegetation Maintenance	Urban Residential, Limited Industrial	

SOURCE: (Permit and Resource Management Department, 2014) (City of Santa Rosa, 2019)

APPENDIX F
TRANSPORTATION SITE-SPECIFIC SETTING AND POTENTIAL IMPACT TABLES

[Page intentionally left blank]

Table F-1. Transportation at Proposed Project Sites Along the Santa Rosa Aqueduct

Proposed Project Site	Construction Activities Within a Public Road Right-of-Way?	Nearest Proposed Project Area Road(s)	Public Road Classifications	Traffic Control Plan	Discussion
SR 0+00 Test Station	No	Proposed Project Site is adjacent to access roads within existing Sonoma Water facility; Access via Wohler Road	Wohler Road: Minor collector, no transit service	No	Construction would occur within a Sonoma Water facility adjacent to Wohler Road. No construction activities would occur within a public road right-of-way. Construction activities would not impact traffic or public transportation and would not block movement of workers at Sonoma Water's facility.
SR 9+66 Cathodic Protection Station	No	Proposed Project Site is adjacent to unnamed private road; Access via neighboring Sonoma Water facility and Wohler Road	Wohler Road: Minor collector, no transit service	No	Construction would occur adjacent to a private road at Ya-Ka-Ama Indian Education and Development, Inc. No construction activities would occur within a public road right-of-way. Construction activities would not impact traffic or public transportation and would not block movement of residents or workers on the property.
SR 14+28 Test Station	No	Proposed Project Site is adjacent to unnamed private road; Access via neighboring Santa Rosa Junior College via Eastside Road	Wohler Road: Minor collector, no transit service	No	Construction would occur adjacent to a private road at Ya-Ka-Ama Indian Education and Development, Inc. No construction activities would occur within a public road right-of-way. Construction activities would not impact traffic or public transportation and would not block movement of residents or workers on the property.

Proposed Project Site	Construction Activities Within a Public Road Right-of-Way?	Nearest Proposed Project Area Road(s)	Public Road Classifications	Traffic Control Plan	Discussion
SR 21+00 Test Station	No	Proposed Project Site is adjacent to Steve Olson Lane; Access via Eastside Road	Eastside Road: Minor collector, no transit service	No	Construction activities would occur adjacent to a private road at the Santa Rosa Junior College (SRJC) facility, Shone Farm. No construction activities would occur within a public road right-of-way. Construction activities would not impact traffic or public transportation and would not block movement of visitors or workers at the SRJC facility.
SR 32+00 Test Station	No	Proposed Project Site is adjacent to Steve Olson Lane; Access via Eastside Road	Eastside Road: Minor collector, no transit service	No	Construction activities would occur adjacent to a private road at the Santa Rosa Junior College facility, Shone Farm. No construction activities would occur within a public road right-of-way. Construction activities would not impact traffic or public transportation and would not block movement of visitors or workers at the SRJC facility.
SR 40+50 Test Station	No	Proposed Project Site is adjacent to Steve Olson Lane; Access via Eastside Road	Eastside Road: Minor collector, no transit service	No	Construction activities would occur at the Santa Rosa Junior College facility, Shone Farm. Site is located adjacent to Steve Olson Lane. No construction activities would occur within a public road right-of-way. Construction activities would not impact traffic or public transportation and would not block movement of visitors or workers at the SRJC facility.

Proposed Project Site	Construction Activities Within a Public Road Right-of-Way?	Nearest Proposed Project Area Road(s)	Public Road Classifications	Traffic Control Plan	Discussion
SR 49+00 Test Station	No	Proposed Project Site is adjacent to Steve Olson Lane; Access via Eastside Road	Eastside Road: Minor collector, no transit service	No	Construction activities would occur at the Santa Rosa Junior College facility, Shone Farm. Site is located adjacent to Steve Olson Lane. No construction activities would occur within a public road right-of-way. Construction activities would not impact traffic or public transportation and would not block movement of visitors or workers at the SRJC facility.
SR 56+00 Test Station	No	Proposed Project Site is adjacent to Steve Olson Lane; Access via Eastside Road	Eastside Road: Minor collector, no transit service	No	Construction activities would occur at the Santa Rosa Junior College facility, Shone Farm. Site is located adjacent to Steve Olson Lane. No construction activities would occur within a public road right-of-way. Construction activities would not impact traffic or public transportation and would not block movement of visitors or workers at the SRJC facility.
SR 75+00 Cathodic Protection Station	Yes	Proposed Project Site is adjacent to Mark West Station Road	Mark West Station Road: Minor collector, no transit service	A Traffic Control Plan will be prepared and implemented to reduce potential traffic-related impacts to less-than-significant.	Construction activities would occur within a public road right-of-way. No public transportation services would be impacted. A Traffic Control Plan will be prepared to address potential impacts to area traffic.

Proposed Project Site	Construction Activities Within a Public Road Right-of-Way?	Nearest Proposed Project Area Road(s)	Public Road Classifications	Traffic Control Plan	Discussion
SR 90+00 Test Station	Yes	Proposed Project Site is adjacent to Mark West Station Road	Mark West Station Road: Minor collector, no transit service	A Traffic Control Plan will be prepared and implemented to address potential traffic-related impacts to less-than-significant.	Construction activities would occur within a public road right-of-way. No public transportation services would be impacted. A Traffic Control Plan will be prepared to address potential impacts to area traffic.
SR 95+00 Cathodic Protection Station	No	Proposed Project Site is adjacent to Mark West Station Road in Water Agency Property	Mark West Station Road: Minor collector, no transit service	A Traffic Control Plan will be prepared and implemented to address potential traffic-related impacts to less-than-significant.	Construction activities would occur within a public road right-of-way. No public transportation services would be impacted. A Traffic Control Plan will be prepared to address potential impacts to area traffic.
SR 111+00 Test Station	No	Proposed Project Site is adjacent to unnamed vineyard road; Access via Mark West Station Road	Mark West Station Road: Minor collector, no transit service	No	Construction activities would occur adjacent to private vineyard road. No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic or public transportation and would not block movement of residents or workers at the vineyard.

Proposed Project Site	Construction Activities Within a Public Road Right-of-Way?	Nearest Proposed Project Area Road(s)	Public Road Classifications	Traffic Control Plan	Discussion
SR 123+43 Test Station	No	Proposed Project Site is adjacent to unnamed vineyard road; Access via Mark West Station Road and Old Vine Lane	Mark West Station Road: Residential, no transit service	No	Construction activities would occur adjacent to private vineyard road. No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic or public transportation and would not block movement of residents or workers at the vineyard.
SR 129+09 Test Station	No	Proposed Project Site is adjacent to unnamed vineyard road; Access via Mark West Station Road and Old Vine Lane	Mark West Station Road: Residential, no transit service	No	Construction activities would occur adjacent to private vineyard road. No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic or public transportation and would not block movement of residents or workers at the vineyard.
SR 134+83 Test Station	No	Proposed Project Site is adjacent to unnamed vineyard road; Access via Mark West Station Road and Old Vine Lane	Mark West Station Road: Residential, no transit service	No	Construction activities would occur adjacent to private vineyard road. No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic or public transportation and would not block movement of residents or workers at the vineyard.

Proposed Project Site	Construction Activities Within a Public Road Right-of-Way?	Nearest Proposed Project Area Road(s)	Public Road Classifications	Traffic Control Plan	Discussion
SR 146+50 Test Station	No	Proposed Project Site is adjacent to unnamed vineyard road; Access via Mark West Station Road and Old Vine Lane	Mark West Station Road: Residential, no transit service	No	Construction activities would occur adjacent to private vineyard road. No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic or public transportation and would not block movement of residents or workers at the vineyard.
SR 150+03 Test Station	No	Proposed Project Site is adjacent to unnamed vineyard road; Access via Mark West Station Road and Old Vine Lane	Mark West Station Road: Minor collector, no transit service	No	Construction activities would occur adjacent to private vineyard road. No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic or public transportation and would not block movement of residents or workers at the vineyard.
SR 159+61 Test Station	No	Proposed Project Site is adjacent to unnamed vineyard road; Access via Slusser Road	Slusser Road: Minor collector, no transit service	No	Construction activities would occur adjacent to private vineyard road. No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic or public transportation and would not block movement of residents or workers at the vineyard.

Proposed Project Site	Construction Activities Within a Public Road Right-of-Way?	Nearest Proposed Project Area Road(s)	Public Road Classifications	Traffic Control Plan	Discussion
SR 170+00 Test Station	No	Proposed Project Site is adjacent to unnamed airport road; Access via Slusser Road	Slusser Road: Minor collector, no transit service	No	Construction activities would occur within property owned by County of Sonoma and associated with Charles M. Schulz Sonoma County Airport. No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic or public transportation and would not impede activities related to operation of the airport.
SR 203+45 Test Station	No	Proposed Project Site is adjacent to unnamed airport road; Access via Laughlin Road	Laughlin Road: Residential road, no transit service	No	Construction activities would occur within property owned by County of Sonoma and associated with Charles M. Schulz Sonoma County Airport. No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic or public transportation and would not impede activities related to operation of the airport.

Proposed Project Site	Construction Activities Within a Public Road Right-of-Way?	Nearest Proposed Project Area Road(s)	Public Road Classifications	Traffic Control Plan	Discussion
SR 207+35 Cathodic Protection Station	No	Proposed Project Site is adjacent to unnamed airport road; Access via Laughlin Road	Laughlin Road: Residential, no transit service	No	Construction activities would occur within property owned by County of Sonoma and associated with Charles M. Schulz Sonoma County Airport. No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic or public transportation and would not impede activities related to operation of the airport.
SR 212+00 Test Station	No	Proposed Project Site is adjacent to unnamed airport road; Access via Laughlin Road	Laughlin Road: Residential, no transit service	No	Construction activities would occur within property owned by County of Sonoma and associated with Charles M. Schulz Sonoma County Airport. No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic or public transportation and would not impede activities related to operation of the airport.

Proposed Project Site	Construction Activities Within a Public Road Right-of-Way?	Nearest Proposed Project Area Road(s)	Public Road Classifications	Traffic Control Plan	Discussion
SR 231+00 Test Station	No	Proposed Project Site is adjacent to unnamed airport road; Access via Laughlin Road	Laughlin Road: Residential, no transit service	No	Construction activities would occur within property owned by County of Sonoma and associated with Charles M. Schulz Sonoma County Airport. No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic or public transportation and would not impede activities related to operation of the airport.
SR 242+97 Cathodic Protection Station	Yes	Proposed Project Site is adjacent to Laughlin Road	Laughlin Road: Residential, no transit service	A Traffic Control Plan will be prepared and implemented to reduce potential traffic-related impacts to less-than-significant.	Construction activities would occur within a public road right-of-way. No public transportation services would be impacted. A Traffic Control Plan will be prepared to address potential impacts to area traffic.
SR 247+94 Test Station	No	Proposed Project Site is located east of Laughlin Road	Laughlin Road: Residential, no transit service	No	Construction activities would occur adjacent to an unpaved trail east of Laughlin Road. No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic or public transportation.

Proposed Project Site	Construction Activities Within a Public Road Right-of-Way?	Nearest Proposed Project Area Road(s)	Public Road Classifications	Traffic Control Plan	Discussion
SR 259+60 Test Station	No	Proposed Project Site is adjacent to unnamed vineyard road; Access via Laughlin Road	Laughlin Road: Residential, no transit service	No	Construction activities would occur adjacent to a private vineyard road. No construction activities would occur within a public road right of way. Construction activities would not impact area traffic or public transportation and would not block movement of residents or workers along the private road.
SR 264+00 Test Station	No	Proposed Project Site is adjacent to unnamed vineyard road; Access via Laughlin Road	Laughlin Road: Residential, no transit service	No	Construction activities would occur adjacent to a private vineyard road. No construction activities would occur within a public road right of way. Construction activities would not impact area traffic or public transportation and would not block movement of residents or workers along the private road.
SR 285+50 Test Station	No	Proposed Project Site is adjacent to unnamed vineyard road; Access via Bisordi Lane	Bisordi Lane: Residential, no transit service	No	Construction activities would occur adjacent to a private vineyard road. No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic or public transportation and would not block movement of residents or workers along the private road.

Proposed Project Site	Construction Activities Within a Public Road Right-of-Way?	Nearest Proposed Project Area Road(s)	Public Road Classifications	Traffic Control Plan	Discussion
SR 320+52 Cathodic Protection Station	No	Proposed Project Site is adjacent to unnamed road; Access via Hart Lane and River Road	Hart Lane: Residential, no transit service; River Road: Primary arterial, Sonoma County Transit service (Route 20)	No	Construction activities would occur adjacent to an unnamed access road within property owned by the Sonoma Marin Area Rail Transit (SMART). No construction activities would occur in a public road right-of-way. Construction activities would not impact area traffic or public transportation and would not impede operation of SMART facilities due to the site's proximity to SMART right-of-way.
SR 415+50 Cathodic Protection Station	Yes	Proposed Project Site overlaps Gold Leaf Lane; Access via Gold Leaf Lane and San Miguel Avenue	Gold Leaf Lane: Residential, no transit service; San Miguel Avenue: Major collector, Santa Rosa City Bus service (Route 6)	A Traffic Control Plan will be prepared and implemented to address potential traffic-related impacts to less-than-significant.	Construction activities would occur in a public road right-of-way (Gold Leaf Lane). A Traffic Control Plan will be prepared to address potential impacts to area traffic and public transportation. Construction-related activities would not impact operation of Sonoma-Marin Area Rail Transit (SMART) but SMART will be notified prior to construction commencement due to the site's proximity to SMART right-of-way.

Proposed Project Site	Construction Activities Within a Public Road Right-of-Way?	Nearest Proposed Project Area Road(s)	Public Road Classifications	Traffic Control Plan	Discussion
SR 479+70 Test Station	Yes	Proposed Project Site overlaps Apache Street; Access via Apache Street	Apache Street: Residential, no transit service	A Traffic Control Plan will be prepared and implemented to reduce potential traffic-related impacts to less-than-significant.	Construction activities would occur in a public road right-of-way (Apache Street). A Traffic Control Plan will be prepared to address potential impacts to area traffic and public transportation. Construction-related activities would not impact operation of Sonoma-Marin Area Rail Transit (SMART) but SMART will be notified prior to construction commencement due to the site's proximity to SMART right-of-way.
SR 496+95 Cathodic Protection Station	Yes	Proposed Project Site overlaps West Steele Lane; Access via West Steele Lane	West Steele Lane: Major collector, Santa Rosa City Bus service (Route 6)	A Traffic Control Plan will be prepared and implemented to reduce potential impacts to vehicle, pedestrian, and bicycle traffic as well as public transportation to less-than-significant.	Construction activities would occur in a public road right-of-way (West Steele Lane), sidewalk, and bicycle lane. A Traffic Control Plan will be prepared to address potential impacts to vehicle, pedestrian, and bicycle traffic as well as public transportation. Construction-related activities would not impact operation of Sonoma-Marin Area Rail Transit (SMART) but SMART will be notified prior to construction commencement due to the site's proximity to SMART right-of-way.

Proposed Project Site	Construction Activities Within a Public Road Right-of-Way?	Nearest Proposed Project Area Road(s)	Public Road Classifications	Traffic Control Plan	Discussion
SR 530+00 Cathodic Protection Station	Yes	Proposed Project Site overlaps Jennings Avenue terminus at SMART tracks (no through traffic); Access via Jennings Avenue	Jennings Avenue: Primary Arterial, no transit service	A Traffic Control Plan will be prepared and implemented to reduce potential traffic-related impacts to less-than-significant.	Construction activities would occur in a public road right-of-way (Jennings Avenue). A Traffic Control Plan will be prepared to address potential impacts to area traffic. Construction-related activities would not impact operation of Sonoma-Marin Area Rail Transit (SMART) but SMART will be notified prior to construction commencement due to the site's proximity to SMART right-of-way.
SR 572+67 Cathodic Protection Station	Yes	Proposed Project Site overlaps Ripley Street terminus at West College Avenue (no through traffic); Access via Ripley Street	Ripley Street: Residential, no transit service	A Traffic Control Plan will be prepared to reduce potential traffic-related impacts to less-than-significant.	Construction activities would occur in a public road right-of-way (Ripley Street). A Traffic Control Plan will be prepared to address potential impacts to area traffic.
SR 588+00 Test Station	Yes	Proposed Project Site overlaps Wilson Street; Access via Wilson Street	Wilson Street: Primary arterial, no transit service	A Traffic Control Plan will be prepared to reduce potential traffic-related impacts to less-than-significant.	Construction activities would occur in a public road right-of-way (Wilson Street). A Traffic Control Plan will be prepared to address potential impacts to area traffic.

Proposed Project Site	Construction Activities Within a Public Road Right-of-Way?	Nearest Proposed Project Area Road(s)	Public Road Classifications	Traffic Control Plan	Discussion
SR 602+00 Test Station	Yes	Proposed Project Site overlaps Wilson Street at 5th Street	Wilson Street: Primary arterial, no transit service; 5th Street: Residential, no transit service	A Traffic Control Plan will be prepared to reduce potential impacts to vehicle and pedestrian traffic to less-than-significant.	Construction activities would occur in a public road right-of-way (Wilson Street) and a pedestrian crosswalk. No public transportation services would be impacted. A Traffic Control Plan will be prepared to reduce potential impacts to vehicle, bicycle, and pedestrian traffic as well as public transportation to less-than-significant.
SR 622+70 Test Station	Yes	Proposed Project Site located within 1st Street immediately west of its intersection with A Street	A Street: Residential, no transit service at this location; 1st Street: Major collector, no transit service at this location	A Traffic Control Plan will be prepared to reduce potential impacts to vehicle and pedestrian traffic to less-than-significant.	Construction activities would occur in a public road right-of-way (1st Street) and could overlap a pedestrian crosswalk. Construction activities would take place within two blocks of the downtown Transit Mall but would not impede flow of buses into or out of the Transit Mall. Construction activities would also limit public parking at the project site. A Traffic Control Plan will be prepared to reduce potential impacts to vehicle, bicycle, and pedestrian traffic as well as public transportation to less-than-significant.

Proposed Project Site	Construction Activities Within a Public Road Right-of-Way?	Nearest Proposed Project Area Road(s)	Public Road Classifications	Traffic Control Plan	Discussion
SR 663+89 Cathodic Protection Station	Yes	Proposed Project Site located adjacent to Sonoma Avenue, construction activities would overlap Sonoma Avenue	Sonoma Avenue: Primary arterial, Santa Rosa City Bus service (Routes 4/4B)	A Traffic Control Plan will be prepared to reduce potential impacts to vehicle, bicycle, and pedestrian traffic as well as public transportation and emergency services to less-than-significant.	Construction activities would occur in a public road right-of-way (Sonoma Avenue) and would overlap a sidewalk, Class II Bike Lane, and portion of the Sonoma Avenue entrance to the parking lot serving the City of Santa Rosa's Fire Station 1 located at 955 Sonoma Avenue and Police Department located at 965 Sonoma Avenue. A Traffic Control Plan will be prepared to reduce potential impacts to vehicle, bicycle, and pedestrian traffic as well as public transportation and emergency services to less-than-significant.
SR 677+00 Test Station	Yes	Proposed Project Site located within Sonoma Avenue	Sonoma Avenue: Primary arterial, Santa Rosa City Bus service (Routes 4/4B)	A Traffic Control Plan will be prepared to reduce potential impacts to vehicle, bicycle, and pedestrian traffic as well as public transportation to less-than-significant.	Construction activities would occur in a public road right-of-way (Sonoma Avenue). Construction activities would also likely overlap a sidewalk and Class II Bike Lane. A Traffic Control Plan will be prepared to reduce potential impacts to vehicle, bicycle, and pedestrian traffic as well as public transportation to less-than-significant.

Proposed Project Site	Construction Activities Within a Public Road Right-of-Way?	Nearest Proposed Project Area Road(s)	Public Road Classifications	Traffic Control Plan	Discussion
SR 713+80 Cathodic Protection Station	Yes	Proposed Project Site located within property owned by City of Santa Rosa at intersection of Sonoma Ave and Farmers Lane	Sonoma Avenue: Primary arterial, Santa Rosa City Bus service (Routes 4/4B, 7, 8, 18); Farmers Lane: Primary arterial, Santa Rosa City Bus services (Routes 7, 8, 18)	A Traffic Control Plan will be prepared to reduce potential impacts to vehicle, bicycle, and pedestrian traffic as well as public transportation to less-than-significant.	Some construction activities would occur in a public road right-of-way (Sonoma Avenue and Farmers Lane) and would likely overlap adjacent sidewalks and Class II Bike Lane. A Traffic Control Plan will be prepared to reduce potential impacts to vehicle, bicycle, and pedestrian traffic as well as public transportation to less-than-significant.
SR 721+40 Test Station	Yes	Proposed Project Site located within Sonoma Ave	Sonoma Avenue: Primary arterial, Santa Rosa City Bus service (Routes 4/4B, 7, 8, 18)	A Traffic Control Plan will be prepared to reduce potential impacts to vehicle, bicycle, and pedestrian traffic as well as public transportation to less-than-significant.	Construction activities would occur in a public road right-of-way (Sonoma Avenue), adjacent to an entrance and exit to the Montgomery Village Shopping Center, and within the footprint of the Montgomery Village Transit Stop. Construction activities would also overlap the adjacent sidewalk and Class II Bike Lane. A Traffic Control Plan will be prepared to reduce potential impacts to vehicle, bicycle, and pedestrian traffic as well as public transportation to less-than-significant.

Proposed Project Site	Construction Activities Within a Public Road Right-of-Way?	Nearest Proposed Project Area Road(s)	Public Road Classifications	Traffic Control Plan	Discussion
SR 761+00 Cathodic Protection Station	Yes	Proposed Project Site is adjacent to Sonoma Ave	Sonoma Avenue: Primary arterial, Santa Rosa City Bus service (Route 8)	A Traffic Control Plan will be prepared to reduce potential impacts to vehicle, bicycle, and pedestrian traffic as well as public transportation to less-than-significant.	Station would be constructed immediately north of Sonoma Avenue but construction activities would occur within public road right-of-way, sidewalk, and Class II Bike Lane. A Traffic Control Plan will be prepared to reduce potential impacts to vehicle, bicycle, and pedestrian traffic as well as public transportation to less-than-significant.
SR 771+40 Cathodic Protection Station	Yes	Proposed Project Site is located east of Summerfield Road at Sonoma Avenue	Sonoma Avenue: Primary arterial, Santa Rosa City Bus service (Route 8); Summerfield Road: Primary arterial, Santa Rosa City Bus service (Route 8)	A Traffic Control Plan will be prepared to reduce potential impacts to vehicle, bicycle, and pedestrian traffic as well as public transportation to less-than-significant.	Station would be constructed immediately east of Summerfield Road but construction activities would occur within public road right-of-way, sidewalk, and Class II Bike Lane. A Traffic Control Plan will be prepared to reduce potential impacts to vehicle, bicycle, and pedestrian traffic as well as public transportation to less-than-significant.

Proposed Project Site	Construction Activities Within a Public Road Right-of-Way?	Nearest Proposed Project Area Road(s)	Public Road Classifications	Traffic Control Plan	Discussion
SR 787+00 Test Station	No	Proposed Project Site is located adjacent to a public trail; Access via Summerfield Road at Sonoma Avenue	Sonoma Avenue: Primary arterial, Santa Rosa City Bus service (Route 8); Summerfield Road: Primary arterial, Santa Rosa City Bus service (Route 8)	No	Construction activities would occur within and adjacent to a Class I Shared-use Path (public trail). A Traffic Control Plan will be prepared to provide for continued access for pedestrians and cyclists within Spring Lake Regional Park.
SR 801+20 Test Station	No	Proposed Project Site is located adjacent to a public trail; Access via Summerfield Road at Sonoma Avenue	Sonoma Avenue: Primary arterial, Santa Rosa City Bus service (Route 8); Summerfield Road: Primary arterial, Santa Rosa City Bus service (Route 8)	No	Construction activities would occur in a Class I Shared-use Path (public trail). Traffic Control Plan to provide for continued access for pedestrians and cyclists within Spring Lake Regional Park.
SR 812+25 Test Station	No	Proposed Project Site is located adjacent to a public trail; Access via Summerfield Road at Sonoma Avenue	Sonoma Avenue: Primary arterial, Santa Rosa City Bus service (Route 8); Summerfield Road: Primary arterial, Santa Rosa City Bus service (Route 8)	No	Construction activities would occur within and adjacent to a Class I Shared-use Path (public trail). Traffic Control Plan to provide for continued access for pedestrians and cyclists within Spring Lake Regional Park.

Proposed Project Site	Construction Activities Within a Public Road Right-of-Way?	Nearest Proposed Project Area Road(s)	Public Road Classifications	Traffic Control Plan	Discussion
SR 821+40 Test Station	No	Proposed Site is located within a Sonoma Water facility within Spring Lake Regional Park; Access via Summerfield Road at Sonoma Avenue	Sonoma Avenue: Primary arterial, Santa Rosa City Bus service (Route 8); Summerfield Road: Primary arterial, Santa Rosa City Bus service (Route 8)	No	Construction activities would occur at Sonoma Water facilities located within Spring Lake Regional Park. Construction activities would not impact area traffic, transportation, or movement of pedestrians and cyclists.

Table F-2. Transportation at Proposed Project Sites along the Russian River to Cotati Aqueduct

Proposed Project Site	Construction Activities Within a Public Road Right-of-Way?	Nearest Proposed Project Area Road(s)	Public Road Classifications	Traffic Control Plan	Discussion
RR 31+22 Test Station	No	Proposed Project Site is adjacent to private vineyard road; Access via Wohler Road	Wohler Road: Minor collector, no transit service	No	Construction activities would occur within and adjacent to a private vineyard road. No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic and would not block movement of residents or workers at the vineyard. No public transportation, bicycle, or pedestrian services are present at the site.
RR 45+00 Cathodic Protection Station	No	Proposed Project Site is within Sonoma Water facility; Access via River Road	River Road: Rural Principal Arterial, Sonoma County Transit service (Route 20)	No	Construction activities would occur within property owned by Sonoma Water. No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic or public transportation. No bicycle or pedestrian services are present at the site.
RR 89+99 Cathodic Protection Station	Yes	Proposed Project Site is within Russell Lane; Access via Russell Lane	Russell Lane: Residential, no transit service	No	Construction activities would occur in a public road right-of-way (Russell Lane). A Traffic Control Plan will be prepared to address potential impacts to area traffic. No public transportation, bicycle, or pedestrian services are present at the site.

Proposed Project Site	Construction Activities Within a Public Road Right-of-Way?	Nearest Proposed Project Area Road(s)	Public Road Classifications	Traffic Control Plan	Discussion
RR 131+00 Test Station	No	Proposed Project Site is within a private vineyard road; Access via Vine Hill Road	Vine Hill Road: Residential, no transit service	No	Construction activities would occur within and adjacent to a private vineyard road. No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic or public transportation and would not block movement of residents or workers at the vineyard. No public transportation, bicycle or pedestrian facilities would be impacted.
RR 141+58 Cathodic Protection Station	No	Proposed Project Site is within a private road; Access via Vine Hill Road	Vine Hill Road: Residential, no transit service	No	Construction activities would occur within and adjacent to a private road. No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic and would not block movement of residents along the road. No public transportation, bicycle, or pedestrian services are present at the site.
RR 151+50 Test Station	No	Proposed Project Site is within a private road; Access via Vine Hill Road	Vine Hill Road: Residential, no transit service	No	Construction activities would occur within and adjacent to private road. No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic and would not block movement of residents along the road. No public transportation, bicycle, or pedestrian services are present at the site.

Proposed Project Site	Construction Activities Within a Public Road Right-of-Way?	Nearest Proposed Project Area Road(s)	Public Road Classifications	Traffic Control Plan	Discussion
RR 200+00 Test Station	No	Proposed Project Site is within a private vineyard road; Access via Laguna Road	Laguna Road: Minor collector, no transit service	No	Construction activities would occur within and adjacent to a private vineyard road. No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic and would not block movement of residents or workers at the vineyard. No public transportation, bicycle, or pedestrian services are present at the site.
RR 224+00 Cathodic Protection Station	No	Proposed Project Site is adjacent to Laguna Road; Access via Laguna Road	Laguna Road: Minor collector, no transit service	No	Construction activities would occur adjacent to a public road right-of-way (Laguna Road). No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic. No public transportation, bicycle, or pedestrian services are present at the site.
RR 245+00 Test Station	No	Proposed Project Site is within private vineyard road; Access via Guerneville Road	Guerneville Road; Rural Principal Arterial, no transit service	No	Construction activities would occur within and adjacent to a private vineyard road. No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic and would not block movement of residents or workers at the vineyard. No public transportation, bicycle, or pedestrian services are present at the site.

Proposed Project Site	Construction Activities Within a Public Road Right-of-Way?	Nearest Proposed Project Area Road(s)	Public Road Classifications	Traffic Control Plan	Discussion
RR 286+50 Test Station	No	Proposed Project Site is within private road; Access via Hall Road	Hall Road; Residential, no transit service	No	Construction activities would occur within and adjacent to a private road. No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic and would not block movement of residents or workers at the ranch. No public transportation, bicycle, or pedestrian services are present at the site.
RR 302+00 Cathodic Protection Station	Yes	Proposed Project Site is adjacent to Hall Road; Access via Hall Road	Hall Road; Residential, no transit service	No	Construction activities would occur in a public road right-of-way (Hall Road). No public transportation, bicycle, or pedestrian services are present at the site. A Traffic Control Plan will be prepared to address potential impacts to area traffic.
RR 312+50 Test Station	No	Proposed Project Site is within private road; Access via Sanford Road	Sanford Road; Major collector, no transit service	No	Construction activities would occur within and adjacent to a private road. No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic and would not block movement of vehicles along the private road. No public transportation, bicycle, or pedestrian services are present at the site.

Proposed Project Site	Construction Activities Within a Public Road Right-of-Way?	Nearest Proposed Project Area Road(s)	Public Road Classifications	Traffic Control Plan	Discussion
RR 323+00 Cathodic Protection Station	Yes	Proposed Project Site is adjacent to private road and Sanford Road; Access via Sanford Road	Sanford Road; Major collector, no transit service	No	Construction activities would occur in a public road right-of-way (Sanford Avenue). No public transportation, bicycle, or pedestrian services are present at the site. A Traffic Control Plan will be prepared to address potential impacts to area traffic.
RR 336+40 Test Station	No	Proposed Project Site is within private road, Bravo Toro Lane; Access via Occidental Road	Occidental Road; Second Arterial, no transit service	No	Construction activities would occur within and adjacent to a private road. No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic and would not block movement of vehicles along the private road. No public transportation, bicycle, or pedestrian services are present at the site.
RR 367+00 Cathodic Protection Station	No	Proposed Project Site is within private vineyard road; Access via Occidental Road	Occidental Road; Second Arterial, no transit service	No	Construction activities would occur within and adjacent to a private vineyard road. No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic and would not block movement of residents or workers at the vineyard. No public transportation, bicycle, or pedestrian services are present at the site.

Proposed Project Site	Construction Activities Within a Public Road Right-of-Way?	Nearest Proposed Project Area Road(s)	Public Road Classifications	Traffic Control Plan	Discussion
RR 376+00 Test Station	No	Proposed Project Site is within private vineyard road; Access via Occidental Road	Occidental Road; Second Arterial, no transit service	No	Construction activities would occur within and adjacent to private vineyard road. No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic and would not block movement of residents or workers at the vineyard. No public transportation, bicycle, or pedestrian services are present at the site.
RR 436+80 Cathodic Protection Station	Yes	Proposed Project Site is within Sonoma Water facility; Access via Sebastopol Road	Sebastopol Road; Highway, Sonoma County Transit service (Route 22)	No	Vehicle activity related to construction activities would occur in a public road right-of-way (Sebastopol Road). Bus Route 22 uses this road but no bicycle or pedestrian services are available at this site. A Traffic Control Plan will be prepared to address potential impacts to area traffic and public transportation.
RR 448+00 Test Station	No	Proposed Project Site is adjacent to private road; Access via Llano Road	Llano Road; Second arterial, no transit service	No	Construction activities would occur within and adjacent to a private road. No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic and would not block movement of residents or workers along the private road. No public transportation, bicycle, or pedestrian services are present at the site.

Proposed Project Site	Construction Activities Within a Public Road Right-of-Way?	Nearest Proposed Project Area Road(s)	Public Road Classifications	Traffic Control Plan	Discussion
RR 502+27 Test Station	No	Proposed Project Site is adjacent to private road; Access via Llano Road	Llano Road; Second arterial, no transit service	No	Construction activities would occur within and adjacent to a private road. No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic and would not block movement of residents or workers along the private road. No public transportation, bicycle, or pedestrian services are present at the site.
RR 541+20 Cathodic Protection Station	No	Proposed Project Site is within Sonoma Water facility; Access via Todd Road	Todd Road: Second arterial, no transit service	No	No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic. No public transportation, bicycle, or pedestrian services are present at the site.
RR 592+00 Test Station	No	Proposed Project Site is adjacent to private road; Access via Walker Avenue	Walker Avenue; Residential, no transit service	No	Construction activities would occur within and adjacent to a private road. No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic and would not block movement of residents or workers along the private road. No public transportation, bicycle, or pedestrian services are present at the site.

Proposed Project Site	Construction Activities Within a Public Road Right-of-Way?	Nearest Proposed Project Area Road(s)	Public Road Classifications	Traffic Control Plan	Discussion
RR 606+00 Cathodic Protection Station	No	Proposed Project Site is within and adjacent to Meadow Lane; Access via Meadow Lane	Meadow Lane; Residential, no transit service	No	Construction activities would occur in a public road right-of-way (Meadow Lane). No public transportation, bicycle, or pedestrian services are present at the site. A Traffic Control Plan will be prepared to address potential impacts to area traffic.
RR 608+00 Cathodic Protection Station	No	Proposed Project Site is adjacent to Walker Avenue; Access via Walker Avenue	Walker Avenue; Residential, no transit service	No	Construction activities would occur on the City of Santa Rosa property. No public transportation, bicycle, or pedestrian services are present at the site.
RR 616+75 Test Station	No	Proposed Project Site is adjacent to a private road; Access via Walker Avenue	Walker Avenue; Residential, no transit service	No	Construction activities would occur adjacent to a private road. No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic and would not block movement of residents or workers along the private road. No public transportation, bicycle, or pedestrian services are present at the site.

Proposed Project Site	Construction Activities Within a Public Road Right-of-Way?	Nearest Proposed Project Area Road(s)	Public Road Classifications	Traffic Control Plan	Discussion
RR 630+00 Test Station	No	Proposed Project Site is adjacent to a private road; Access via Walker Avenue	Walker Avenue; Residential, no transit service	No	Construction activities would occur adjacent to a private road. No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic and would not block movement of residents or workers along the private road. No public transportation, bicycle, or pedestrian services are present at the site.
RR 643+75 Cathodic Protection Station	No	Proposed Project Site is adjacent to a private road; Access via Wilfred Avenue	Wilfred Avenue; Residential, no transit service	No	Construction activities would occur adjacent to a private road. No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic and would not block movement of residents or workers along the private road. No public transportation, bicycle, or pedestrian services are present at the site.

Proposed Project Site	Construction Activities Within a Public Road Right-of-Way?	Nearest Proposed Project Area Road(s)	Public Road Classifications	Traffic Control Plan	Discussion
RR 669+30 Test Station	No	Proposed Project Site is adjacent to a private road; Access via Stony Point Road	Stony Point Road; Residential, no transit service	No	Construction activities would occur adjacent to a private road. No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic and would not block movement of residents or workers along the private road. No public transportation, bicycle, or pedestrian services are present at the site.
RR 677+80 Cathodic Protection Station	No	Proposed Project Site is adjacent to a private road; Access via Stony Point Road	Stony Point Road; Residential, no transit service	No	Construction activities would occur adjacent to a private road. No construction activities would occur within a public road right of way. Construction activities would not impact area traffic or public transportation and would not block movement of residents or workers along the private road.
RR 748+52 Cathodic Protection Station	Yes	Proposed Project Site is within a private driveway adjacent to Highway 116, some construction activities could occur within Highway 116 right-of-way; Access via Highway 116	Highway 116; Highway, Sonoma County Transit bus routes 26 and 52	No	Construction activities would occur in a public road right-of-way (Highway 116). No bicycle or pedestrian services are present at this site but public transit services are present on Highway 116. A Traffic Control Plan will be prepared to address potential impacts to area traffic and public transportation and coordination with CalTrans.

Proposed Project Site	Construction Activities Within a Public Road Right-of-Way?	Nearest Proposed Project Area Road(s)	Public Road Classifications	Traffic Control Plan	Discussion
RR 781+00 Cathodic Protection Station	Yes	Proposed Project Site is adjacent to Madrone Avenue; Access via Madrone Avenue.	Madrone Avenue; Residential, no transit service	No	Construction activities would occur in a public road right-of-way (Madrone Avenue). No public transportation, bicycle, or pedestrian services are present at the site. A Traffic Control Plan will be prepared to address potential impacts to area traffic.
RR 798+50 Test Station	No	Proposed Project Site is adjacent to private driveway; Access via Madrone Avenue.	Madrone Avenue; Residential, no transit service	No	Construction activities would occur adjacent to a private driveway. No construction activities would occur within a public road right of way. Construction activities would not impact area traffic or public transportation and would not block movement of residents along the private road.
RR 808+45 Test Station	No	Proposed Project Site is adjacent to a private vineyard road which overlaps aqueduct easement; Access via West Sierra Avenue.	West Sierra Avenue; Major collector, no transit service	No	Construction activities would occur adjacent to a private vineyard road. No construction activities would occur within a public road right of way. Construction activities would not impact area traffic and would not block movement of residents or workers along the private road. No public transportation, bicycle, or pedestrian services are present at the site.

Proposed Project Site	Construction Activities Within a Public Road Right-of-Way?	Nearest Proposed Project Area Road(s)	Public Road Classifications	Traffic Control Plan	Discussion
RR 826+55 Cathodic Protection Station	No	Proposed Project Site is within existing Sonoma Water facility; Access via West Sierra Avenue.	West Sierra Avenue: Major collector, no transit service	No	Construction would occur within a Sonoma Water facility adjacent to West Sierra Avenue. No construction activities would occur within a public road right-of-way. Construction activities would not impact area traffic and would not block movement of workers at Sonoma Water's facility. No public transportation, bicycle, or pedestrian services are present at the site.

Table F-3. Transportation at Proposed Maintenance Sites

	Project Activities Within a Public Road Right-of-Way?	Nearest Proposed Project Area Road(s)	Public Road Classifications	Traffic Control Plan	Discussion
Vine Hill Vegetation Maintenance	No	private road via Vine Hill Road	Residential	No	Occassional vehicle and equipment access. Maintenance activities would not impact area traffic, public transportation, bicycle, or pedestrian services.
Laguna Vegetation Maintenance	No	Private roads via Hall Road	Major Collector	No	Occassional vehicle and equipment access. Maintenance activities would not impact area traffic, public transportation, bicycle, or pedestrian services.
West Sierra Vegetation Maintenance	No	West Sierra Avenue	Major Collector	No	Occassional vehicle and equipment access. Maintenance activities would not impact area traffic, public transportation, bicycle, or pedestrian services.
Penngrove Vegetation Maintenance	No	Adobe Road	2nd Arterial	No	Occassional vehicle and equipment access. Maintenance activities would not impact area traffic, public transportation, bicycle, or pedestrian services.

APPENDIX G
NOTICE OF PREPARATION OF INITIAL STUDY

Notice of Preparation of Initial Study

July 9, 2018

TO: State Clearinghouse
Responsible and Trustee Agencies
Interested Agencies and Parties

FROM: Sonoma County Water Agency
404 Aviation Blvd.
Santa Rosa, CA 95403

Santa Rosa Aqueduct and Cotati Aqueduct Cathodic Protection Project

Public Scoping Period: July 9 to August 10, 2018

The Sonoma County Water Agency (Water Agency) is preparing an Initial Study for the Santa Rosa Aqueduct and Cotati Aqueduct Cathodic Protection Project (Proposed Project) in accordance with the provisions of the California Environmental Quality Act (CEQA), the State CEQA Guidelines, and the Water Agency's Procedures for the Implementation of CEQA. An Initial Study is a preliminary analysis of a project's potential environmental impacts is used to determine whether a Negative Declaration or an Environmental Impact Report will be prepared. It is a public document that analyzes the potential environmental effects related to construction, operation, and maintenance of a project and describes ways to reduce or avoid possible environmental impacts. The Water Agency will act as the Lead Agency pursuant to CEQA, and will consider all comments received in response to this Notice of Preparation (NOP), including comments from responsible and trustee agencies, and interested parties regarding the scope and content of the information to be considered in the Initial Study.

Background

The Water Agency was created in 1949 by the California Legislature as a special district to provide flood protection and water supply services. The members of the Sonoma County Board of Supervisors are the Water Agency's Board of Directors. The Water Agency'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 the Water Agency's facilities), and the treatment and disposal of wastewater.

The Water Agency operates several aqueducts to provide a reliable supply of naturally-filtered drinking water from the Russian River to contractors throughout its service area. The original system was constructed in the late 1950s and early 1960s, but construction of the transmission system continued through 2006. The Santa Rosa Aqueduct was installed from 1968 to 1985 to provide drinking water to

residents in Santa Rosa. The Santa Rosa Aqueduct consists of approximately 83,100 feet (16 miles) of 36-inch and 42-inch diameter concrete mortar-lined steel pipe. This aqueduct runs from the Wohler Pumping Plant at the Russian River to the Ralphine Tanks at Spring Lake Park in Santa Rosa. The Cotati Aqueduct was installed in 1963 and consists of 94,000 feet (18 miles) of 30-inch to 48-inch diameter concrete mortar-lined steel. This aqueduct runs from the Mirabel Pumping Plant to the Cotati Tanks.

Project Need and Objective

The Proposed Project would allow the Water Agency to update the existing, aging cathodic protection system. The Water Agency's aqueducts are currently protected by a galvanic cathodic protection system (galvanic system). The galvanic system includes buried anodes that are attached to the aqueduct. The anodes provide a material that corrodes more readily than the aqueduct, so the corrosive materials in the environment around the aqueduct degrade the anodes rather than the aqueduct. This system also includes cathodic test stations, which consist of a wire lead from the aqueduct up to a test station mounted above the ground surface that allows Water Agency staff to test the level of cathodic protection without excavating to the aqueduct. The anodes in the current galvanic cathodic protection system are aging and, therefore, depleted and no longer provide adequate protection against corrosion. Failing to replace the existing anodes could result in corrosion and failure of sections of the aqueducts in the future.

The objective of the proposed project is to extend the service lives of the Santa Rosa and Cotati aqueducts by installing an updated cathodic protection system, which will protect the aqueducts from corrosion.

Project Location and Description

The Proposed Project would be located at multiple locations along the Santa Rosa and Cotati aqueducts in unincorporated areas of Sonoma County and in the City of Santa Rosa. New right-of-way will be required in several locations. The Water Agency is proposing to install 29 centralized anode wells and 51 test stations along these aqueducts (Figure 1). Each anode well would require a construction footprint of approximately 40 feet by 100 feet and would include the installation of appurtenances with a footprint measuring two feet by three feet and a well measuring one foot in diameter and 250 feet deep would also be included at each location. Each test station would require a construction footprint of approximately 30 feet by 50 feet and would include permanent facilities measuring approximately two feet by two feet.

Operation and Maintenance

The Water Agency will monitor the wells and test stations up to six times per year for the first two years to ensure that they are operating properly. Once the system has been installed, tested, and is fully operational, the wells and test stations will be tested once per year. Testing will involve taking voltage and amperage readings at the test stations and rectifiers and verifying that the rectifiers are operating properly.

Vegetation maintenance would also be necessary at each anode well, test station, and at various locations along the Santa Rosa and Cotati aqueducts. Three known locations for maintenance activities are included in Figure 1. Vegetation maintenance would be required along the aqueducts to ensure continued access and prevent damage to the aqueducts from tree roots.

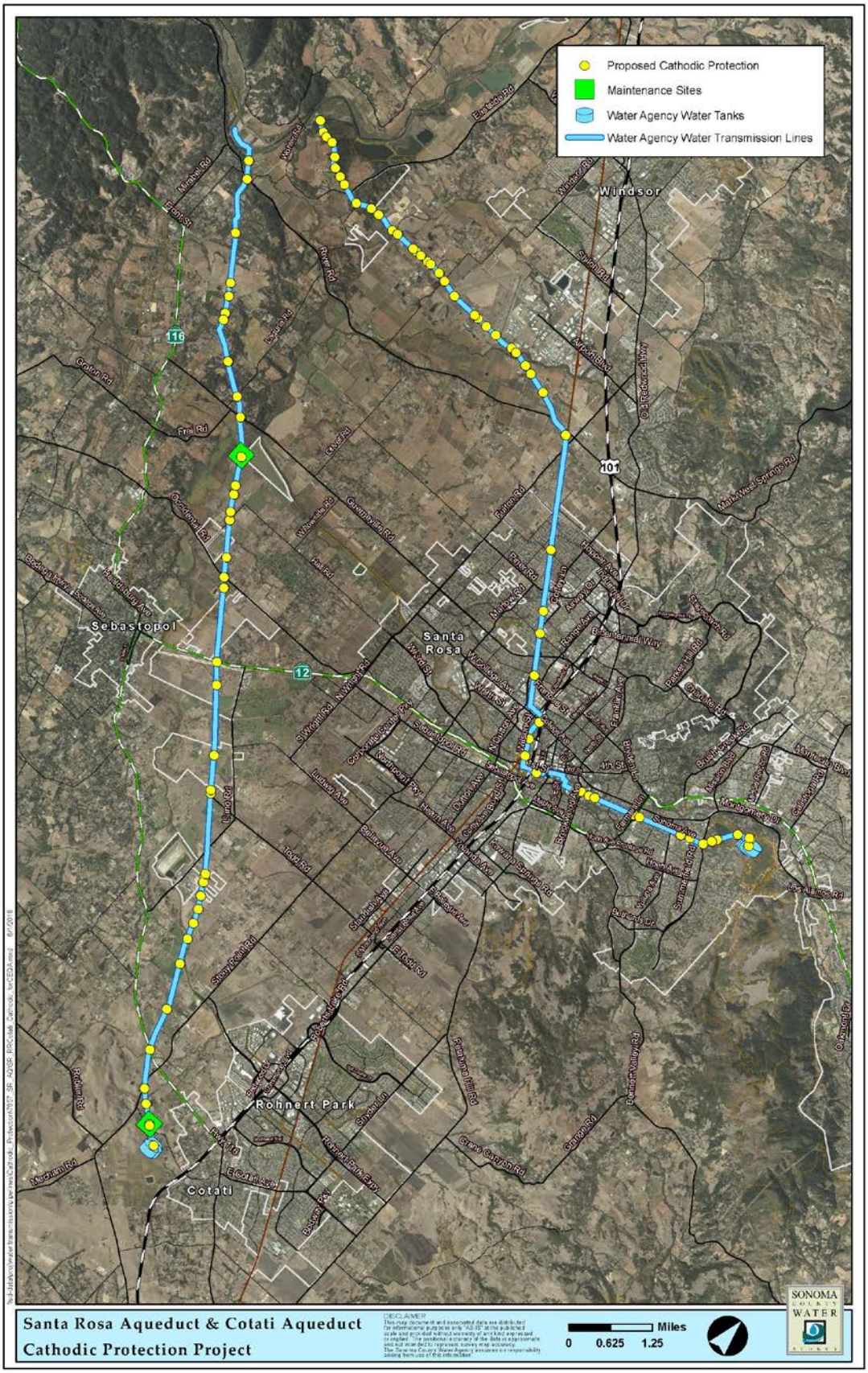


Figure 1. Proposed Project Area, Including Locations of the Existing Santa Rosa and Cotati Aqueducts

Todd Road Aqueduct Improvements

The Water Agency's existing pump station, located adjacent to Todd Road, west of Llano Road (Figure 2), includes a portion of the Cotati Aqueduct that requires reinforcement at its joints. Work would take place adjacent to the existing production well and control building and would require excavation of 10-foot by 10-foot pits to unearth the pipeline and stockpiling of soil during welding activities.

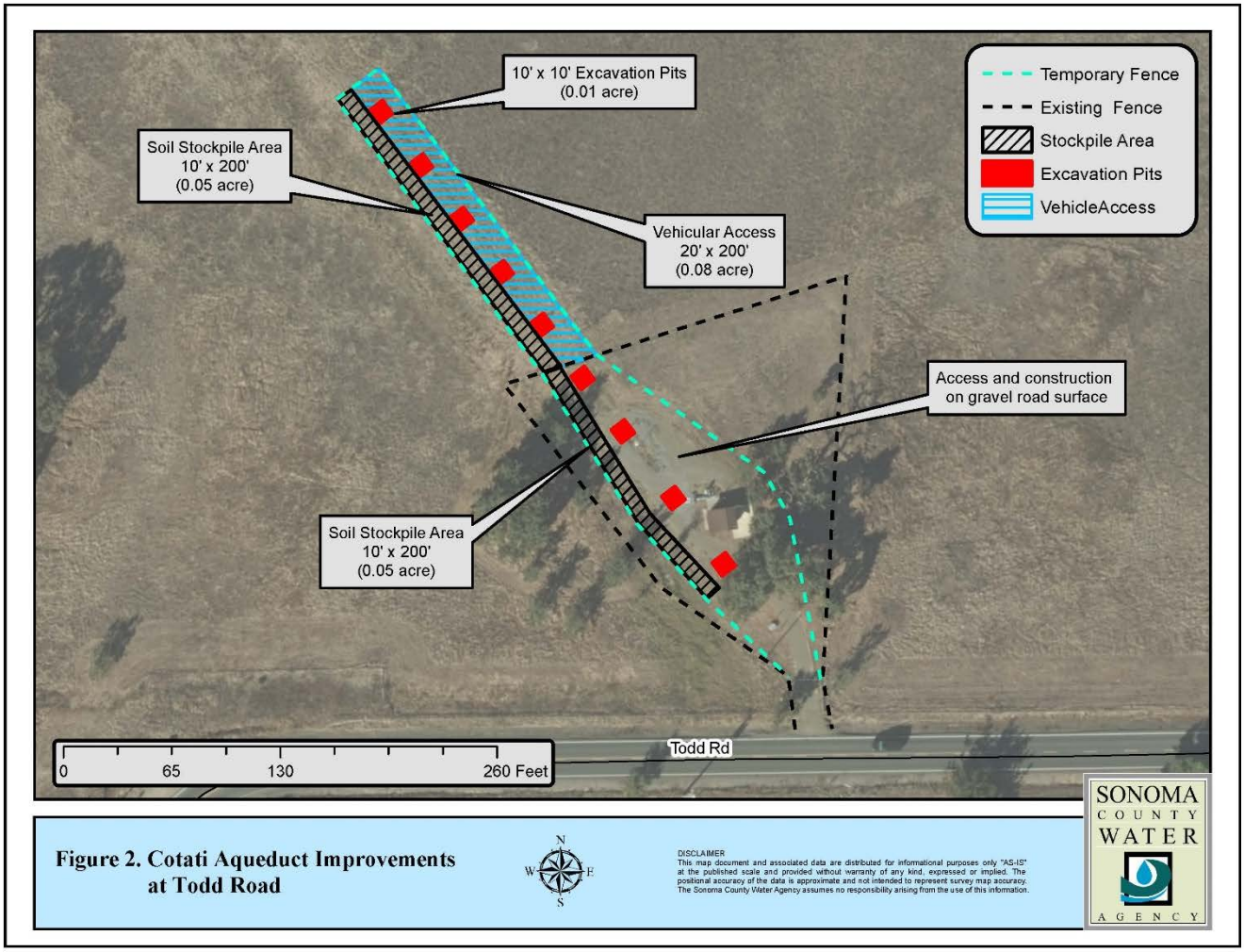


Figure 2. Cotati Aqueduct Improvements at Todd Road

Issues to be Addressed in the Initial Study

In accordance with CEQA, the Initial Study will evaluate the potential environmental impacts, either individually or cumulatively, associated with the construction, operation, and maintenance of the Proposed Project. Areas of analysis may include: Aesthetics; Agricultural and Forest Resources; Air Quality; Biological Resources; Cultural Resources; 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 and Traffic; Tribal Cultural Resources; and Utilities and Service Systems. Where feasible, mitigation measures will be proposed to avoid or reduce impacts. Areas of analysis may be changed based on comments received from responsible agencies and the public during the NOP scoping period. Decision-makers,

responsible and trustee agencies, and interested persons will also have an opportunity to comment on the applicable CEQA document, as determined by the Initial Study, after it is circulated for public review.

Public Comment Period for this Notice of Preparation

Due to the time limits mandated by State law, responses must be sent no later than 5:00 p.m. on August 10, 2018. Please include a name, address, and telephone number, and email address of a contact person for all future correspondence on this subject. Comments may be submitted electronically to Anne.Crealock@scwa.ca.gov or mailed to:

Sonoma County Water Agency
Attn: Anne Crealock
404 Aviation Boulevard
Santa Rosa, CA 95403

Documents or files related to the Proposed Project are available for review online at http://www.scwa.ca.gov/environmental-documents/ or at the Water Agency's administrative office at 404 Aviation Boulevard, Santa Rosa, California, 95403.

If you have any questions regarding this NOP, or if you wish to update information on our mailing list, please contact Anne Crealock at 707-547-1948 or Anne.Crealock@scwa.ca.gov

APPENDIX H
NOTICE OF AVAILABILITY / NOTICE OF 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 AQUEDUCT AND RUSSIAN RIVER TO COTATI AQUEDUCT CATHODIC PROTECTION PROJECT

Posted: September 28, 2021

Public Review Period: September 29, 2021 to October 28, 2021

The Sonoma County Water Agency (Sonoma Water) is the Lead Agency under the California Environmental Quality Act (CEQA) for the proposed Santa Rosa Aqueduct and Russian River to Cotati Aqueduct Cathodic Protection Project (Proposed Project). Sonoma Water has prepared an Initial Study and Mitigated Negative Declaration (IS/MND) for the project in accordance with the California Environmental Quality Act (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 would be located within unincorporated areas of Sonoma County and the City of Santa Rosa, California at intervals along the Santa Rosa and Russian River to Cotati aqueducts. Locations of Proposed Project components start approximately 4 miles southwest of downtown Windsor and end approximately 4.5 miles north of Petaluma and are shown in Figure 1 below. Additional location information is available in the IS/MND.

Project Description: Sonoma Water owns, operates, and maintains a 48-inch diameter concrete mortar lined steel water supply pipeline (the Russian River to Cotati Aqueduct) and a 42-inch steel water supply pipeline (the Santa Rosa Aqueduct) that provide water from Sonoma Water's production facility to southern parts of portions of central, southern, and eastern Sonoma County. The Russian River to Cotati and Santa Rosa aqueducts provide essential water service to approximately 600,000 residents and businesses within the Sonoma Water's service area. The Proposed Project would include the construction of a total of 31 Cathodic Protection Stations and 49 Test Stations at intervals along the Santa Rosa and Russian River to Cotati aqueducts; vegetation maintenance activities associated with both aqueducts; and vegetation management at one location on the Petaluma Aqueduct. The Proposed Project is needed because the existing corrosion protection systems along the aqueducts are in need of replacement. Failing to replace the existing system components could result in corrosion and failure of portions of the aqueducts in the future.

Materials: A copy of the IS/MND and supporting materials are available at the Sonoma Water administrative office at 404 Aviation Blvd., Santa Rosa, CA. 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 September 29, 2021 to October 28, 2021. 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 pm on October 28, 2021. Written comments may be addressed to: Candace Messner, Environmental Specialist, Sonoma Water, 404 Aviation Blvd., Santa Rosa, CA 95403-9019; or emailed to candace.messner@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 am on December 14, 2021.** Comments submitted during the Initial Study review period will be included in our report to the Board of Directors.

In accordance with AB 361 (Government Code § 54953(e)(3)) in response to the coronavirus pandemic, Board of Directors meetings may be held virtually or in a dual format with on-site modifications. Public comment on the Proposed Project may be made live during the virtual meeting or live, in person, in the Board Chambers located at 575 Administration Drive, Room 102A, Santa Rosa, CA. For information on participation, please review the agenda for the Board meeting of December 14, 2021 using the following link: https://sonoma-county.legistar.com/Calendar.aspx.

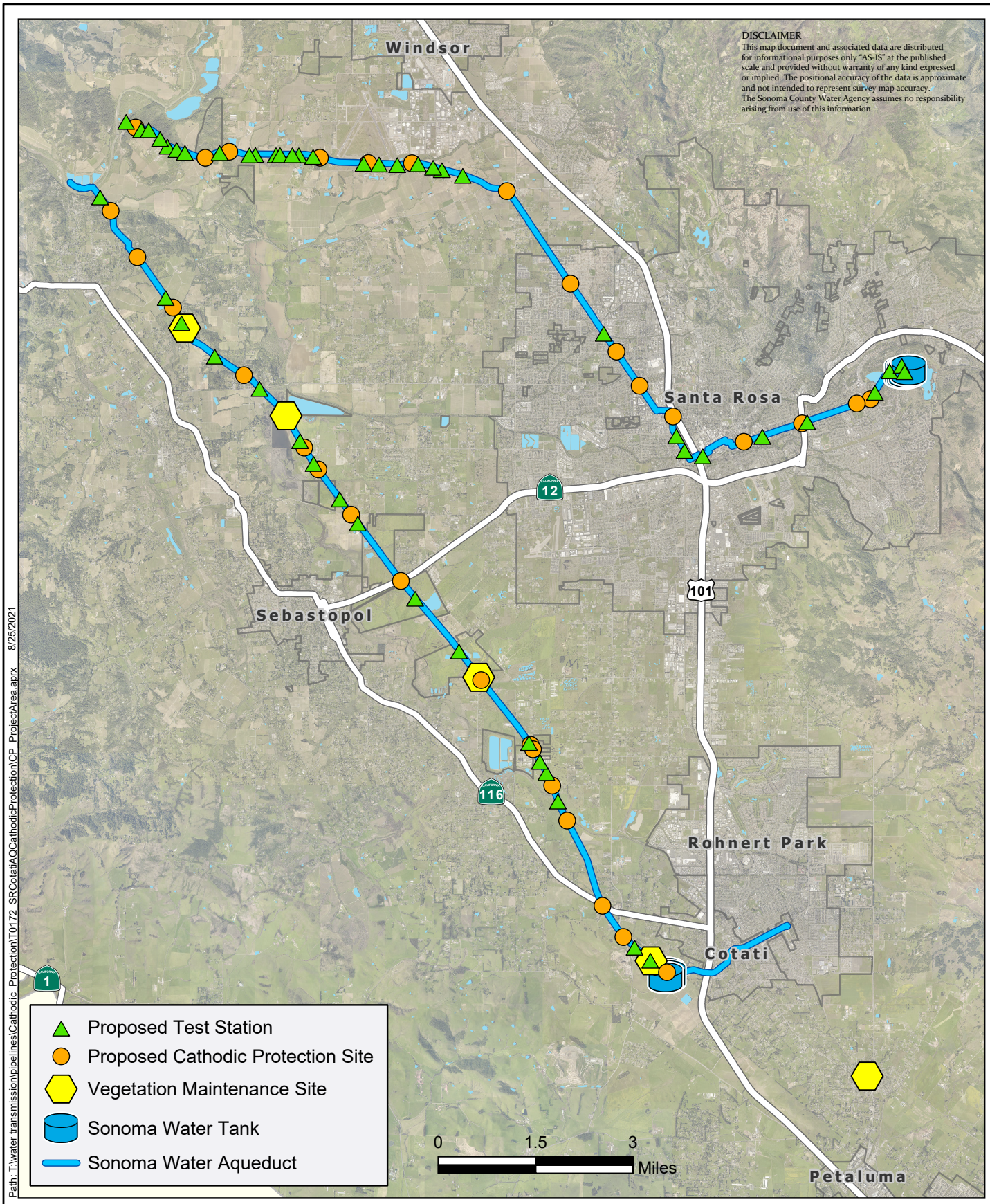


Figure 1. Santa Rosa Aqueduct and Russian River to Cotati Aqueduct Cathodic Protection Project.

Sonoma Water