FINAL
SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT/INITIAL STUDY
MARYSVILLE RING LEVEE
PHASES 2B AND 3 UTILITY RELOCATION

YUBA RIVER BASIN, CALIFORNIA

February 2021

US Army Corps of Engineers
Sacramento District

State of California Central Valley
Flood Protection Board

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ACRONYMS & ABBREVIATIONS

AB	Assembly Bill
APE	Area of Potential Effects
BMPs	Best Management Practices
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAR	Coordination Act Report
CCAA	California Clean Air Act
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CVFPB	Central Valley Flood Protection Board
CVRWQCB	Central Valley Regional Water Quality Control Board
CWA	Clean Water Act
DDR	Design Documentation Report
EA	Environmental Assessment
EA/IS	Environmental Assessment/Initial Study
ECOS	Environmental Conservation Online System
EDR	Engineering Document Report
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
ESA	Environmental Site Assessment
ESA	Endangered Species Act
EO	Executive Order
FONSI	Finding of No Significant Impact
FRAQMD	Feather River Air Quality Management District
GGS	Giant Garter Snake
GHG	Greenhouse Gases
GRR	General Reevaluation Report
IPaC	Information, Planning, and Consultation System
IS	Initial Study
LESA	Land Evaluation and Site Assessment
MLD	Marysville Levee District
MND	Mitigated Negative Declaration
MOA	Memorandum of Agreement
MRL	Marysville Ring Levee
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards

NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NO_2	Nitrogen Dioxide
NO_X	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
O_3	Ozone
OHWM	Ordinary High Water Mark
O&M	Operation and Maintenance
PPA	Project Partnership Agreement
PG&E	Pacific Gas and Electric Company
PM2.5	Fine Particulate Matter
PM10	Particulate Matter (Less than 10 Microns in Diameter)
ROG	Reactive Organic Gases
ROW	Right-Of-Way
SEA	Supplemental Environmental Assessment
SEA/IS	Supplemental Environmental Assessment/Initial Study
SHPO	State Historic Preservation Officer
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMND	Supplemental Mitigated Negative Declaration
SO_2	Sulfur Dioxide
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
UPRR	Union Pacific Railroad
USACE	U.S. Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
VELB	Valley Elderberry Longhorn Beetle
WRDA	Water Resources Development Act

1.0 PURPOSE AND NEED FOR THE ACTION

1.1 Introduction

Pursuant to the National Environmental Policy Act of 1969 (NEPA) and the California Environmental Quality Act of 1970 (CEQA), as amended, this Supplemental Environmental Assessment (SEA)/Initial Study (IS) has been prepared to update, discuss, and disclose potential effects, beneficial or adverse, that may result from proposed utility relocations associated with Phases 2B and 3 of the Marysville Ring Levee Project (MRL Project). Relocation of utilities is required in order to construct the authorized levee improvements in Phases 2B and 3 of the MRL Project. The U.S. Army Corps of Engineers (USACE) is the lead agency under NEPA. The Central Valley Flood Protection Board (CVFPB) is the lead agency under CEQA.

In April 2010, USACE published the Marysville Ring Levee, Yuba River Basin, California Final Environmental Assessment/Initial Study (2010 EA/IS). The 2010 EA/IS described the direct and indirect impacts expected to occur as a result of the levee improvements. The 2010 EA/IS supplemented the Yuba River Basin Investigation Environmental Impact Statement (EIS) and Environmental Impact Report (EIR), dated April 1998 (1998 EIS/EIR). In June 2019, USACE finalized a SEA/IS for Phases 2B and 3 of the MRL project (2019 SEA/IS). The 2019 SEA/IS described the changes needed to authorized Project features following development of detailed designs for Phase 2B and 3, and the direct and indirect impacts associated with these design changes. This 2020 SEA/IS assesses the direct and indirect impacts associated with the utility relocation activities in the MRL Project that were not previously described in detail. The MRL Project is a cooperative effort between USACE, the State of California, acting by and through the CVFPB, and the Marysville Levee District (MLD).

1.1.1 Project Authorization

The Yuba River Basin, California Project ("Authorized Project") was authorized for construction in the Water Resources Development Act of 1998, Pub. L. 106-53, § 101(a)(10), 112 Stat. 269, 275 (hereinafter "WRDA 1999"), as amended by the Water Resources Development Act of 2007, Pub. L. No. 110-114, § 3041, 121 Stat. 1041, 1116 (hereinafter "WRDA 2007"), and consists of three reaches: Reach 1 (Linda/Olivehurst), Reach 2 (Best Slough/Lower RD 784), and Reach 3 (Marysville).

A General Reevaluation of the Authorized Project was initiated to re-assess the project for new under-seepage criteria, and a General Reevaluation Report (GRR) was being prepared. Prior to completion of the GRR, local interests began making in-kind contributions toward their cost-share obligations, constructing improvements to the Yuba, Feather and Bear Rivers and Western Pacific Interceptor Canal levees in Reaches 1 and 2. During post-authorization studies, Reach 3, the MRL Project, was analyzed in the 2010 EA/IS and approved for construction as a separable element of the Authorized Project. An Engineering Documentation Report (EDR) was completed in April 2010 which found that, although design changes were necessary, they did not constitute a change in scope, and the MRL Project was approved to proceed to construction as a separable element of the Authorized Project. As a result, a Project

Partnership Agreement (PPA) was executed in 2010 and federal construction of the MRL Project commenced in 2010.

In order for the CVFPB to apply credit for advance work completed in Reach 1 towards the non-Federal cost share of the Marysville Ring Levee element of the Authorized Project, a Post Authorization Documentation Report was completed and approved in December 2012, a subsequent Integral Determination Report was completed and approved in February 2014, and the MRL PPA was amended on March 17, 2017 to include Reach 1 within the scope of the MRL Project.

1.1.2 Marysville Ring Levee Project Location and Background

The City of Marysville is located in Yuba County approximately 50 miles north of Sacramento, California. The City is bordered by Yuba River to the south, Jack Slough to the north and Feather River to the West (Figure 1). The MRL surrounds and protects the city from flooding from these three water sources. The MRL consists of 7.5 miles of levee ranging in height from 17 to 28 feet. The 2010 MRL EDR and 2010 EA/IS addressed the engineering and environmental aspects of the proposed levee improvements for the entire Marysville flood protection system. These levee improvements address under-seepage, through-seepage, embankment slope stability, utility penetrations, constructability, settlement and geometrical corrections to the levee embankment. The 2010 EA/IS recommended and analyzed implementation of these improvements over multiple phases. As a result, the MRL Project activities were initially divided into Phases 1 through 4.

After development of the 2010 EDR, Phase 2 was further sub-divided into 2A, 2B, and 2C, to better facilitate design and construction (Figure 2). Phase 1 was constructed in 2011 and portions of Phase 4 were constructed in 2016 and 2017. Construction of Phase 2A-North was completed in fall 2018. Phase 2A-South construction was completed in fall 2019. Phase 2C and a portion of Phase 3 is currently in active construction for summer and fall 2020, with additional construction in Phases 2B and 3 scheduled for 2021 through 2023 (USACE 2019).

Design Documentation Reports and supplemental environmental documentation have been prepared, as appropriate, and utilized to document changes in design, costs, and environmental effects since completion of the 2010 EDR and the 2010 EA/IS. Since release of the 2010 EA/IS, additional SEA/IS documents have been completed for Phases 2A-South and 2C, and for design refinements in Phases 2B and 3.

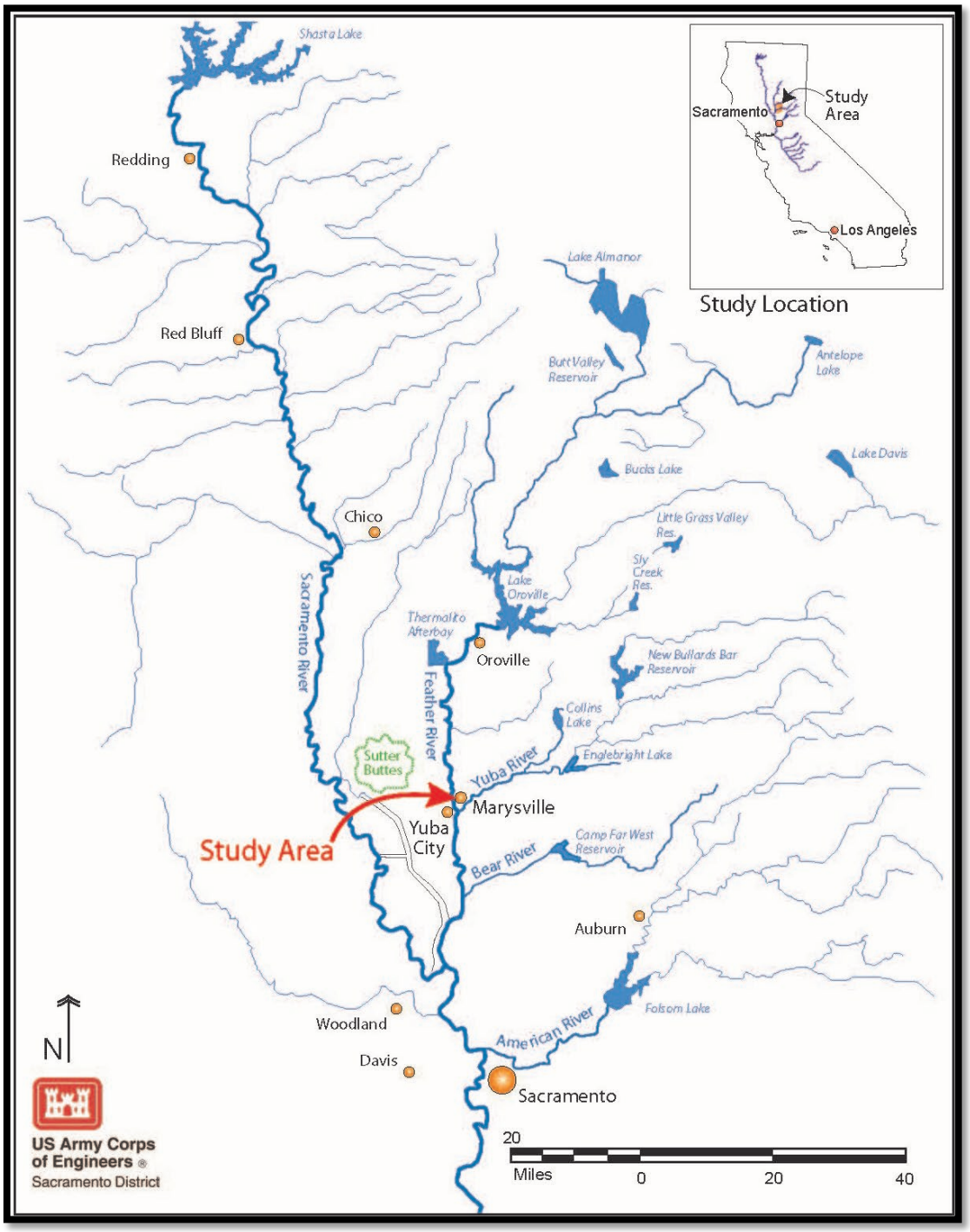

Figure 1. **MRL Project (Vicinity) Map.**

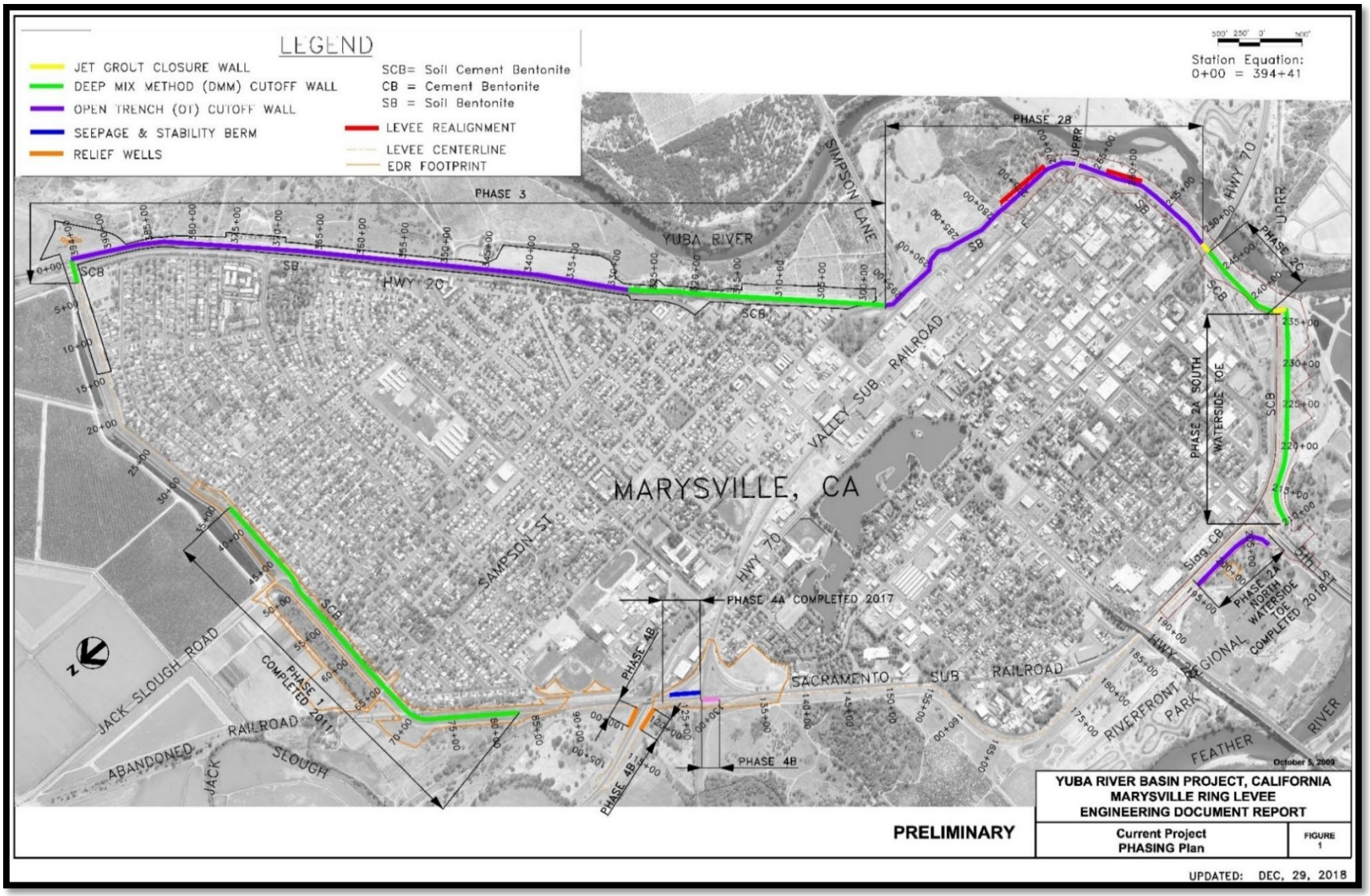

Figure 2. MRL Project Phasing

1.2 Purpose and Need for the Proposed Action

The purpose of the MRL Project is to reduce flood risk to the City of Marysville. To accomplish this, levees are being improved in phases to reduce the risk of levee failure. Subsequent to authorization of the MRL Project levee improvements, design refinements were proposed for Phases 2B and 3 and evaluated in the 2019 SEA/IS. Construction of Phases 2B and 3 will require relocation of numerous Pacific Gas and Electric Company (PG&E) gas and electric utilities to locations outside of the Phases 2B and 3 project and construction footprints. Relocation of these utilities is integral to implementation of the authorized levee improvements, including the Phases 2B and 3 design refinements.

1.3 Need for Supplemental Environmental Documentation

Utility relocations, including PG&E utilities, were analyzed and described in the 2019 SEA/IS for the MRL Phases 2B and 3 Project (USACE 2019). Since that document was finalized and a Finding of No Significant Impact (FONSI) signed, new information about the number and location of the PG&E utilities that require relocation has become available. Based upon the new information we have determined that some utilities requiring relocation fall outside of the MRL Phases 2B and 3 Project Area (Project Area) that was previously evaluated and described in the 2019 SEA/IS. Also, some additional relocations will be required beyond what was reported in the 2019 SEA/IS. This current SEA/IS describes the proposed relocation of PG&E utilities and evaluates the changes in the proposed action and in the direct, indirect, and cumulative impacts of those changes (if any) since completion of the 2019 SEA/IS.

The Council on Environmental Quality regulations specify that supplements are required if: (i) USACE makes substantial changes in the Proposed Action that are relevant to environmental concerns; or (ii) there are significant new circumstances or information relevant to environmental concerns and bearing on the Proposed Action or its impacts. CEQA specifies that a supplemental document is necessary when (i) any of the conditions for a subsequent document are met (2018 CEQA Guidelines Section 15162) and, (ii) only minor additions or changes would be necessary to make the previous environmental document adequately apply to the project in the changed situation.

This SEA/IS is in compliance with NEPA (42 U.S.C. § 4321 *et seq*.) and CEQA (California Public Resources Code § 21000 *et seq*.) and provides full disclosure of the effects of the proposed action.

1.4 Previous Environmental Documentation and Scope of this SEA/IS

Previous joint NEPA/CEQA documentation (USACE 2010; USACE 2019) described the Affected Environment in detail and evaluated the potential effects on resources of concern. For most resources, the conclusions of those previous effects analyses remain valid since the scope has remained the same, and because Federal and State laws have not changed in a manner that would require re-evaluation of these resources. Those environmental effects are summarized in Section 3 of both the 2010 MRL EA/IS and 2019 MRL SEA/IS (USACE 2010; USACE 2019). Sections 3.2.1 through 3.2.6 of the 2010 EA/IS and Sections 3.1.2, 3.2.6, and 3.2.9 of the 2019 SEA/IS, have not changed and are incorporated by reference in this this Utility Relocation supplement.

Information about some resources has changed since publication of the 2010 and 2019

NEPA/CEQA documents. These changes to affected resources, as well as updates to the analysis of project effects to those resources, are discussed in more detail in the following sections of this SEA/IS: 3.2.1 Public Utilities; 3.2.2 Special Status Species; 3.2.3 Air Quality; 3.2.4 Vegetation and Wildlife; 3.2.5 Cultural Resources; and 3.2.6 Agricultural and Prime and Unique Farmlands.

This SEA/IS is being completed under the 1978 CEQ regulations (40 CFR Parts 1500-1508) because it was underway before publication of the July 2020 final rule updating the CEQ regulations for implementing NEPA.

1.5 Decisions to Be Made

The District Engineer, Commander of the Sacramento District, must decide whether the Proposed Action qualifies for a mitigated Finding of No Significant Impact (FONSI) under NEPA or whether an Environmental Impact Statement must be prepared. In addition, the CVFPB must decide if the Proposed Action qualifies for a Supplemental Mitigated Negative Declaration (SMND) under CEQA or whether an Environmental Impact Report must be prepared.

1.6 Laws, Regulations, and Policies

1.6.1 Federal Requirements

Bald and Golden Eagle Protection Act of 1940, as amended, 16 U.S.C. § 668-668c, *et seq*. *Full Compliance.* This Act prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald eagles, including their parts, nests, or eggs. The Act provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof." The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." Preconstruction surveys would be conducted either by a qualified Corps biologist or a USFWS certified biologist. If any eagle nests are sighted in or near the Project Area, an appropriately sized protective buffer would be established in coordination with USFWS and the area would be avoided until the nests were no longer active.

Clean Air Act of 1972, as amended, 42 U.S.C. § 7401, *et seq*. *Full Compliance*. Section 3.2.3 of this document discusses the effects of the Proposed Action on local and regional air quality. The analysis indicates that the expected emissions for the Proposed Action would not exceed federal *de minimis* thresholds, therefore, the activities associated with the Proposed Action are compliant with the Federal Clean Air Act. However, emission estimates are anticipated to exceed local (FRAQMD) thresholds for PM_{10}. Mitigation measures to reduce emissions are discussed in Section 3.2.3.4 and emissions estimates for the Project are included in Appendix A.

Clean Water Act of 1972, as amended, 33 U.S.C. § 1251, *et seq*. *Full Compliance.* The CWA is the primary Federal law governing water pollution. It established the basic structure for regulating discharges of pollutants into waters of the U.S. and gives U.S. Environmental Protection Agency authority to implement pollution control programs. In some states, including California, USEPA has delegated authority to regulate the CWA to State agencies. The Proposed Action is not expected to have impacts on water quality.

Section 303. Section 303 of the CWA requires states to adopt water quality standards

that "consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses." See Section 1.6.2 State of California Requirements, California Water Code.

Section 401. Section 401 of the CWA regulates the water quality for any activity that may result in discharge into navigable waters; these actions must not violate Federal water quality standards. In California, the State Water Resources Control Board (SWRCB) and Central Valley RWQCB administer Section 401 and either issue or deny water quality certifications that typically include project-specific requirements established by the RWQCB. The Yuba River is located to the east of Phases 2B and 3 and flows downstream to the north. The Ordinary High Water Mark (OHWM) on the right bank of the river, was previously delineated by USACE Regulatory Division and was identified as being located at approximately fifty vertical feet from substrate. The Project would incorporate a work exclusion buffer extending 25 feet landward (horizontal) from the OHWM delineations. No utility work activities associated with the levee improvements would occur within the work exclusion buffer or below the OHWM. There would be no discharge to navigable waters and no affect to water quality, therefore, a 401 Water Quality Certification is not required.

Section 402. National Pollutant Discharge Elimination System (NPDES) permit. In California this Federal program has been delegated to the State of California for implementation through the SWRCB and the RWQCBs. The NPDES Permit Program regulates point sources that discharge pollutants into waters of the United States. Construction that involves clearing, grading, and excavating activities that disturb one acre or more, including smaller sites in a larger common plan of development or sale must obtain coverage under a General NPDES permit (Construction General Permit) for their stormwater discharges. A project-specific Stormwater Pollution Prevention Plan (SWPPP) is required for NPDES permit coverage for stormwater discharges. Since the Project would disturb more than one acre of land and involve possible storm water discharge to surface waters, PG&E would be required to obtain a NPDES permit from the CVRWQCB. As part of the permit, PG&E would be required to prepare a SWPPP identifying Best Management Practices (BMPs) to be used in order to avoid or minimize any adverse effects on surface waters.

Section 404. Section 404 of the CWA regulates discharge of fill material into waters of the United States. When USACE is the action agency it complies with the substantive requirements of the CWA but does not permit itself. The Project would not discharge dredge or fill material into waters of the United States, therefore, a Clean Water Act Section 404(b)(1) evaluation is not required.

Fish and Wildlife Coordination Act of 1958, as amended, 16 U.S.C. § 661, *et seq*.
Partial Compliance This Act requires that federal agencies consult with the U.S. Fish and Wildlife Service, the National Marine Fisheries Service and State wildlife agencies for activities that affect, control or modify waters of any stream or bodies of water, in order to minimize the adverse impacts of such actions on fish and wildlife resources and habitat. USACE has coordinated with the USFWS to determine the effects of the Project on vegetation and wildlife. The USFWS previously prepared a Coordination Act Report (CAR) to address the effects on these resources for the MRL Project in the 2010 EA/IS. A final Supplemental CAR was also prepared by USFWS for Phases 2B and 3 Project on March 27, 2019. Another draft Supplemental CAR is in preparation by USFWS to include evaluation of the additional utility work associated with the Phases 2B and 3 levee improvements (anticipated March

2021). This document would contain additional recommendations to mitigate any adverse impacts to fish and wildlife resources and their habitat resulting from the Proposed Action and would be included as an Appendix (Appendix B) to the Final SEA/IS. USACE has discussed with USFWS the anticipated recommendations to be included in a supplemental CAR. USACE will incorporate all recommendations into the proposed action to mitigate for the additional loss of vegetation.

Endangered Species Act of 1973, as amended, 16 U.S.C. § 1531, *et seq*. *Partial Compliance* This Act requires federal agencies, in consultation with the U.S. Fish and Wildlife Service and/or the National Marine Fisheries Service (NMFS), to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat. An updated list of threatened and endangered species that may be affected by the Project was obtained from the USFWS website on July 29, 2020 (Appendix C). The updated list indicated there was no change to the species list from what was previously analyzed in the Phases 2B and 3 SEA/IS. Two federally-listed species have the potential to be affected by the Project—the valley elderberry longhorn beetle (VELB) and giant garter snake (GGS). USACE formally consulted with USFWS for potential project effects on the VELB and GGS and received a Biological Opinion (BO) dated April 13, 2010. USACE reinitiated formal Section 7 Endangered Species Act (ESA) consultation with USFWS and received an amended BO, dated March 13, 2019. The updated Proposed Action of PG&E utility relocations would result in additional effects (i.e., beyond those addressed in the 2010 and 2019 consultations) on the VELB; consultation has been reinitiated with USFWS. Following the completion of the ESA consultation with USFWS, the subsequent amended BO will be included as an Appendix to the Final SEA/IS (Appendix D). All terms and conditions resulting from the amended BO will be implemented by USACE and its partners. Additionally, USACE, as the action agency, has made the determination that there would be no effect on any listed fish species under the jurisdiction of the NMFS because there would be no in-water work. As a result, no formal consultation is required with NMFS under Section 7 of the Endangered Species Act.

Executive Order 11988, Flood Plains Management. *Full Compliance.* This order directs all Federal agencies approving or implementing a project to consider the effects that project may have on flood plains and flood risks. The levee improvements associated with Phases 2B and 3 would reduce flooding to parts of the flood plain that are already urbanized, specifically, the City of Marysville. Phases 2B and 3 would also improve existing levees that are part of a ring levee that immediately surrounds the city. No new or undeveloped flood plains would be added to the area protected by the ring levee; thus the Proposed Action would not induce or encourage development of flood plains in the Project Area.

Executive Order 11990, Protection of Wetlands. *Full Compliance*. This order directs USACE to provide leadership and take action to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands in implementing civil works. A final field survey was completed on April 23, 2019 to ensure that all potentially affected aquatic resources were identified. Approximately 1.04 acres of potentially jurisdictional, seasonal emergent wetlands were previously identified in the Project Area. In most areas, a 25-foot work exclusion buffer would be implemented around identified wetland areas. Potential adverse effects on water quality from work-related runoff would be avoided through implementation of the BMPs outlined in Section 3.1.3 and any

requirements of the SWPPP and NPDES permit. The Proposed Action would not affect beneficial uses.

Invasive Species and Executive Order 13751, Safeguarding the Nation from the Impacts of Invasive Species. *Full Compliance.* BMPs would be implemented during construction and operations phases to reduce the risk of introducing invasive species to the Project Area or transporting such species from the Project Area. California Invasive Plant Council (https://www.cal-ipc.org) identifies BMPs suitable for the Project Area. The California Sudden Oak Mortality Task Force (http://www.suddenoakdeath.org) provides current information on Sudden Oak Death (SOD) and BMPs relevant to construction phase project work, including oak tree removal and transport protocols and planting and maintenance guidelines. California Department of Fish and Wildlife's Invasive Species Program (https://www.wildlife.ca.gov/conservation/invasives) provides information on invasive wildlife and has produced the California Aquatic Invasive Species Management Plan. These state resources and the National Invasive Species Council (https://www.doi.gov/invasivespecies) would be consulted for the most current BMPs for construction- and operations-phase work. Applicable cost-efficient BMPs would be incorporated into work activity requirements.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended, 42 U.S.C. § 9601, *et seq*. *Full Compliance*. In 2010, USACE completed a Hazardous, Toxic and Radiological Waste Environmental Site Assessment (2010 ESA) for the MRL Project. The report is included in Appendix G of the 2010 EA/IS. This report concluded that "there are no recognized environmental conditions within the 200-foot corridor along the levees." Subsequently, to update the assessment performed in 2010, an ESA was conducted on August 28, 2017, for Phase 2B and November 2018, for Phase 3 and included in Appendix E of the 2019 SEA/IS.

Uniform Relocation Assistance and Real Property Acquisition Act (Uniform Act), 42 U.S.C. § 61 *et seq*. *Full Compliance.* It is anticipated that there would not be temporary or permanent displacements of persons, dwellings and/or businesses, as those terms are defined in the Uniform Act, as a result of the Proposed Action. However, individuals, residences, tenancies, and businesses located in, and/or living near or adjacent to the Project Footprint as a result of the Proposed Action could experience some environmental effects, particularly during levee construction. These effects, together with measures to mitigate adverse effects, were identified and addressed in Sections 3.2.7, 3.3.2, 3.3.6, 3.3.7, and 3.3.8 of the 2010 EA/IS, and in Sections 3.1.2, 3.2.1, 3.2.6, 3.2.8, and 3.2.9 of the 2019 SEA/IS.

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. *Full Compliance.* There is a presence of minority and low-income populations within the Project Area. Adverse environmental effects that may occur as a consequence of the Proposed Action, together with measures to mitigate adverse effects are identified and addressed in Sections 3.2.7, 3.3.2, 3.3.6, 3.3.7, and 3.3.8 of the 2010 EA/IS and in Sections 3.1.2, 3.2.1, 3.2.6, 3.2.8, and 3.2.9 of the 2019 SEA/IS. Post-construction, minority and low-income populations within the Project Area would be benefited by the construction of the MRL Project as a consequence of the reduced flood risk to the entire City of Marysville.

Farmland Protection Policy Act, 7 U.S.C. § 4201 et seq. *Full Compliance*. There would be no permanent loss of prime or unique farmlands, or farmlands of statewide

importance associated with this Project. Small areas of Prime and Unique Farmland are present on the waterside of the eastern portion of the Project Area. These lands are currently in orchards. The physical features of the project would remain within the existing footprint in most areas, including where prime and unique farmlands are present. Staging areas are situated to avoid prime and unique farmlands. A paved levee service (O&M) road would be constructed on the landside of Phase 3 extending 15 feet from the toe of the levee. Levee features are also accessible from the existing, paved service road located on the crown of the levee. Although there would be no service roads located on the waterside, a 15-foot offset (flood safety easement) is necessary. The 15-foot flood safety easement may encroach onto one row of orchard trees in some places, preserving most if not all existing orchard trees. Unique Farmland and Farmland of Statewide Importance is located along the northeastern portion of the Project Area. Lands within the Project Area footprint are not farmed. Agricultural production would continue in the area at its current level after the completion of the levee improvements in the Project Area. The anticipated additional area of impact to these lands from the utility relocation work is 0.06 acres.

Magnuson-Stevens Fishery Conservation and Management Act 16 U.S.C. § 1801 *et seq*. *Full Compliance.* This legislation requires that all Federal agencies consult with National Marine Fisheries Service regarding all actions or proposed actions permitted, funded, or undertaken that may adversely affect essential fish habitat. Essential fish habitat is defined as "waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." USACE has determined that the Proposed Action would have "no effect" on federal special-status fish species and essential fish habitat.

Migratory Bird Treaty Act of 1936, as amended, 16 U.S.C. § 703 *et seq*. *Full Compliance*. The Proposed Action could result in the removal of suitable nesting habitat. To ensure the Project would not adversely affect migratory birds, preconstruction surveys by a qualified biologist would be conducted. If active nests are found in the Project Area, a protective buffer would be delineated in coordination with USFWS and/or California Department of Fish and Wildlife (CDFW) as appropriate.

National Environmental Policy Act of 1969, as amended, 42 U.S.C. § 4321, *et seq*. *Partial Compliance.* This SEA/IS is currently in partial compliance with this Act. No public comments were received on the draft SEA/IS and draft FONSI following completion of public review on 12 January, 2021. The SEA/IS has been finalized and the final FONSI will be signed by Sacramento District Commander once informal consultation with USFWS under Section 7 of the Endangered Species Act has been completed, and the California State Historic Preservation Officer (SHPO) has concurred with USACE determination of effect following completion of Section 106 consultations under the National Historic Preservation Act. The final decision will be made prior to the commencement of any PG&E utility work.

National Historic Preservation Act of 1966, as amended, 16 U.S.C. § 470, *et seq*. *Partial Compliance.* Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of a proposed undertaking on properties that have been determined to be eligible for listing in, or are listed in, the National Register of Historic Places (NRHP). USACE has concluded that there are historic properties within the Area of Potential Effects (APE). In 2010 it was determined that the Marysville Ring Levee, the Marysville Historic Commercial District and the Bok Kai Temple were located within the APE for the MRL Project, and that all three were historic properties, eligible for listing on the NRHP. The

USACE determined that the MRL Project, as proposed, would not affect the characteristics that make these historic properties eligible for listing in the NRHP, and that measures could be taken to ensure that they would not be adversely affected by the Project activities—therefore, the Corps made a finding of *no adverse effect* to historic properties for the MRL Project. A letter to the State Historic Preservation Officer (SHPO) documenting these findings was sent in January 2010.

Subsequent to the 2010 consultation on the MRL Project APE, additional historic property identification measures were undertaken. These measures include an ethnographic study, an updated cultural resources inventory and geoarchaeological subsurface testing. The Ethnography was completed in August 2017 and the additional inventory and testing was completed in March 2018. The additional measures were completed to update the cultural resource inventory and to address concerns regarding the potential for prehistoric sites within the APE, which were expressed by Native American Tribes after Section 106 consultation was complete. As a result of the additional inventory and subsurface testing, ten potential historic properties were identified. Consultation concerning these potential properties was completed in accordance with 36 CFR § 800.13, post review discoveries. Consultation under 36 CFR § 800.13 was completed with the SHPO and two interested Native American Tribes (United Auburn Indian Community and the Enterprise Rancheria-Estom Yumeka Maidu Tribe) on November 30, 2018.

USACE has not yet completed Section 106 compliance for the utility relocations in Phase 2B and 3. USACE has initiated consultation with potentially interested Native American Tribes and has completed the initial inventory efforts to identify historic properties that could be affected by the Project (36 CFR §800.4). The remaining Section 106 compliance, including completing consultation with the same potentially interested Native American Tribes to inform the identification effort is underway. Once this consultation is complete, the identification of historic properties will be complete and USACE will consult with the SHPO and Native American Tribes with interests in the Project area on the revised Area of Potential Effects (APE), identification of historic properties, and the proposed finding of effect for this action (36 CFR 800.4-5). Consultation is expected to conclude in April 2021, and it is anticipated that the finding of effect for the undertaking will remain *no adverse effect* pursuant to 36 CFR 800.5(b).

Noise Control Act of 1972, 42 U.S.C. § 4901 to 4918. *Full Compliance.* This Act establishes a national policy to promote an environment for all Americans free from noise that jeopardizes their health and welfare. Compliance with this Act is being addressed though compliance with the Yuba County Noise Ordinance and CEQA.

Most work activities associated with the Proposed Action would occur during construction exempt hours from 7:00 a.m. – 10:00 p.m., up to seven days a week. However, there would be some night work associated with the Proposed Action, as discussed in Section 2.2 and Section 3.1.1. Mitigation measures to reduce any potential effects from noise and vibration were documented in Section 3.3.8 of the 2010 EA/IS and 3.2.8 of the 2019 SEA/IS. These measures would be incorporated during work activities associated with the Proposed Action to reduce impacts to less-than-significant levels.

Wild and Scenic Rivers Act, 16 U.S.C. § 1271 *et seq*. *Full Compliance*. There are no components of the Federal Wild and Scenic River system in the Project Area.

Executive Order 13007, Indian Sacred Sites; Indian Trusts Act. *Full Compliance.* This executive order requires federal agencies to avoid adversely affecting Native American sacred sites located on federal land and to allow access to those sites for ceremonial use. The executive order applies only to sacred sites located on federal land and as such is not applicable to this Project.

Executive Order 13175, Consultation with Tribal Governments. *Partial Compliance.* This executive order applies primarily to the development of rules, policies, and guidance by federal agencies. Additionally, the executive order reaffirms the federal government's unique relationship with Native American Tribes and their rights to self-govern. The order recognizes the 1994 Presidential Memorandum committing to consultation between the federal government and tribal governments that may be affected by a federal action and that the federal government must take into account effects of tribal trust resources. This Project does not promulgate new rules, policies, or guidance; no tribal governments have indicated that this Project would affect them beyond what has been discussed pursuant to Section 106 of the NHPA; and no tribal trust land, or resources covered by treaty rights (i.e. trust resources), are affected by this Project. Section 106 consultation for this updated action has been reinitiated. The inventory and finding of effect is currently in review by the Tribes and the SHPO. No comments have been received to date. Review is scheduled to be completed on April, 2021.

1.6.2 State of California Requirements

California Clean Air Act of 1988, California Health and Safety Code § 40910, *et seq*. *Full Compliance.* Section 3.2.3 of this document discusses the effects of the Proposed Action on local and regional air quality. The Project would result in temporary, short-term effects on air quality. There would be no long-term operational emission sources other than vehicle emissions associated with routine utility inspection and maintenance. Emissions estimates associated with the Proposed Action are expected to exceed existing local thresholds of the California Clean Air Act as administered by the FRAQMD for NOx and PM_{10}, however, with implementation of mitigation measures described in Section 3.2.1.4 of the 2019 SEA/IS, emissions would be reduced to less-than-significant.

California Environmental Quality Act of 1970, California Public Resources Code § 21000-21177. *Partial Compliance.* The Central Valley Flood Protection Board (CVFPB), as the non-federal sponsor and CEQA lead agency, would undertake activities to ensure compliance with the requirements of this Act. CEQA requires the full disclosure of the environmental effects, potential mitigation, and environmental compliance of the Project. The Initial Study/Mitigated Negative Determination (IS/MND) has been made available for a 30-day public review period and any comments were considered and incorporated, as appropriate, into the Final SEA/IS prior to adoption of the MND. Adoption of this SEA/IS and mitigated FONSI/MND by the CVFPB would provide full compliance with the requirements of CEQA. The final decision will be made prior to any PG&E utility work.

California Endangered Species Act, 14 C.C.R. § 783-786.6. *Full Compliance*. This Act requires the non-federal agency to consider the potential adverse effects of a proposed action on State-listed species. A list of threatened and endangered species that may be affected within the Project Area was obtained from the California Natural Diversity Database (CNDDB) website on August 4, 2020 (Appendix C). As a joint NEPA/CEQA document, this

SEA/IS has considered potential effects of the proposed action on State-listed species and has incorporated conservation measures where appropriate. With the implementation of the listed conservation measures, no effects on State-listed species are expected.

California Native Plant Protection Act of 1977, California Fish and Game Code § 1900, *et seq*. *Full Compliance.* This Act allows the Fish and Game Commission to designate plants as rare and endangered; California Rare Plant Rank 1B constitutes the majority of taxa in the California Native Plant Society (CNPS) Inventory (CNPS 2020), with more than 1,000 plants assigned to this category of rarity. All of the plants constituting California Rare Plant Rank 1B meet the definitions of the California Endangered Species Act under the California Department of Fish and Game Code and are eligible for state listing. Impacts to these species or their habitat must be analyzed during preparation of CEQA environmental documents—as a joint NEPA/CEQA document, this SEA/IS has considered the potential effects and has provided conservation measures where appropriate.

California Water Code. **§ 303**. *Full Compliance*. The Project is located within the Central Valley RWQCB's jurisdiction. The preparation and adoption of water quality control plans, or Basin Plans, and State-wide plans, is the responsibility of the State Water Resources Control Board (SWRCB). State law requires that Basin Plans conform to policies set forth in the California Water Code beginning with Section 13000 and any State policy for water quality control. These plans are required by the California Water Code (Section 13240) and supported by the Federal CWA. Section 303 of the CWA requires states to adopt water quality standards that "consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses." According to Section 13050 of the California Water Code, Basin Plans consist of a designation or establishment for the waters within a specified area of beneficial uses to be protected and water quality objectives to protect those uses. Adherence to Basin Plan water quality objectives protects continued beneficial uses of water bodies. Because beneficial uses and corresponding water quality objectives can be defined per Federal regulations as water quality standards, the Basin Plans are regulatory references for meeting State and Federal requirements for water quality control (40 CFR 131.20). The potential effects of the Proposed Action on water quality were evaluated and discussed in Section 3.2.3 of the 2019 SEA/IS and in Section 3.1.3 of this SEA/IS. Compliance with the California Water Code would be accomplished by obtaining certifications from the Central Valley RWQCB. The project is in full compliance since all work is performed in the dry and no water used in the project would be extracted from surface waters. BMPs for preventing soil erosion would be in place throughout all project activities.

Central Valley Flood Protection Board Encroachment Permit. 23 C.C.R. § 1-3. *Full Compliance.* Under California law, no reclamation project may be started or carried out on or near the Sacramento and San Joaquin Rivers or their tributaries until plans have first been approved by the CVFPB. The CVFPB's efforts focus on controlling floodwater, reducing flood damage, protecting land from floodwater erosion that would affect project levees and controlling encroachment into flood plains and onto flood control works, such as levees, channels, and pumping plants. Proposed measures would result in beneficial impacts by reducing flood risk to the City of Marysville and would not promote indirect development within the flood plain or onto flood control works.

Banks, levees and channels of floodways along any stream, its tributaries or distributaries may not be excavated, cut, filled, obstructed or left to remain excavated during

the flood season, which is November 1 through April 15 for the Sacramento River system. The CVFPB, at prior written request of USACE, may allow work to be done during the flood season within the floodway, provided that, in the judgment of the CVFPB, forecasts for weather and river conditions are favorable.

The CVFPB is the non-federal sponsor of the MRL Project and it is CVFPB policy to not issue permits to themselves; however, board representatives on the PDT for USACE projects ensure that designs and contract specifications are in alignment with this requirement.

Assembly Bill (AB) 52, 09/2014. *Full Compliance.* The California Legislature passed Assembly Bill (AB) 52, which added provisions to the Public Resources Code regarding the evaluation of impacts on tribal cultural resources under CEQA, and consultation requirements with California Native American Tribes. In particular, AB 52 requires lead agencies to analyze project impacts on "tribal cultural resources," separately from archaeological resources (PRC § 21074; 21083.09). The Bill defines "tribal cultural resources" in a new section of the PRC Section 21074. AB 52 also requires lead agencies to engage in additional consultation procedures with respect to California Native American Tribes (PRC § 21080.3.1, 21080.3.2, 21082.3). Finally, AB 52 requires the Office of Planning and Research to update Appendix G of the CEQA Guidelines by July 1, 2016 to provide sample questions regarding impacts to tribal cultural resources (PRC § 21083.09).

While compliance with AB 52 is not required due to the MRL Project authorization occurring prior to AB 52 being legalized, consultation and coordination with California Native American Tribes is being met through compliance with federal laws and regulations and the California Natural Resources Agency's Tribal Consultation Policy.

Assembly Bill (AB) 1473, 07/2002. *Full Compliance.* This order directs the California Air Resources Board to establish fuel standards for non-commercial vehicles that would provide the maximum feasible reduction of GHGs. The aim is to reduce GHG emissions from non-commercial vehicle travel. This project will not alter non-commercial vehicle travel.

Assembly Bill (AB) 32, 09/2006. Executive Order (EO) S-3-05, 06/2005. *Full Compliance.* This order establishes statewide GHG reduction targets and biennial science assessment reporting on climate change impacts and adaptation and progress toward meeting GHG reduction goals. Projects are required to be consistent with statewide GHG reduction plan and reports would provide information for climate change adaptation analysis. The GHG emissions from the proposed utilities relocation action would remain under established targets as discussed in Section 3.2.1 of this SEA/IS.

California Fish and Game Code. § 1600 *Full Compliance*. CDFW provides protection from take for fish and game habitat under Fish and Game Code Section 1600. Since USACE is the Federal lead for the Project, the CDFW considers it to be a Federal project, exempt from this State requirement under Section 1602 regulations.

California Land Conservation Act of 1965 (Williamson Act). *Full Compliance.* Yuba County does not participate in the Williamson Act program; therefore, no Williamson Act lands would be affected by the Project.

Executive Order (EO) B-30-15, 04/2015. *Full Compliance.* This order establishes a new interim greenhouse gas (GHG) reduction target to reduce GHGs to 40% below 1990 levels by 2030 in order to meet the target of reducing GHGs to 80% below 1990 levels by 2050. The

Project would reduce overall GHG emissions through compliance with FRAQMD recommended emission control measures (See Section 3.2.1 of this SEA/IS).

Executive Order (EO) B-10-11, 09/2011. *Full Compliance*. Directs state agencies to encourage effective cooperation, collaboration, communication, and consultation with Tribes concerning the development of legislation, regulations, rules, and policies on matters that may affect Tribes in California. In November 2012 the Natural Resources Agency adopted a Final Tribal Consultation Policy that implemented the Executive Order, including but not limited to: recognition of tribal sovereignty over their territories and members, acknowledgment that tribes and tribal communities possess distinct cultural, spiritual, environmental, economic and public health interests, and unique traditional cultural knowledge about California resources, recognition of tribal interests, and defining effective consultation as open, inclusive, regular, collaborative and implemented in a respectful manner, sharing responsibility, and providing free exchange of information concerning Natural Resources Agency regulations, rules, policies, programs, projects, plans, property decisions, and activities. Please see Section 3.2.6 for additional information. The Project has achieved compliance by implementing the California Natural Resource Agency's Tribal Policy.

Executive Order (EO) S-13-08, 11/2008. *Full Compliance.* Directs the Resource Agency to work with the National Academy of Sciences to produce a California Sea Level Rise Assessment Report and directs the Climate Action Team to develop a California Climate Adaptation Strategy. Information in the reports would provide information for climate change adaptation analysis.

Executive Order (EO) S-1-07, 01/2007. *Full Compliance.* Establishment of Low Carbon Fuel Standard. Reduction of GHG emissions from transportation activities.

Executive Order (EO) S-1-07, 08/2007. *Full Compliance.* Directs Office of Planning and Research (OPR) to develop guideline amendments for the analysis of climate change in CEQA documents. Requires climate change analysis in all CEQA documents.

Porter-Cologne Water Quality Control Act. California Water Code § 13000 *et seq.* *Full Compliance*. The Porter-Cologne Water Quality Control Act of 1970 established the State Water Resources Control Board (SWRCB) and nine RWQCBs within California. These groups are the primary State agencies responsible for protecting California water quality to meet present and future beneficial uses and regulate appropriative surface rights allocations. The preparation and adoption of water quality control plans, or Basin Plans, and State-wide plans, is the responsibility of the SWRCB. State law requires that Basin Plans conform to the policies set forth in the California Water Code (Section 13240) and supported by the Federal CWA. Section 303 of the CWA requires states to adopt water quality standards which "consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses." According to Section 13050 of the California Water Code, Basin Plans consist of a designation or establishment for the waters within a specified area of beneficial uses to be protected, and water quality objectives to protect those uses. Adherence to Basin Plan water quality objectives protects continued beneficial uses of water bodies. The potential effects of the Proposed Action on water quality have been evaluated and are discussed in Section 3.1.3.

In 1992, the SWRCB adopted a general NPDES permit (Order No. 92-08-DWQ, General Permit No. CAS000002) that applies to construction projects resulting in land

disturbance of 5 acres or greater. In order to obtain a State-wide NPDES general construction permit, an action must comply with CVRWQCB's Water Quality Control Plan for the Sacramento and San Joaquin River Basins, the Ventral Valley Pesticide TMDL and Basin Plan Amendment, San Joaquin River Organophosphorous Pesticide TMDL, San Joaquin River Dissolved Oxygen TMDL, and the San Joaquin River Upstream. Prior to construction, PG&E would obtain an NPDES general construction permit. Conditions of the permit would require development and implementation of a storm water pollution prevention plan to limit effluent discharge as a result of storm water runoff and performance of inspections of storm water pollution prevention measures during and after construction.

The Project would achieve full compliance with this Act by achieving compliance with the Federal CWA.

Senate bill (SB) 375, 09/2008. *Full Compliance.* This bill requires metropolitan planning organizations to included sustainable community strategies in their regional transportation plans. The aim is to reduce GHG emissions associated with housing and transportation. The Project would not alter the regional transportation plans within or around the project area.

Senate Bill (SB) 1368, 09/2006. *Full Compliance.* This bill establishes GHG emission performance standards for base load electrical power generation. The aim is to reduce GHG emissions from purchased electrical power. The Project would not alter any means of power generation.

Senate Bill (SB) 1771, 09/2000. *Full Compliance.* This bill establishes the California Climate Registry to develop protocols for voluntary accounting and tracking of GHG emissions. In 2007, the Department of Water Resources (DWR) began tracking GHG emissions for all departmental operations. The Project would follow DWR's protocols where DWR staff or resources were used to further the Project.

1.6.3 Local Laws, Programs, and Permit Requirements

Feather River Air Quality Management District (FRAQMD) Indirect Source Review Guidelines, 2010. *Full Compliance.* Effects of the Proposed Action on local and regional air quality are discussed in Section 3.2.1. The analysis indicates that construction-related emissions for Phases 2B and 3 of the MRL Project are anticipated to exceed local FRAQMD thresholds for PM_{10}. After implementation of on-site mitigation measures, any emissions that remain in excess of local thresholds would be reduced by contributing to the FRAQMD's off-site mitigation program (Carl Moyer Program). Impacts to air quality and GHGs resulting from construction activities associated with the Proposed Action would be temporary and considered less-than-significant with implementation of the mitigation measures described in Section 3.2.1.4.

Yuba County General Plan. *Full Compliance.* The Project Area is located within the jurisdiction of the Yuba County General Plan and General Plan Update (Yuba County 2030) and would comply with all relevant local plans.

2.0 PROPOSED ACTION AND ALTERNATIVES

2.1 SEA/IS Marysville Ring Levee Alternatives

This section describes the alternative development process, including the alternative that was not considered and removed from further assessment (No Action). One alternative is identified that meets the purpose and need. This alternative is referred to as the Proposed Action and is evaluated in detail in this SEA/IS. The No Action alternative sets the baseline to illustrate potential effects of not implementing the Proposed Action. Both alternatives would include the levee repair work described in the 2010 and 2019 EA/IS (USACE 2010, USACE 2019). Because the utilities will need to be relocated for access to levee sections that are currently obstructed, the only two alternatives are to either relocate the utilities that would reduce flood risk or leave them in place, which will leave the City of Marysville at a higher chance of flood risk..

2.1.1 Alternative 1 (No Action)

A contract has been awarded for Phase 3 of the MRL Project and construction of Phase 2B was included as an exercisable option in the contract. Under the No Action Alternative, the MRL Project would commence as described in the most recent environmental document (USACE 2019), with portions of Phase 3 proceeding to construction in summer 2020 and 2021. Because the utility work would remain in place, certain levee sections cannot be accessed and levee improvement work in these sections would not occur, leaving the City of Marysville at a higher chance of flood risk.

2.1.2 Alternative 2 (Proposed Action)

This alternative includes implementation of levee design refinements for the Phases 2B and 3 Project, including utility relocations. The design refinements for these phases address geotechnical concerns associated with the seepage and stability of the MRL identified after the 2010 EA/IS was finalized. The 2010 EA/IS addressed the planned levee improvements to Phases 1 through 4 of the Marysville flood protection system; however, since the preparation of the 2010 EDR, updated designs for Phases 2B and 3 were developed utilizing new geotechnical data, topographic surveys, and utility research.

Additionally, public utility removals, relocations, and installations associated with the Phases 2B and 3 levee improvements were previously assumed to fall within the Project Footprint. However, since finalization of the 2019 SEA/IS (USACE 2019), the public utility companies (PG&E, Sprint, Comcast, and AT&T) have provided additional design details associated with natural gas and electric facilities. Disclosure of this information has resulted in: (1) known utilities adversely impacted by the Phases 2B and 3 Project construction extend beyond the Phases 2B and 3 Project Footprint, and (2) additional utility removal, relocation, and installation (not necessarily analyzed) are required and extend beyond the Phases 2B and 3 Project Footprint. As a result, public utility activity locations and potential impacts were not adequately discussed under Alternative 2 (Proposed Action) of the 2019 SEA/IS (USACE 2019).

2.2 Description of the Proposed Action

The Proposed Action includes the Phases 2B and 3 design refinements described and

analyzed in the 2019 SEA/IS, which is incorporated by reference. The updated description of the utility relocations is also included in the Proposed Action. The description of the proposed levee improvements remains consistent with the 2019 SEA/IS, as construction methodologies, scope, and timing remain the same. Since the utility relocation information has changed since 2019, they will receive particular attention in this SEA/IS. The overall effects determination and compliance status will consider the entire Proposed Action not just the utilities relocation.

The proposed Phases 2B and 3 Utility Relocations (Project Area) would extend beyond the 2019 SEA/IS Project Footprint (Figures 3 and 4). To facilitate construction of the levee improvements in Phases 2B and 3, PG&E would relocate existing electric transmission and distribution lines, as well as gas transmission and distribution pipelines. Work to be performed by PG&E would include removal of existing utilities, relocation and installation of new utility structures and anchors, transfer of existing electric transmission and distribution lines from existing utility structures to new utility structures, and installation of new gas transmission and distribution pipelines, and connection of new gas distribution pipelines to existing facilities. PG&E's work activities associated with Proposed Action are discussed in further detail in Section 3.2.1. Additionally, AT&T and Sprint would install new utility structures on the landside and waterside of the levee in Phase 3.

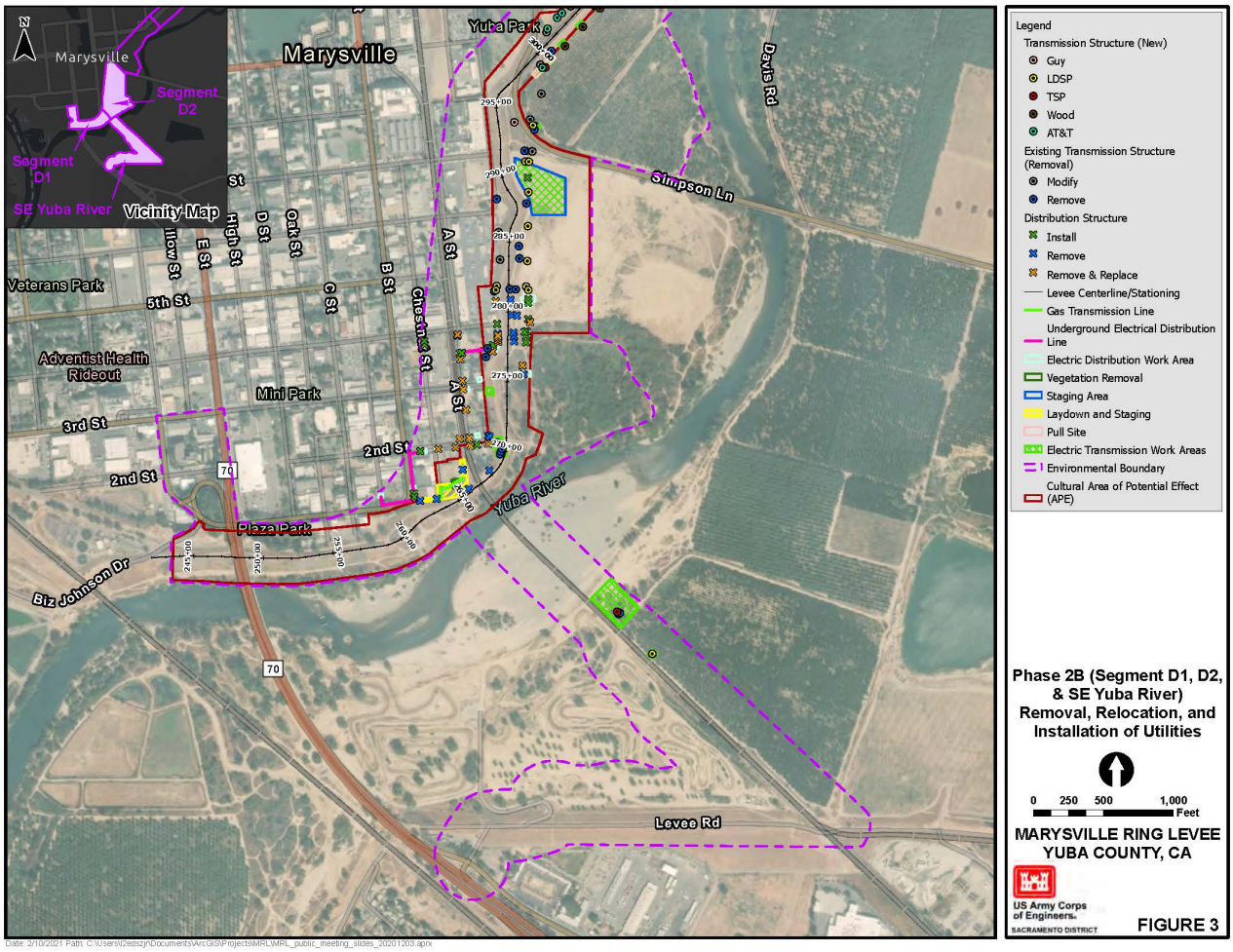

Figure 3. Removal, Relocation, and Installation of Utilities for Phase 2B.

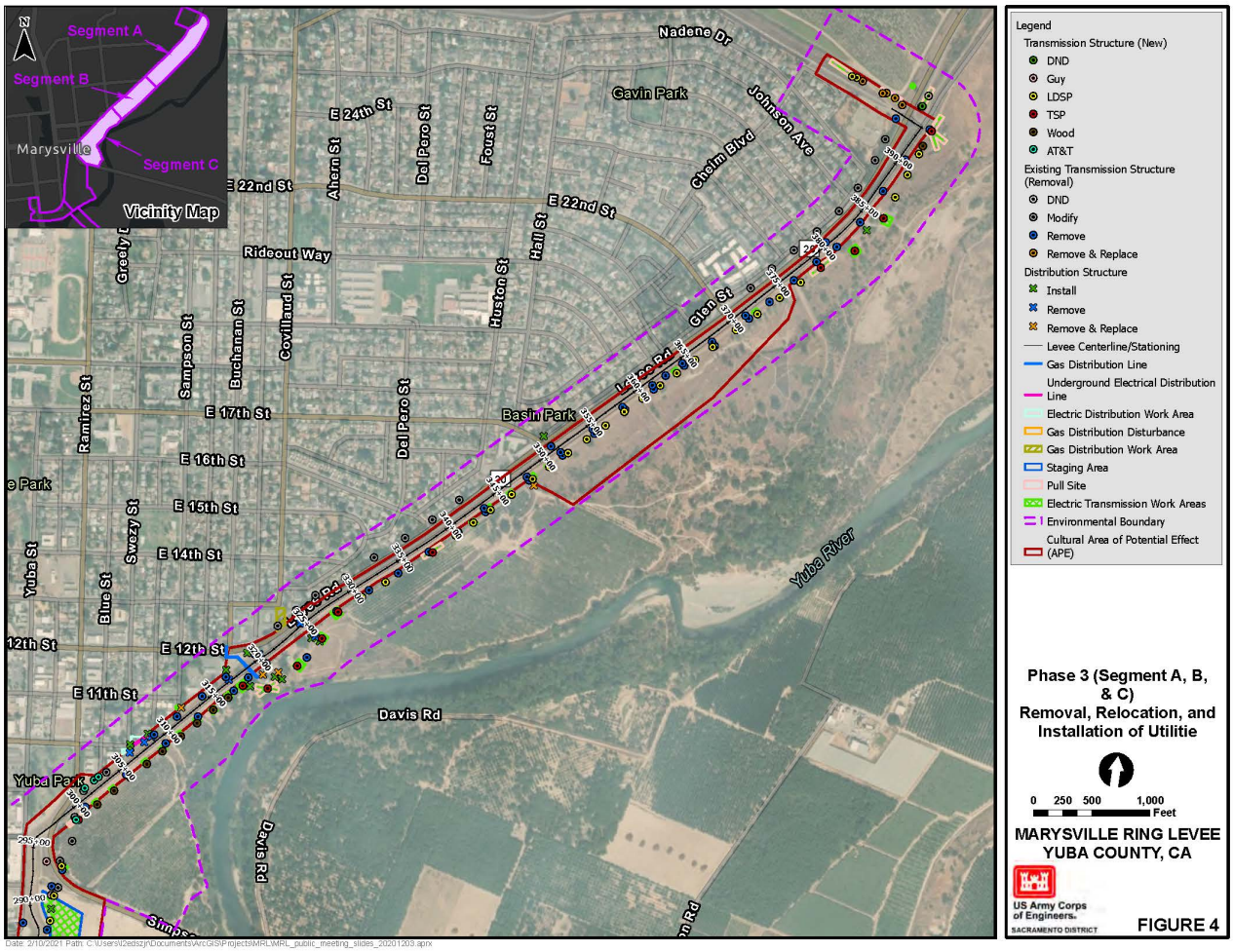

Figure 4. Removal, Relocation, and Installation of Utilities for Phase 3.

2.2.1 Access Routes and Work Areas

Proposed PG&E work would encompass approximately 59 acres. A maximum of about 29 acres would be disturbed per day. There is one identified staging area for PG&E electrical and gas transmission and distribution work activities, this area would be approximately 300 feet by 300 feet in diameter. The staging area would be in an existing staging area identified for the Phases 2B and 3 Project, specifically Staging Area 3. The staging area would mainly be used for material and equipment storage and would be secured overnight with installation of fencing. This area may also be used for vehicle parking. Fencing would be removed once utility work is complete. The electric transmission work would require up to an additional 103 work areas (up to 100 feet by 100 feet). The electrical distribution work would require up to 29 work areas (approximately 30 feet by 30 feet). The electric distribution work would also utilize eight pull sites located at angle points throughout the Project alignment and measuring approximately 40 by 100 feet in diameter. Lastly, there would be one work area for the proposed gas transmission work and two work areas for gas distribution work, encompassing approximately 0.75 acres.

New access routes would be required to facilitate the proposed utility work. To the

greatest extent possible, access for work activities would be achieved through existing public and private roads. The proposed access routes for the Project Area are shown in Figures 5, 6a, and 6b.

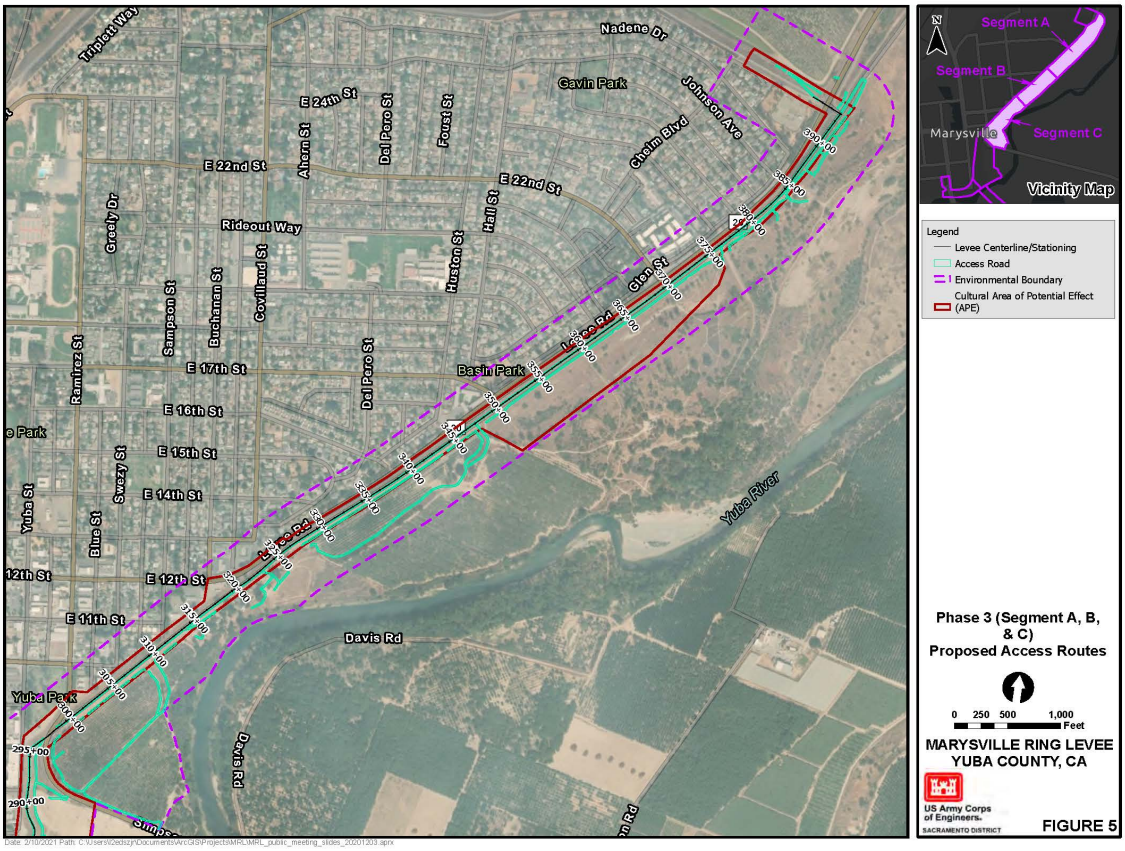

Figure 5. Proposed access routes for Phase 3.

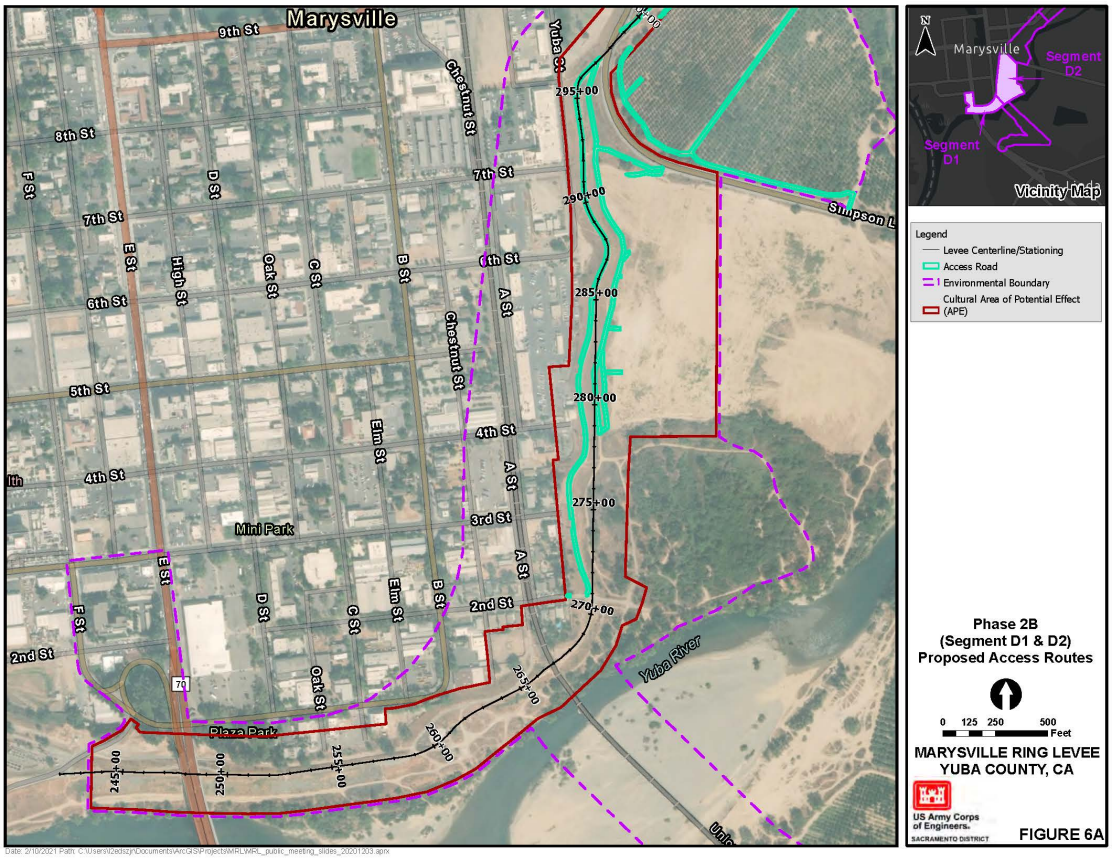

Figure 6a. Proposed access routes for Phase 2B.

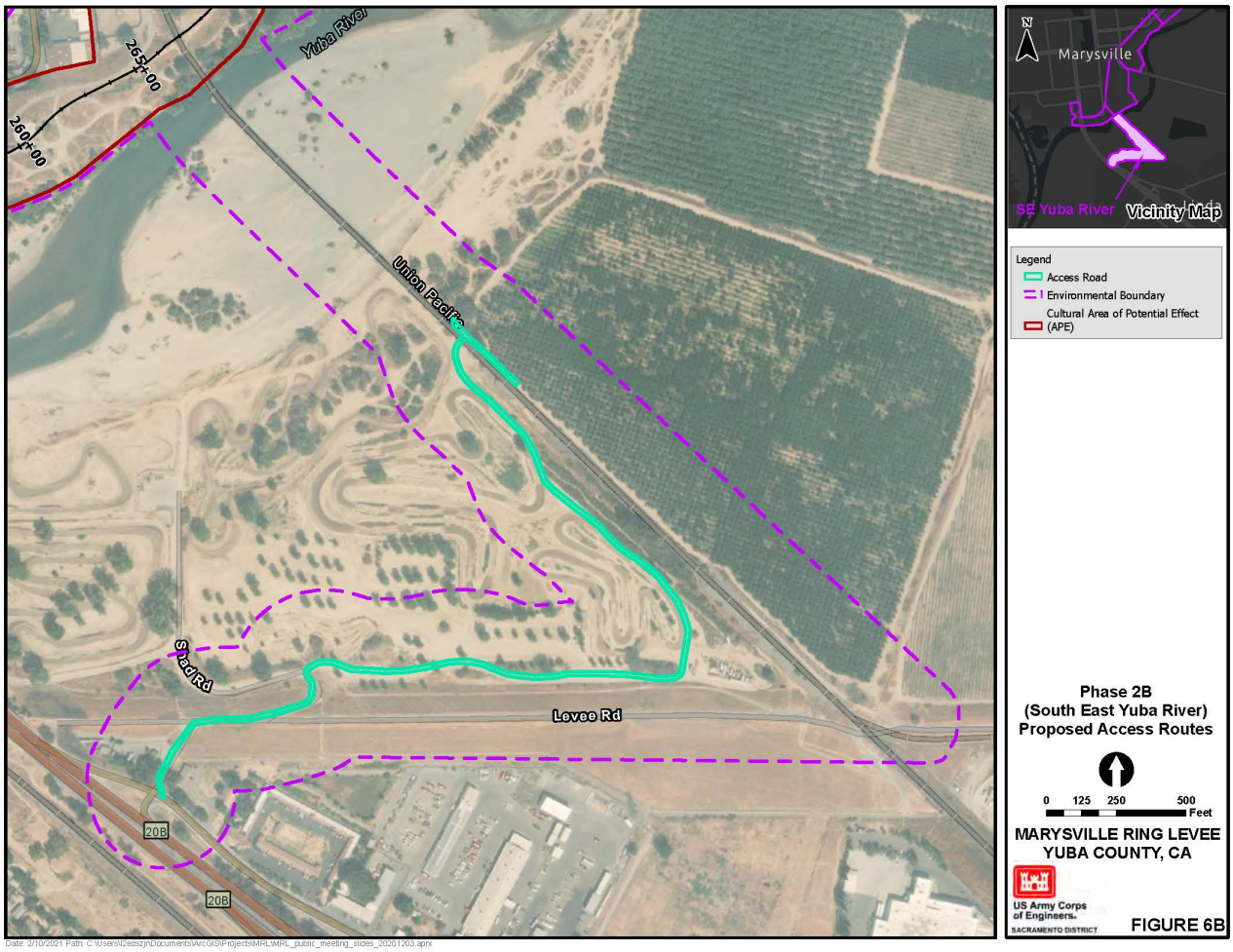

Figure 6a. Proposed access routes for Phase 2B south of the Yuba River.

2.2.2 Workers and Schedule

Expected times for installing new electrical and gas utilities will vary and depend on structure type and the number of workers and equipment required. Although, the activities vary, the relocations will begin with the installation of the new structures and reconnection of service to the new poles before the old poles are removed. Electric transmission work is proposed to start in August 2021 and electric distribution work is proposed to start in September 2021. Gas work may have to occur as late as winter depending on easement acquisition.

The electrical facility installation would require approximately one day to install two poles. Additionally, gas installation would require approximately two days for installation of approximately 100 feet of pipe on average. Work activities would occur prior to and/or concurrent and/or following the levee improvement construction in Phases 2B and 3, for an estimated duration of up to four months (approximately June 2021-October 2022). Although the numbers of workers on site would vary, there would typically be 3 to 6 crew members for each daily activity. However, during conductor installation there would be up to 36 crew members on-site each day. Most activities would be limited to the hours of 7:00 a.m. and 10:00 p.m., up to seven days a week. To minimize impacts on traffic, night work would be implemented for both electric distribution and electric transmission work. Additionally, for gas transmission work, during clearance day when crews connect new pipe to old pipe, connections would need to occur in a single work day and shift hours would extend beyond the typical working hours if necessary. Night hours of operation would extend from 8:00 p.m. to 5:00 a.m. and would extend up to four months.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section describes the resources within the Project Area, as well as the effects of the Alternatives on these resources. Each section below presents the existing resource conditions, environmental effects and, when necessary, mitigation measures that are proposed to avoid, reduce, minimize, or compensate for adverse effects, including any that could be significant. Impacts are identified as direct, indirect, or cumulative.

For this SEA/IS, the NEPA criteria apply to all resources and are not repeated for each individual resource. The CEQA requirements are more specific to each resource and are listed in the 2010 MRL EA/IS and 2019 SEA/IS (USACE 2010; USACE 2019) and detailed below where needed. These requirements, as well as other applicable agency criteria and significance thresholds, are identified under the appropriate resource. The effects on resources not considered herein would remain consistent with the 2019 SEA/IS.

3.1 Resources Not Considered in Detail

Previous joint NEPA/CEQA documents (USACE 2010; USACE 2019) described the Affected Environment in detail and evaluated the potential effects of implementing the MRL Project and the Phases 2B and 3 design refinements on resources of concern, including: traffic and circulation; geology and seismicity; mineral resources; topography and soil types; aesthetics and visual resources; hazards, hazardous materials, toxic, and radiological waste; fisheries; land use; socioeconomics; environmental justice; population and housing; noise; and recreation. For most resources the conclusions reached in the 2010 and 2019 effects analyses remain accurate for the 2020 Proposed Action since the construction methodologies, scope, and seasonality remain the same, and the relevant Federal and State laws have not changed in a manner that would require re-evaluation of these resources. Some resources warrant additional consideration and are addressed in this SEA/IS. These include the following: greenhouse gases; water resources and quality; public utilities; special status species; air quality; vegetation and wildlife; cultural resources; and agriculture and prime and unique farmland.

3.2 Resources Considered in Detail

3.2.1 Greenhouse Gases

On April 5, 2017, CEQ published a notice in the Federal Register to withdraw the final guidance on GHG emissions and the effects on climate change in NEPA reviews. Subsequently, CEQ published draft guidance in June 2019, to assist Federal agencies in their consideration of GHG emissions in NEPA analysis and documentation. If the 2019 Draft Guidance is finalized, the result would replace the Final Guidance that was issued in 2016 and withdrawn in 2017 for further consideration pursuant to Executive Order 13783.

However, California has adopted comprehensive amendments to the CEQA Guidelines, which include numerous provisions aimed at improving the analysis of GHG emissions and climate change impacts in state environmental reviews. These provisions touch on both climate change mitigation and adaptation, providing more detailed guidance on topics such as assessing the significance of GHG emissions, estimating vehicle emissions, and evaluating environmental risks in light of a changing and uncertain baseline. These amendments provide further detail on many of the that were first added to the CEQA Guidelines in 2010 (Sabin Center for Climate Change Law 2019).

3.2.1.1 Environmental Setting

In California's Global Warming Solutions Act of 2006 (California Health and Safety Code § 35000 et seq.), the California Legislature recognized California's vulnerability to weather events triggered by global warming. The Legislature found that global warming would "have detrimental effects on some of California's largest industries." Assembly Bill 32 mandates that emissions of GHGs be reduced to 1990 levels by 2020.

The term "greenhouse gas" refers to a gas that traps heat in the atmosphere and contribute to global climate change. The primary GHGs of concern include carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O) and fluorinated compounds (Yuba County 2030). The United States is the 2nd largest contributor to worldwide CO2 emissions resulting from fossil fuel combustion (USEIA 2017)—additionally, according to State-level CO2 emissions, California is the 2nd largest emitter of energy-related CO2 in the United States (USEIA 2017). Transportation is the largest source of ozone and GHG production in the region and a reduction in vehicle emissions is necessary to achieve significant GHG reduction (Yuba County 2030).

3.2.1.2 Effects

Significance Criteria

The following criteria would be used to determine the significance of GHG emissions:

- The relative amounts of GHG emissions resulting from implementation of the Proposed Alternatives are substantial compared to emission standards set by adjacent air quality management districts, [10,000 metric tons CO2e per year (Placer County 2016)]; or
- The amount of GHG emissions resulting from implementation of the Proposed Alternatives results in a substantial effect to global climate change; or
- If the Proposed Alternatives has the potential to contribute to a substantially lower carbon future.

FRAQMD has not established thresholds for GHG emissions at this time; instead, each project is evaluated on a case-by-case basis using the most up-to-date methods of calculation and analysis. Project impacts to climate change would be evaluated using the criteria listed below.

According to the CEQA Guidelines, a project could result in significant impacts if it would do any of the following:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment;
- Exceed a threshold that is applicable to the project; or
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

Alternative 1 (No Action)

Under the No Action Alternative, the MRL Project would commence as described in the most recent environmental document (USACE 2019), with portions of Phase 3 proceeding to construction. GHGs would be influenced by fuel combustion from onsite construction

vehicles, as well as indirect emissions from the electricity used to operate machinery. In addition to the construction vehicles, there would be GHG emissions from the vehicles used for worker commutes. Routine operation and maintenance would also continue on the existing levee.

Alternative 2 (Proposed Action)

GHG emissions associated with Proposed Action would be primarily associated with construction. GHG emissions would be emitted due to fuel combustion from onsite construction vehicles, as well as indirect emissions from the electricity used to operate machinery. In addition to the construction vehicles, there would be GHG emissions from the vehicles used for worker commutes.

In response to concerns regarding GHG emissions, the Road Construction Emissions Model developed by the Sacramento Metropolitan Air Quality Management District now generates an output for CO_2. Although CO_2 emissions can be calculated, there is currently no federal, state, or local (FRAQMD) thresholds to meet. The USEPA has also stated that GHG emissions below 25,000 metric tons do not commonly require reporting (USEPA 2013). However, the local neighboring county of Placer has recommended a GHG threshold of 10,000 metric tons of CO_2 per year for construction and operational phases of land use and stationary source projects (Placer County 2016).

The Model was used to calculate emission estimates for utility work activities related to the Phases 2B and 3 Project. The results of the modeling, included in Appendix A determined that the Project's CO_2 emissions would be 4,999 metric tons, and would not exceed 25,000 metric tons per year nor exceed the 10,000 metric tons per year threshold. The BMPs and mitigation measures applicable from the 2010 EA/IS and 2019 SEA/IS would be implemented to minimize CO_2 and reduce GHG emissions during implementation of the Proposed Action. Therefore, the Project would not have significant environmental effects due to greenhouse gas emissions.

3.2.1.3 Mitigation

All applicable mitigation measures from the 2010 EA/IS and 2019 SEA/IS would be implemented to avoid or minimize adverse effects to greenhouse gas emissions. Emissions are expected to fall below the threshold of 10,000 metric tons per year.

3.2.2 Water Resources and Quality

3.2.2.1 Environmental Setting

The Yuba and Feather Rivers are the largest waterways in the vicinity of the Proposed Action. Yuba River is located adjacent to the Project to the east and exhibits an Ordinary High Water Mark (OHWM) of approximately 50 feet along the right bank of the river next to the Phase 2B levee work activities. There is an agricultural ditch located along the northwest portion of Project in Phase 3 which is connected to Jack Slough and drains into the Feather River and from there into the Sacramento River. These waterbodies are all waters of the United States and protected under the Clean Water Act. Jack Slough exhibits an OHWM of approximately four vertical feet from substrate, with a significant nexus to traditional navigable waters, which indicates the slough itself is an aquatic resource and jurisdictional. Additionally, approximately 1.04 acres of potentially jurisdictional, seasonal emergent wetlands were previously identified in the Project Area. Based on the soil types observed

during the survey, the wetlands would not provide suitable habitat for vernal pool species.

3.2.2.2 Effects

Significance Criteria

Adverse effects on water quality were considered significant if an alternative would result in any of the following:

- Alter the quantity and quality of surface runoff.
- Degrade water quality.
- Violate any water quality standards or waste discharge requirements.
- Substantially alter the existing drainage pattern of the site or area, such that the flood risk and/or erosion and siltation potential would increase.
- Place structures that would impede or redirect flood flows within a 100-year flood plain.
- Expose people, structures, or facilities to significant risk from flooding, including flooding as a result of the failure of a levee or dam.
- Create or contribute to runoff that would exceed the capacity of an existing or planned storm water management system.
- Reduce groundwater quantity or quality.

Alternative 1 (No Action)

Under the No Action Alternative, the MRL Project would commence as described in the most recent environmental document (USACE 2019), with portions of Phase 3 proceeding to construction. No change from the existing condition of surface waters, including wetlands is expected. However, water quality is reasonably expected to improve through basin-wide planning and regulation. Additionally, groundwater would continue to be managed consistent with the requirements of the California Sustainable Groundwater Management Act of 2014 and are expected to remain stable and at historic levels.

Alternative 2 (Proposed Action)

Implementation of the utility activities associated with the levee improvements would not affect groundwater availability or use. No change from the existing or the No Action Alternative condition is expected. Both electric distribution and electric transmission work activities are proposed in the northwest portion of Phase 3 near the agriculture ditch. Additionally, there is electric transmission work proposed on the left (south) bank of the Yuba River. A field survey was performed by USACE Regulatory Division on August 13, 2020 as part of an OHWM determination. With consideration of available information including direct observations of physical characteristics indicative of the OHWM, previous determinations, gage data, and LiDAR data, USACE Regulatory Division concluded that the OHWM on the left (south) bank of the Yuba River within the survey area for the proposed electric transmission work is approximately 53 feet. The proposed utility work activities would be accomplished entirely outside of surface waters.

3.2.1.3 Mitigation

All applicable mitigation measures from the 2010 EA/IS and 2019 SEA/IS would be implemented to avoid or minimize adverse effects to aquatic resources. In most cases, any potential direct effects to identified wetlands or aquatic resources would be avoided by placement of a minimum 25-foot work exclusion buffer in most areas. Along the Yuba River the exclusion buffer would be measured horizontally from the identified contour elevation line for the OHWM. Due to the limited work area adjacent to the agriculture ditch, any direct effects would be avoided by implementing a minimum 10-foot work exclusion buffer with appropriate barriers and placement of silt fencing.

Additional BMPs to minimize effects to water quality that would be implemented during work activities include scheduling activities to minimize soil disturbance during rain events, preserving existing vegetation by limiting the work area and disturbed soil areas to the extent practicable, providing sediment control (i.e., biodegradable fiber rolls, gravel bags, etc.) downslope of any soil disturbances, protecting drainage inlets within 50 feet of any soil disturbances, covering all excavations at the end of each work day, when feasible, and ensuring that exposed soils are protected from erosion. BMPs would be inspected daily and maintained, replaced, or repaired as necessary.

Since the Project would disturb more than one acre of land and involve possible storm water discharge to surface waters, PG&E would be required to obtain an NPDES permit from the CVRWQCB and prepare a SWPPP identifying BMPs to be used in order to avoid or minimize any adverse effects on surface waters. The Proposed Action would not affect beneficial uses.

3.2.3 Public Utilities

3.2.3.1 Environmental Setting

The Public Utilities Section of the 2010 EA/IS (USACE 2010) and subsequent 2019 SEA/IS (USACE 2019) sufficiently characterizes the affected environment for this resource.

3.2.3.2 Effects

Significance Criteria

Adverse effects on public utilities are considered significant if an alternative would result in any of the following:

- Disrupt or significantly diminish the quality of the public utilities for an extended period of time, or,
- Damage public utility facilities, pipelines, conduits, or power lines.

Alternative 1 (No Action)

Under the No Action Alternative, the MRL Project would commence as described in the most recent environmental document (USACE 2019), with portions of Phase 3 proceeding to construction. Under the No Action Alternative, only the utility work activities including any removals, relocations, or installations previously described in the 2019 SEA/IS would be implemented.

Alternative 2 (Proposed Action)

Prior to and/or concurrent with levee improvement construction in Phases 2B and 3, PG&E would relocate existing electric transmission and distribution lines and gas transmission and distribution pipelines to facilitate levee improvement construction. Work to be performed by PG&E would include removal of existing utilities, relocation and installation of new utility structures and anchors, transfer of existing electric transmission and distribution lines from existing utility structures to new utility structures, relocation of the gas transmission and distribution pipelines, and connection of relocated gas pipelines to existing facilities.

In addition to PG&E's proposed work activities, AT&T would install three new utility structures in Phase 3 including two poles on the landside of the levee with guy wires and a push-brace pole, as well as a single pole on the waterside of the levee. AT&T would allow Comcast to share use of these poles. Lastly, Sprint is planning to install four new utility structures (wood poles measuring a maximum of 35 feet tall and installed to a maximum depth of 15 feet)—three of the poles would be installed on the waterside of the levee and one pole would be installed on the landside of the levee. The pole on the landside would be installed by PG&E and jointly used with Sprint.

Electrical Transmission and Distribution. The proposed utility activities would include removal, relocation and installation of new electrical transmission structures (Figures 7 and 8). There are three types of poles associated with the electric transmission work including Tubular Steel Poles (TSP), Light Duty Steel Poles (LDSP), and wood poles. These poles would be a maximum of 120 feet tall and would be comprised of wood or steel. TSPs would be installed on a concrete foundation measuring up to eight feet in diameter and extending to a maximum depth of 35 feet (depending on foundation location and soil conditions). A maximum of 75 poles would be installed during the electrical transmission work and construction activities at these locations would encompass a disturbance area of approximately 75 feet in diameter.

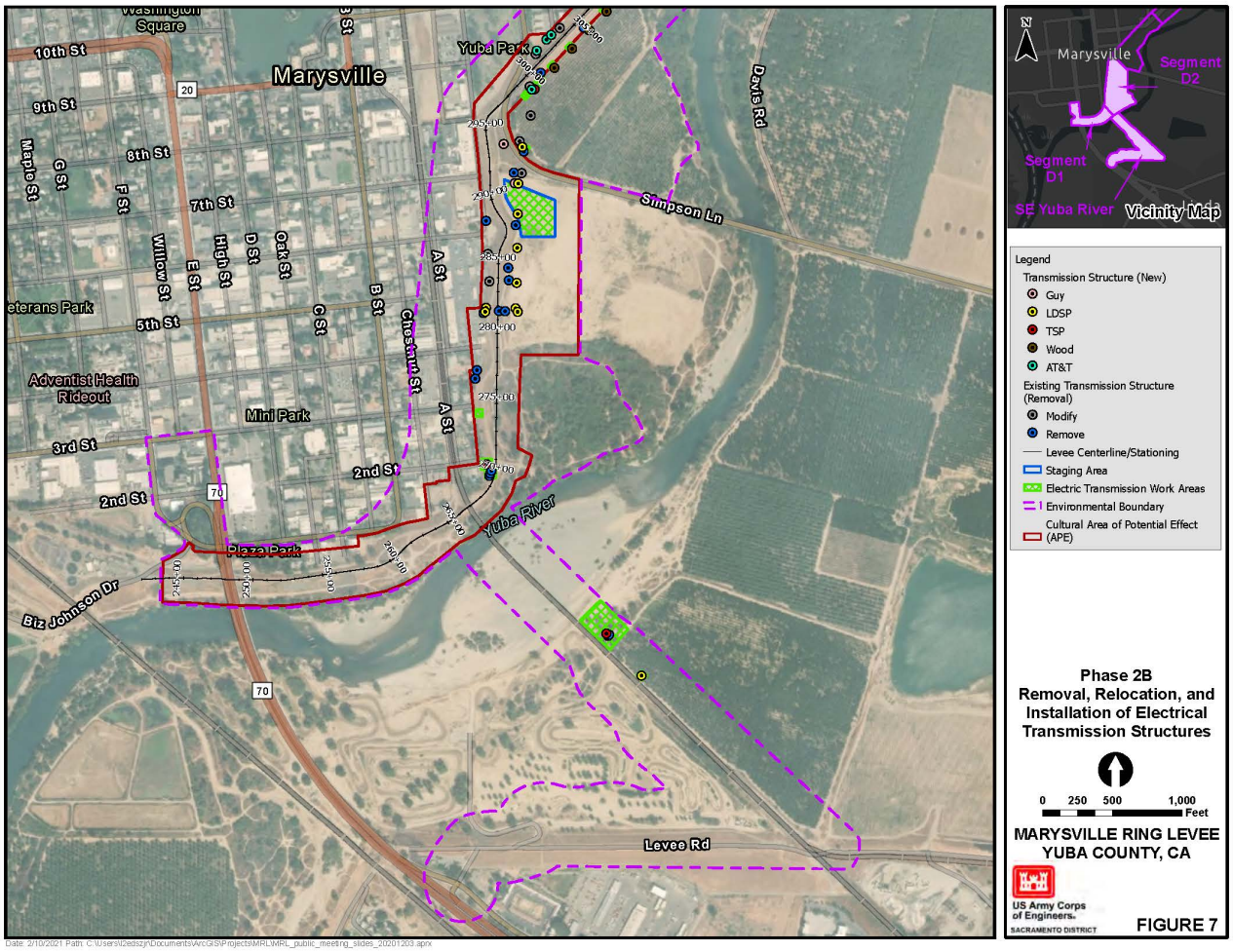

Figure 7. Removal, Relocation, and Installation of Electrical Transmission Structures in Phase 2B.

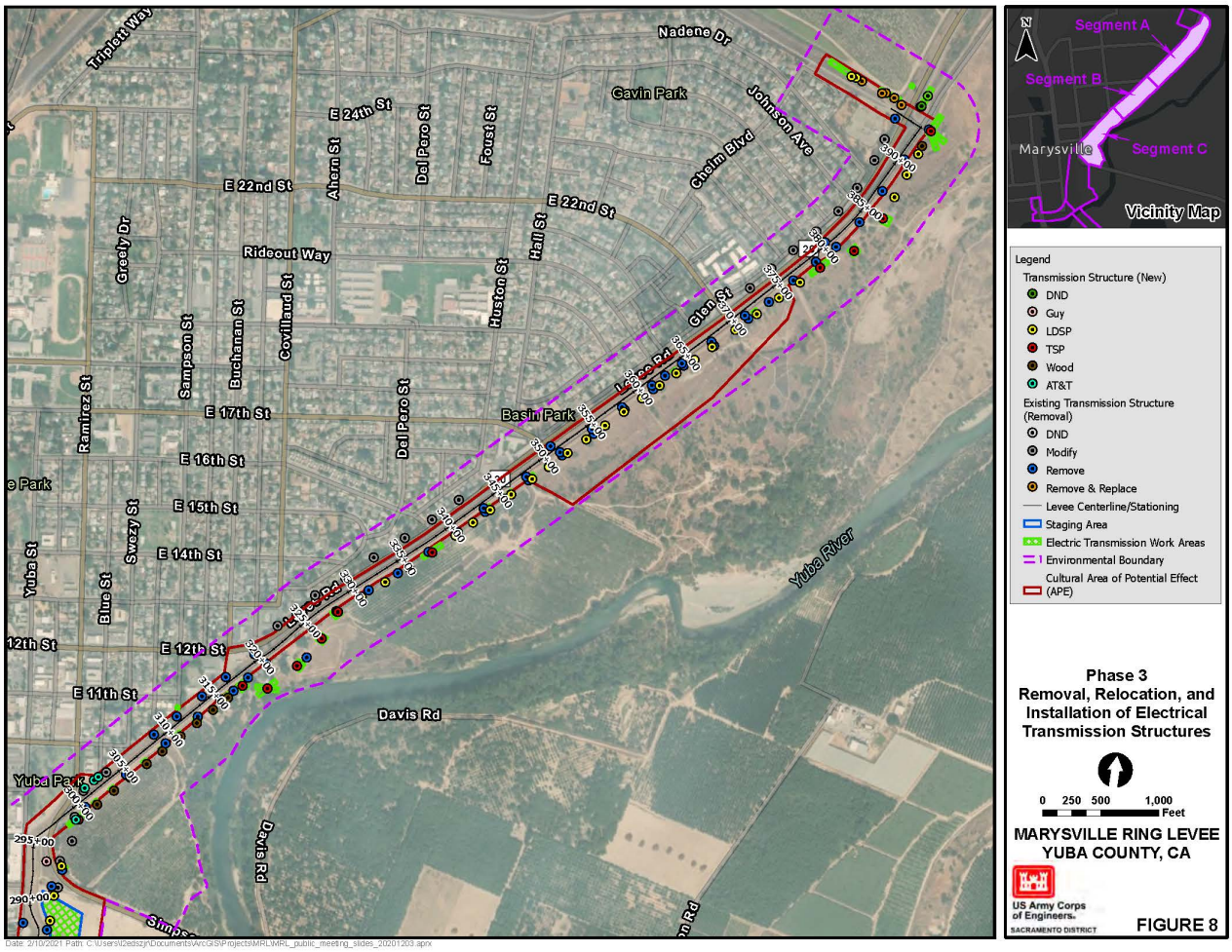

Figure 8. Removal, Relocation, and Installation of Electrical Transmission Structures in Phase 3.

The proposed utility activities would also include removal, relocation and installation of new electrical distribution structures (Figures 9 and 10). The types of poles associated with the electrical distribution work include TSP and wood poles. These poles would measure up to 95 feet in length and be comprised of wood or steel. Direct bury wood poles would be installed directly into the ground up to 20 feet deep and with a maximum diameter of seven feet. A maximum of 40 poles would be installed during the electrical distribution work and disturbance at these sites would be a maximum of 50 feet in diameter (based on structure height and location).

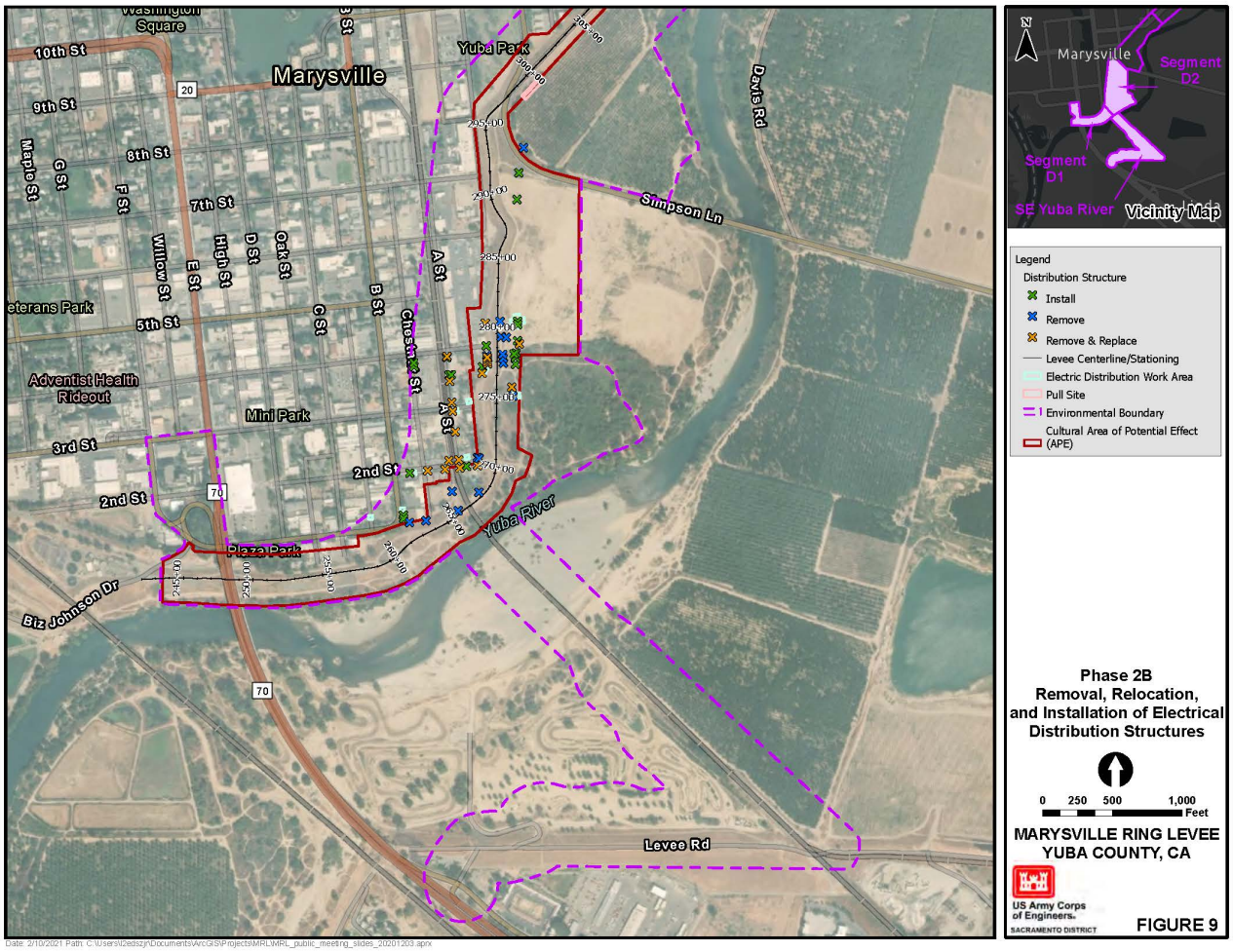

Figure 9. Removal, Relocation, and Installation of Electrical Distribution Structures in Phase 2B.

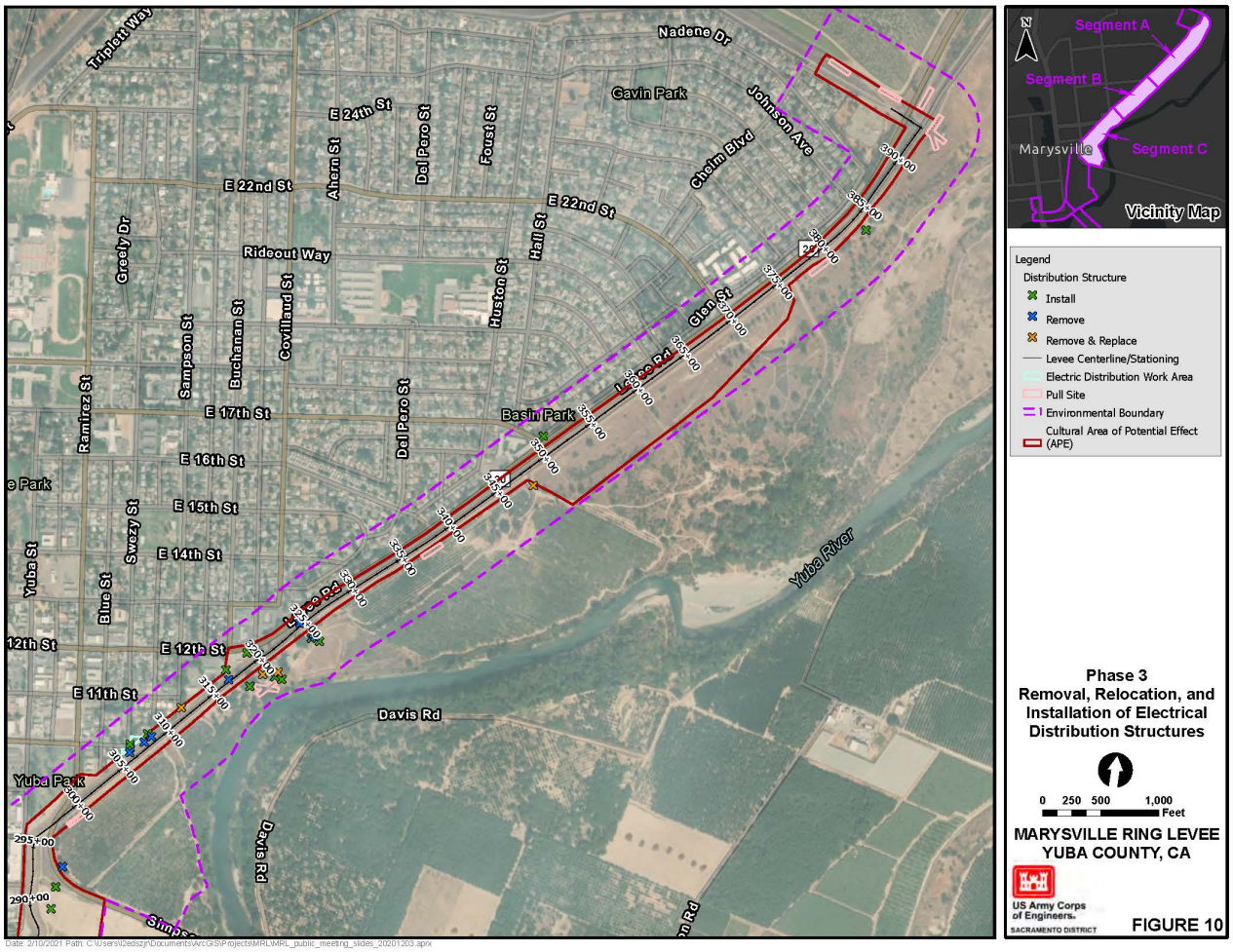

Figure 10. Removal, Relocation, and Installation of Electrical Distribution Structures in Phase 3.

Additionally, guy wires with anchors may be required at transmission and distribution pole locations for added stability (Figure 11). The electrical transmission work would include a maximum of 39 guy anchors and the electrical distribution work would include a maximum of 42 anchors. Locations that require installation of guy anchors would require an additional disturbance footprint up to two feet in diameter and up to five feet in depth.

Figure 11. Guy Wire and Guy Wire Anchor Example.

Electrical transmission and distribution pole removal activities would be conducted by a line-crew, and each pole site would be accessed with a line truck and trailer or a boom truck. However, a crane would likely be used to remove poles located on the levee crown. Existing poles are loosened from the ground with a hydraulic jack, removed from their holes using either a crane, line truck or boom truck. The removed pole would be transported from the site on a trailer or boom truck and a backhoe and dump truck would backfill any holes with native soil from Project construction activities (e.g., pole excavations).

Underground conduit installation will be required at three locations on the south-east side of Marysville (Figure 12). According to the relocation plans, underground electric lines are being installed along 1st Street/B Street near the intersection at 2nd Street, running to Elm Street, and across the property located at 325 A Street (Figure 12). Underground electric line installation is also planned across the CalWater parcel at 1005 Swezy Street (Figure 12). Construction techniques for these types of installation activities include trench excavation up to 40 feet wide by four feet deep, and up to 420 feet in length. Typically, the trench would be aligned in the middle of the new utility corridor. The recent change in electrical trench depth (see Appendix E) changed the APE for the USACE consultation with SHPO that commenced in November of 2020. The new trench depth information, supplied by PG&E in January of 2021, triggered additional consultation information needs that will be submitted to SHPO to

satisfy the provisions pursuant to section 106 of the NHPA.

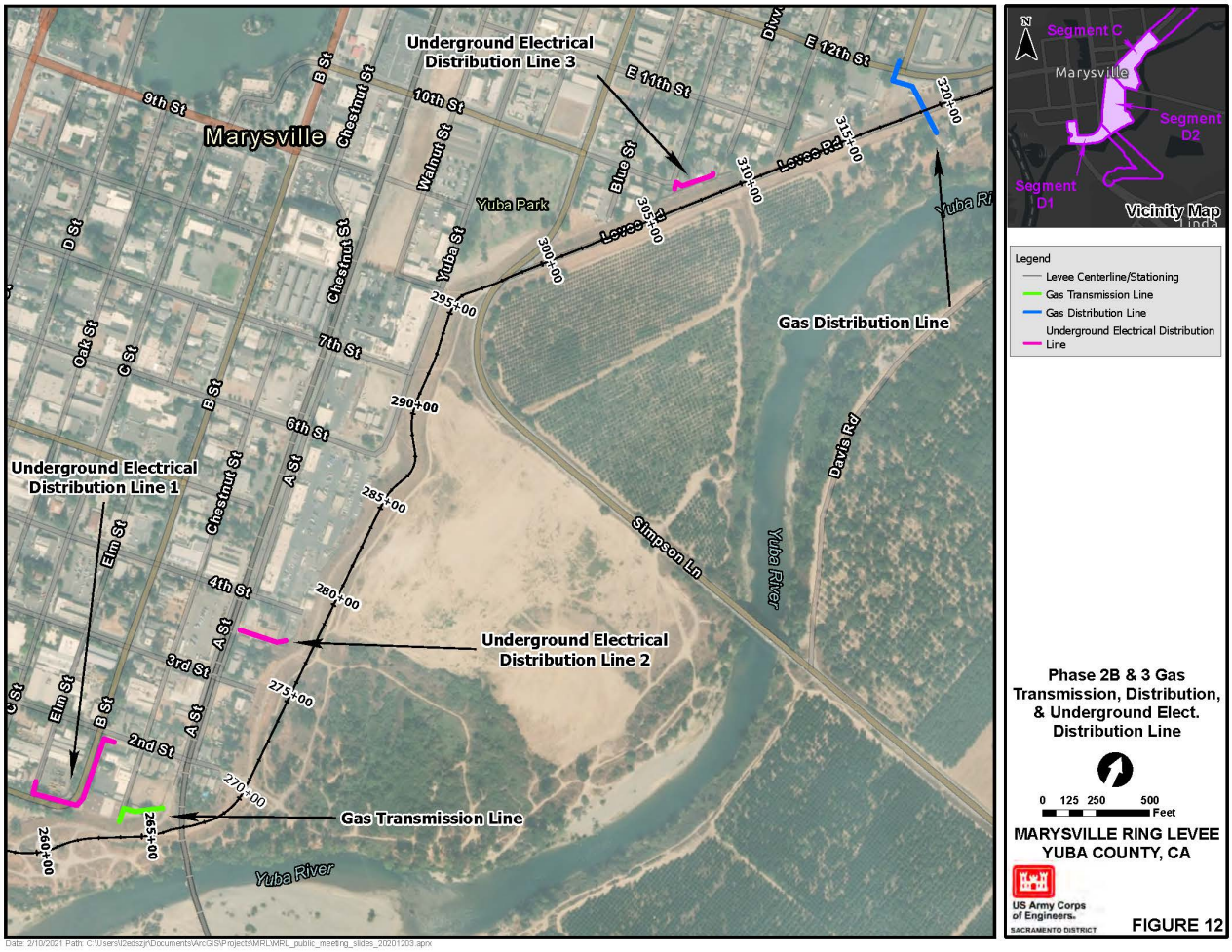

Figure 12. Buried Electric and Gas.

Installation of electrical structures includes pole staking, work area flagging, and excavation using a hole-auger or drill. Based on structure type and location, a helicopter or crane would be used for installation or removal of electrical transmission poles. Additional installation activities would include pole removal, hole-backfill with rock or native soil, wire and equipment transfer, old conductor removal, stringing of the new conductor, and equipment disposal. Oil and treated wood storage onsite would require secondary containment, storage management, and labeling with manifested disposal/recycling processing. PG&E would collect the existing treated wood poles in Project-specific containers once removed from the site and disposes of them at a licensed Class 1 or a composite-lined portion of a solid waste landfill. Insulators would be stored separately and recovered.

Natural Gas Transmission and Distribution.

PG&E would install roughly 300 feet of gas transmission steel pipe measuring approximately eight inches in diameter and about 430 feet of distribution steel or plastic pipe

measuring one to two inches in diameter. Existing gas distribution and transmission pipelines be abandoned in place. Other types of gas transmission and distribution equipment that may be installed include Electrolysis Test Station/Current Transformer meter stations for future pipe monitoring purposes, and pipeline markers (paddle and/or carsonite markers) at angle points and at levee crossing locations. Gas pipe installations requires multiple work areas totaling approximately 0.75 acres (Figure 12) and techniques include digging a trench approximately three feet wide by up to six feet deep for both gas transmission and distribution. PG&E requires a permanent right of way (ROW) of up to 30 feet in width for gas transmission and distribution projects. For the existing gas lines that cross the levee, PG&E would shut off the gas, the construction contractor will remove the gas pipeline during levee construction. PG&E may coordinate with the contractor to install a new gas distribution pipeline that is routed through the levee above the keyway. After construction the levee will be restored in accordance with an erosion plan and the excavated trenches would be restored to existing conditions.

The existing gas transmission pipeline will be abandoned in place (Figure 12). PG&E would also install approximately 400 feet of gas distribution steel or plastic pipe measuring one to two inches in diameter. Other types of gas transmission and distribution equipment that may be installed include Electrolysis Test Station/Current Transformer meter stations for future pipe monitoring purposes, and pipeline markers (paddle and/or carsonite markers) at angle points and at levee crossing locations. The existing gas distribution pipeline will be abandoned in place.

Gas pipe installation techniques include digging a trench approximately three feet wide by up to six feet deep and up to approximately 1,000 feet long. PG&E requires a permanent right of way (ROW) of up to 30 feet in width for gas transmission and distribution projects. Both gas transmission and distribution projects require multiple work areas totaling approximately 0.75 acres (Figure 12). Clearing and grading operations involve preparation of the ROW, including vegetation removal, debris disposal, and land leveling. Installation sites are backfilled using sand to create an approximately six-inch insulation zone around the pipe and then covering by native soil from the work activities. In some instances, a crane may be required to place pipe at crossing sites located at the crowns of the levees. Dump trucks would be utilized to transport sand and soil materials. Spoil piles may be temporarily placed onsite within identified work areas while the gas pipe installation activities are occurring. Vegetation replacement within the area of the permanent easement would have restrictions of trees within 15 feet of the pipeline.

Hydrostatic testing of gas pipelines may be required. Hydrostatic testing would be performed to test the strength of the new pipeline. This type of test involves filling the pipeline with water pressurized to one and a half times the operating pressure, and this pressure is held for up to eight hours. Following testing, the pipe would be flushed to remove dirt and other debris. Test water would be discharged at a rate or in a manner that minimizes erosion, using an appropriate energy dissipater. Test water intake and discharge would be performed in accordance with all applicable regulations and permit requirements.

3.2.3.3 Mitigation

The proposed gas and electric work activities would result in temporary, short-term disruptions to public services. However, implementation of the mitigation measures described

below would reduce effects to less-than-significant levels.

Disruptions resulting from the gas transmission and distribution work would be avoided through installation of portable bottles filled with gas, these would be utilized to maintain operation of gas appliances in neighboring homes that may be affected by work activities. There would also be temporary disruptions in service when the newly installed electric transmission equipment is energized. However, mitigation measures including shoo-flys (temporary wood pole structures and conductors) would be implemented to ensure there are no power outages. Any customers identified as being impacted by work activities would be notified in advance of any service disruptions.

3.2.4 Special Status Species

3.2.4.1 Regulatory Setting

The Special Status Species Section of the 2010 EA/IS (USACE 2010) and subsequent 2019 SEA/IS (USACE 2019) sufficiently characterizes the regulatory setting for this resource.

3.2.4.2 Environmental Setting

The Special Status Species Section of the 2010 EA/IS (USACE 2010) and subsequent 2019 SEA/IS (USACE 2019) sufficiently characterizes the affected environment for this resource. However, the Proposed Action would result in additional effects (i.e., beyond those addressed in the 2010 and 2019 USFWS consultations) on the VELB; therefore, formal consultation would be reinitiated with USFWS. Special status species lists were generated from the USFWS ECOS IPaC website and the California Natural Diversity Data Base (CNDDB) (USFWS July 27, 2020, CNDDB August 4, 2020). The USFWS and CNDDB lists are included in Appendix C. The updated list indicated there was no change to the species list from what was previously analyzed in the Phases 2B and 3 SEA/IS. The resultant BO would be included in the Appendix of the Final SEA/IS (Appendix D). Additionally, USFWS is preparing a Supplemental CAR to include evaluation of the additional utility work associated with the Phases 2B and 3 levee improvements (anticipated March 2021). The Supplemental CAR would be reviewed for information related to special status species and any recommendations would be integrated into the mitigation measures for the Project.

3.2.4.3 Effects

Significance Criteria

An action would be considered to have a significant effect on special status species if it would result in any of the following:

- Direct or indirect reduction in growth, survival, or reproductive success of species listed or proposed for listing as threatened or endangered under the ESA or CESA.
- Direct mortality, long-term habitat loss, or lowered reproductive success of Federal or State-listed threatened or endangered animal or plant species or candidates for Federal or State listing.
- Direct or indirect reduction in the growth, survival, or reproductive success of substantial populations of Federal species of concern, State-listed endangered or threatened species, plant species listed by the CNPS, or species of special concern or regionally important commercial or game species.

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species by CDFW, USFWS, or in any local or regional plans, policies, or regulations.
- An adverse effect on a species' designated critical habitat.
- 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.

Alternative 1 (No Action)

Under the No Action Alternative, the MRL Project would commence as described in the most recent environmental document (USACE 2019), with portions of Phase 3 proceeding to construction. The amount and condition of special status species, or species of special concern, and their habitat in the Project Area would remain the same as was previously described in the most recent environmental document (USACE 2019).

Alternative 2 (Proposed Action)

Bank swallow. Implementation of the Proposed Action could potentially result in direct and/or indirect effects to the bank swallow if this species begins nesting adjacent to the Project Area prior to construction. Work activities in the vicinity of a nest have the potential to result in forced fledging or nest abandonment. Suitable nesting habitat does not exist within Phases 2B and 3 Project Area and construction activities would occur in areas which are set back from the banks of the river. Implementation of avoidance measures listed in the 2010 EA/IS and 2019 SEA/IS would ensure construction activities would not adversely affect this species or its habitat.

Swainson's hawk. The Proposed Action could potentially result in direct and/or indirect effects to the Swainson's hawk if this species begins nesting adjacent to the Project Area prior to construction. Work activities in the vicinity of a nest have the potential to result in forced fledging or nest abandonment by adult hawk. Implementation of the avoidance and minimization measures listed in the 2010 EA/IS and the 2019 SEA/IS, would ensure work activities would not adversely affect this species or its habitat.

Tri-Colored blackbird. The Proposed Action is not likely to result in direct or indirect effects to the tri-colored blackbird. Although suitable nesting habitat exists within the Project Area, construction activities are not expected to adversely affect this habitat. Implementation of avoidance measures listed in the 2010 EA/IS and 2019 SEA/IS would ensure PG&E work activities would not adversely affect this species or its habitat.

Giant Garter Snake (GGS). Aquatic and terrestrial GGS habitat is not present within or adjacent to the Project Area.

Valley Elderberry Longhorn Beetle. The Proposed Action could potentially result in indirect affects to the VELB. USACE biologists mapped elderberry shrub locations in the Project Area in May 2020. The shrub locations (latitude and longitude) were recorded and 65 individual elderberry shrubs and 52 shrub clusters were identified within the Project Area. All shrubs were inventoried for height, width, and stem size. In addition, a certified arborist also surveyed vegetation in the vicinity of the proposed utility work in Phases 2B and 3. Arborist surveys identified three elderberry shrubs located in Phase 3 and one elderberry located in

Phase 2B, that would be in the vicinity of the proposed utility work, but would not conflict with PG&E work activities. USACE is reinitiating Section 7 ESA consultation with USFWS to address the effects of the Proposed Action on VELB. Additional elderberry shrubs would be protected in place. The mitigation measures listed in the 2010 EA/IS and the 2019 SEA/IS would avoid and minimize effects to elderberries in the Project Area. Compensatory mitigation is not anticipated. Once received, the amended BO would be included in the Appendix of the Final SEA/IS (Appendix D). All requirements of the BO would be implemented.

Migratory Birds. The Proposed Action could potentially result in direct and indirect effects to swallows, passerines, raptors, as well as other migratory birds. Swallow nests have been previously observed on the undersides of Highway 70 Bridge over the Yuba River, and other migratory birds have also been seen actively nesting in trees/shrubs near staging areas. PG&E activities in the vicinity of active nests have the potential to result in forced fledging or nest abandonment by these species during the breeding season. However, with implementation of appropriate avoidance and minimization measures, the Project is not expected to significantly affect these species or their habitat.

3.2.4.4 Mitigation

All applicable mitigation measures from the 2010 EA/IS and 2019 SEA/IS would be implemented to avoid or minimize adverse effects to special status species. Through the implementation of these measures, potential effects on special status species would be reduced below a significant level by CEQA standards. The Project may affect the VELB and its habitat, and may potentially affect special-status raptor species or other migratory birds. USACE previously formally consulted with USFWS for potential project effects on the VELB and GGS, and received a BO dated April 13, 2010. USACE reinitiated formal Section 7 ESA consultation with USFWS and received an amended BO, dated March 13, 2019. The Proposed Action may result in additional indirect effects (i.e., beyond those addressed in the 2010 and 2019 consultations) on the VELB; therefore, formal consultation has been reinitiated with USFWS to address the effects of the Proposed Action on VELB. All other elderberry shrubs in the Project Area that could be indirectly affected by Project work activities would be protected through implementation of BMPs as well as avoidance and minimization measures like protective fencing. The PG&E access route via Beale Road along the UPRR trestle would require buffers and a monitor during the entirety of the utility relocation that requires this access route since the access route, that is approximately a 15-foot wide path, would impinge on the recommended minimum buffer of 20-feet. Other routes would occur along service roads that are directly along waterside and landside of the levee in Phase 2B/3 and will not require mitigation.

Additionally, to mitigate any potential impacts to migratory birds every reasonable effort would be made to protect trees. If trees identified for removal in Section 3.2.5 would be removed during nesting season, surveying would be required prior to removal to identify active nests. Avoidance and minimization measures in coordination with USFWS and CDFW (as appropriate), would be incorporated to ensure that migratory bird species are not adversely affected during Project activities.

3.2.5 Air Quality

3.2.5.1 Regulatory Setting

The Air Quality Section of the 2010 EA/IS (USACE 2010) and subsequent 2019 SEA/IS (USACE 2019) sufficiently characterizes the regulatory setting for this resource.

3.2.5.2 Environmental Setting

The Air Quality Section of the 2010 EA/IS (USACE 2010) and subsequent 2019 SEA/IS (USACE 2019) sufficiently characterizes the affected environment and management for this resource.

3.2.5.3 Effects

Significance Criteria

General significance criteria have been established by the California Office of Planning and Research, to determine if the potential air quality impacts of a proposed project are significant, and would therefore require mitigation in an attempt to reduce the potential impacts to a less-than-significant level. Where available, these general criteria are supplemented with quantitative thresholds in terms of air quality parameters, separated into the three following categories:

1) Criteria pollutants relative to emission limits and ambient air quality standards;
2) TACs relative to public health impacts; and
3) Cumulative impacts.

Additionally, where available, the significance criteria established by the applicable air quality management district may be relied upon to make the following determinations (using CEQA guidelines). Adverse effects on air quality standards would be considered significant if the alternative:

1) Would conflict with or obstruct implementation of the applicable air quality plan.
2) Would violate any air quality standard or contribute substantially to an existing or projected air quality violation.
3) Would result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
4) Would expose sensitive receptors to substantial pollutant concentrations.
5) Would create objectionable odors affecting a substantial number of people.

Alternative 1 (No Action)

Under the No Action Alternative, the MRL Project would commence as described in the most recent environmental document (USACE 2019), with portions of Phase 3 proceeding to construction. Construction of the proposed levee improvements would have temporary, short-term effects on air quality. Routine operation and maintenance would continue on the existing levee. Air quality would be influenced by construction of the levee improvements from mobile and stationary sources including construction equipment, haul trucks, and worker vehicles.

Alternative 2 (Proposed Action)

Implementation of the proposed utility work associated with the levee improvements would result in temporary, short-term effects on air quality. There would be no long-term operational emission sources other than vehicle emissions associated with routine levee inspection and maintenance. Proposed work activities would result in air pollution emissions from mobile and stationary sources including construction equipment, haul trucks, and worker vehicles.

The Sacramento Metropolitan Air Quality Management District (SMAQMD) Road Construction Emissions Model (Model), Version 9.0.0 (May 2018), was utilized to calculate projected emissions for the utility work as it was previously approved for use by the FRAQMD for the Phases 2B and 3 Project. The Model was used to calculate the maximum annual emission estimates for criteria pollutants for the proposed work activities (Appendix A). The results from the Model were compared to the NAAQS *de minimis* thresholds and FRAQMD's standard emissions thresholds (Table 1). This comparison was used to determine the overall significance of projected emissions on air quality.

Table 1. PG&E Annual Emissions from Utility Work Activities.

Total Emissions	Pollutant (Tons/Year)					
	ROG	CO	NO_x	PM_{10}	$PM_{2.5}$	CO_{2e}
Phases 2B and 3 Utility Work Activities (2021)						
Total Mitigated[1]	1.02	21.8	2.34	17.06	3.69	5,503.59
Federal *De Minimis* Thresholds	50	100	100	70	100	N/A
FRAQMD Thresholds	4.5	N/A	4.5	14.5	N/A	N/A

[1] Mitigated numbers include on-model measures including 2010 and newer on-road vehicle fleet and Tier 4 off-road equipment (SMAQMD 2017).

3.2.5.4 Mitigation

Based on the air quality analysis, the projected emissions for PG&E work activities would not exceed federal *de minimis* thresholds; however, they would exceed local (FRAQMD) thresholds for PM_{10}. Impacts to air quality and GHGs resulting from the Proposed Action would be temporary and considered less-than-significant with implementation of the mitigation measures described below.

Mitigation measures to reduce air quality impacts during a project's construction phase are provided in FRAQMD's Indirect Source Review Guidelines (FRAQMD 2016). These measures were documented in the 2010 EA/IS and would be incorporated during PG&E utility activities. Additional mitigation measures were listed in Table 8 of the Phases 2B and 3 SEA/IS and would be incorporated during the proposed work activities as appropriate. After implementation of on-site mitigation measures, emissions that remain in excess of local thresholds would be reduced by contributing to the FRAQMD's off-site mitigation program (Carl Moyer Program) to further reduce air quality impacts below applicable thresholds of

significance.

3.2.6 Vegetation and Wildlife

3.2.6.1 Regulatory Setting

The Vegetation and Wildlife Section of the 2010 EA/IS (USACE 2010) sufficiently characterizes the regulatory setting for this resource, and the 2019 SEA/IS sufficiently addresses the actions causing or promoting the introduction or spread of invasive species.

3.2.6.2 Environmental Setting

The Vegetation and Wildlife Section of the 2010 EA/IS (USACE 2010) and 2019 SEA/IS (USACE 2019) sufficiently characterizes the affected environment and management for this resource.

3.2.6.3 Effects

Significance Criteria

An action would be considered to have a significant effect on vegetation and wildlife if it would result in any of the following:

- Substantial loss, degradation, or fragmentation of any sensitive natural communities or wildlife habitat identified by the CDFW, USFWS, or in any local or regional plans policies, or regulations.
- Substantial adverse impact on a sensitive natural community including federally protected wetlands and other waters of the U.S. as defined by Section 404 of the CWA, including but not limited to seasonal wetlands, rice fields, and irrigation ditches through direct removal, filling, hydrologic interruption, or other means.
- Substantial reduction in the quality or quantity of important habitat, or access to such habitat, or wildlife species.

Alternative 1 (No Action)

Under the No Action Alternative, the MRL Project would commence as described in the most recent environmental document (USACE 2019), with portions of Phase 3 proceeding to construction. Vegetation and wildlife communities in the Project Area would remain the same as was previously described in the most recent environmental document (USACE 2019).

Alternative 2 (Proposed Action)

The 2019 supplemental USFWS CAR (USFWS 2019) evaluated the impacts on fish and wildlife resources resulting from construction of the proposed levee improvements in Phases 2B and 3. Another Supplemental CAR is being prepared by USFWS to include evaluation of the additional impacts from the utility work associated with the Phases 2B and 3 levee improvements (anticipated December 2020). The Supplemental CAR may contain additional recommendations to mitigate any adverse impacts to fish and wildlife resources and their habitat resulting from vegetation removal in the Project Area. The Final Supplemental CAR would be included as an Appendix (Appendix B) to the Final SEA/IS.

Removal of vegetation to utilize access roads by PG&E equipment would not be required. Areas of permanent easement associated with gas and electric facilities (which

would be obtained by CVFPB in coordination with PG&E) would restrict trees from being located within 15 feet of the pipelines and 30 feet of the electric facilities. Additionally, removal of vegetation up to 50 feet from the larger TSP installation site would need to occur to accommodate installation activities. California Public Utilities Commission General Order 95 requires that vegetation maintenance activities be conducted to ensure significant space exists between the electrical line and vegetation for purposes of providing a safe clearance.

Phase 2B.

Woodland Habitat. Woodland habitat on the waterside of the levee would be permanently affected by the proposed gas and electric utility work activities. Tree surveys were conducted in May and July 2020 for Phases 3 and 2B respectively to update and accurately provide a complete count of all trees that would need to be removed to safely relocate distribution and transmission power lines.

In Phase 2B there would be approximately 60 stems, with a diameter at breast height (DBH) greater than four inches, and approximately 26 stems of brush to be cut and removed from the Project Area due to new utility pole installations for necessary clearances needed around the utilities. There are approximately six stems of trees to be cut and removed that are growing in close proximity to residential areas and three Date Palms would possibly need to be cut and removed if the utility lines would be closer than 10 feet from the trees. There is a portion of undeveloped land, east of the PG&E substation where approximately 10 stems of California black walnut trees would be cut and removed to allow for aerial utility lines to pass through an area or installation of new utility poles. In this same footprint, approximately 10 stems of common hackberry and approximately 20 stems of various brush species including willow, coyote brush, and small multi-stemmed sprouting black walnut, would also be removed. There are five walnut trees in one area that would be removed to facilitate gas transmission pipeline relocation. Planned tree removals in Phase 2B are listed in Table 2. The tree boles are comprised of multiple stems or a single trunk and the sizes were not independently measured, but instead, based on a range provided by the Arborist.

Since there are continuous portions of natural habitat surrounding this area, there would be no concern of habitat fragmentation. Additionally, woodland habitat loss would be mitigated for as described in Section 3.2.4.4. Therefore, no significant adverse effects on riparian woodland habitat, or the species dependent on this habitat type, are expected in Phase 2B. Project timelines prevent removing trees in the non-nesting season, therefore tree removals would occur during the nesting season for raptors and passerine birds, and would require surveying to identify active nests prior to any tree removals or trimming. Avoidance and minimization measures in coordination with USFWS and CDFW (as appropriate), would be incorporated to ensure that migratory bird species are not adversely affected during work activities.

Table 2. Tree Removals Phase 2B.

Species	Number of stems	Average DBH Range	Location (Lat. and Long.)	Notes
Date Palm *(Phoenix dactylifera)*	3	24” – 35.9”	39° 8'14.18"N 121°35'3.87"W	Trees spaced 18 feet from each other; trees may not need to be removed.
CA black walnut *(Juglans californica)*	1	36” +	39° 8'35.22"NW 121°34'56.67" W	
Tree of Heaven *(Ailanthus altissima)*	4	Brush units < 4”	39° 8'26.99"N 121°34'59.63" W	4 trees < 8 ft. tall
CA black walnut *(Juglans californica)*	2	Brush units < 4”	39° 8'17.19"N 121°34'56.36" W	Multi-stem
CA black walnut *(Juglans californica)*	5	6”-42”	39° 8'11.66"N 121°35'3.54"W	Multi-stem
CA black walnut *(Juglans californica)*	8	4”-11.9”	39° 8'18.71"N 121°34'56.70" W	
CA black walnut *(Juglans californica)*	2	Greater than or equal to 36”	39° 8'22.22"N 121°34'56.34" W and 39° 8'22.18"N 121°34'54.91" W	
Common hackberry *(Celtis occidentalis)*	10	4”-11.9”	39° 8'22.12"N 121°34'55.83" W	
Misc. brush (willow, coyote brush, black walnut)	20	Brush units < 4”	39° 8'22.08"N 121°34'54.27" W	
Tree of Heaven *(Ailanthus altissima)*	2	4”-11.9”	39° 8'14.92"N 121°35'0.10"W	
CA black walnut	2	12”-23.9”	39° 8'14.92"N	

Species	Number of stems	Average DBH Range	Location (Lat. and Long.)	Notes
(Juglans californica)			121°35'0.10"W	
American elm *(Ulmus Americana)*	2	12”-23.9”	39° 8'15.03"N 121°35'0.52"W	
CA black walnut *(Juglans californica)*	1	36” +	39° 8'11.62"N 121°35'3.54"W	Approximate location; gas transmission workspace
CA black walnut *(Juglans californica)*	1	12” – 23.9”	39° 8'11.62"N 121°35'3.54"W	Approximate location; gas transmission workspace
CA black walnut *(Juglans californica)*	1	12” – 23.9”	39° 8'11.62"N 121°35'3.54"W	Approximate location; gas transmission workspace
CA black walnut *(Juglans californica)*	1	4” – 11.9”	39° 8'11.62"N 121°35'3.54"W	Approximate location; gas transmission workspace
CA black walnut *(Juglans californica)*	1	12” – 23.9”	39° 8'11.62"N 121°35'3.54"W	Approximate location; gas transmission workspace
CA black walnut *(Juglans californica)*	1	36” +	39° 8'2.02"N 121°34'48.42" W	
CA black walnut *(Juglans californica)*	2	24”-35.9”	39° 8'2.47"N 121°34'48.91" W	East side of the Yuba River.
CA black walnut *(Juglans californica)*	4	12”	39° 8'2.47"N 121°34'48.91" W	East side of the Yuba River.

Phase 3. In Phase 3, there are approximately 59 stems that would be cut and removed measuring greater than four inches DBH and two stems less than four inches DBH. There are approximately six Valley oak trees that would need to be removed. Additionally, there are six English walnut trees that are in an orchard that would have to be cut and removed due to new utility poles being installed. Since the number of trees that would be removed is minimal in relation to the size of the entire orchard (approximately 9.7 acres), there would not be significant impacts on wildlife that use the area or the walnut trees. If the utility poles being installed are wooden, these would likely be used by raptors as a perching area while hunting for prey and would be beneficial.

There is a location where two utility lines would be in close proximity to each other and would require a small area cleared around the lines. The affected area is approximately 0.30 acres and contains two English walnut trees, two Fremont cottonwoods, two box elder maples, one fig tree, and two almond trees. The number of stems that would be removed is not a large number considering there are numerous contiguous natural trees surrounding three quarters of this area and would not be creating any habitat fragmentation. The newly opened area could have the potential to eventually attract small rodents to the area to forage.

Lastly, there are eight almond trees in an orchard that would need to be cut and removed. Removal of these eight trees would be small in relation to the whole orchard, which is approximately 28 acres in size. Planned tree removals and trimming in Phase 3 are listed in Table 3. Woodland habitat loss would mitigate for as described in Section 3.2.4.4, therefore, no significant adverse effects on riparian woodland habitat, or the species dependent on this habitat type, are expected in Phase 3. Tree removals would occur during the nesting season for raptors and passerine birds and would require surveying to identify active nests prior to any tree removals or trimming. Avoidance and minimization measures in coordination with USFWS and CDFW (as appropriate), would be incorporated to ensure that migratory bird species are not adversely affected during work activities.

Table 3. Tree Removals and Trimming Phase 3.

Species	Number of stems	Average DBH Range	Location (Lat. and Long.)	Notes
Almond *(Prunus dulcis)*	2	24” – 35.9”	39° 9'41.74"N 121°33'36.40"W	
CA black walnut *(Juglans californica)*	1	12” - 23.9”	39° 9'42.15"N 121°33'36.16"W	
CA black walnut *(Juglans californica)*	5	4” - 11.9”	39° 9'40.02"N 121°33'37.66"W	
CA black walnut *(Juglans californica)*	2	> 36”	39° 9'40.86"N 121°33'37.11"W And 39° 9'40.65"N 121°33'37.07"W	
Fig *(Ficus sp.)*	6	12” - 23.9”	39° 9'39.55"N 121°33'38.03"W	
Valley oak *(Quercus lobata)*	2	4” - 11.9”	39° 9'41.01"N 121°33'37.03"W	
CA black walnut *(Juglans californica)*	4	> 36”	-	
CA black walnut *(Juglans californica)*	10	> 36”	39° 9'38.41"N 121°33'38.66"W	
Black locust *(Robinia pseudoacacia)*	2	24” - 35.9”	39° 9'37.39"N 121°33'40.14"W	
Boxelder maple *(Acer negundo)*	1	> 36”	-	
Fremont cottonwood *(Populus fremontii)*	1	> 36”	39° 9'32.95"N 121°33'46.03"W	
Valley oak *(Quercus lobata)*	4	24” - 35.9”	39° 9'14.09"N 121°34'10.65"W And 39° 9'14.05"N 121°34'10.43"W And 39° 9'14.01"N 121°34'9.79"W	

Species	Number of stems	Average DBH Range	Location (Lat. and Long.)	Notes
			And 39° 9'14.04"N 121°34'9.71"W	
CA black walnut *(Juglans californica)*	1	12” - 23.9”	39° 9'14.72"N 121°34'11.41"W	Multi-stem
English walnut *(Juglans regia)*	1 (orchard)	4” - 11.9”	39° 9'14.07" 121°34'12.62"W	
English walnut *(Juglans regia)*	1 (orchard)	4” - 11.9”	39° 9'13.51"N 121°34'13.12"W	
English walnut *(Juglans regia)*	1 (orchard)	4” - 11.9”	39° 9'11.96"N 121°34'15.27"W	
English walnut *(Juglans regia)*	1 (orchard)	4” - 11.9”	39° 9'10.68"N 121°34'16.86"W	
English walnut *(Juglans regia)*	1 (orchard)	4” - 11.9”	39° 9'9.40"N 121°34'18.52"W	
English walnut *(Juglans regia)*	1 (orchard)	4” - 11.9”	39° 9'7.66"N 121°34'20.88"W	
English walnut *(Juglans regia)*	1 (orchard)	4” - 11.9”	39° 9'3.21"N 121°34'27.79"W	
Western sycamore *(Platanus racemosa)*	1	> 36”	39° 8'56.33"N 121°34'35.06"W	
English walnut *(Juglans regia)*	2	> 36”	Approximately 39° 8'54.66"N 121°34'38.67"W	Polygon area of approximately .31 acres will have all shrubs and trees removed.
Fremont cottonwood *(Populus fremontii)*	2	24” - 35.9”	Approximately 39° 8'54.66"N 121°34'38.67"W	Polygon area of approximately .31 acres will have all shrubs and trees removed.
Boxelder maple *(Acer negundo)*	2	24” - 35.9”	Approximately 39° 8'54.66"N 121°34'38.67"W	Polygon area of approximately .31 acres will have all shrubs and trees removed.
Fig *(Ficus sp.)*	1	> 36”	Approximately 39° 8'54.66"N 121°34'38.67"W	Polygon area of approximately .31 acres will have all shrubs and trees

Species	Number of stems	Average DBH Range	Location (Lat. and Long.)	Notes
				removed.
Almond *(Prunus dulcis)*	2	24” - 35.9”	Approximately 39° 8'54.66"N 121°34'38.67"W	Polygon area of approximately .31 acres will have all shrubs and trees removed.
Red Mulberry *(Morus rubra)*	1	> 36”	Approximately 39° 8'54.66"N 121°34'38.67"W	Polygon area of approximately .31 acres will have all shrubs and trees removed.
Palm tree *(Arecaceae)*	1	24” - 35.9”	Approximately 39° 8'54.66"N 121°34'38.67"W	Polygon area of approximately .31 acres will have all shrubs and trees removed.
Fremont cottonwood *(Populus fremontii)*	3	12” - 23.9”	Approximately 39° 8'54.66"N 121°34'38.67"W	Polygon area of approximately .31 acres will have all shrubs and trees removed.
Tree of Heaven *(Ailanthus altissima)*	2	Brush units	39° 8'53.73"N 121°34'40.45"W	
Sweetgum *(Liquidamber styraciflua)*	1	12” - 23.9”	39° 8'53.87"N 121°34'40.18"W	
Southern catalpa *(Catalpa bignonioides)*	1	24” - 35.9”	39° 8'53.48"N 121°34'40.21"W	
Red Mulberry *(Morus rubra)*	3	4” - 11.9”	39° 8'53.18"N 121°34'41.27"W	
Red Mulberry *(Morus rubra)*	1	24” - 35.9”	39° 8'53.18"N 121°34'41.27"W	
River oak *(Casuarina cunninghamiana)*	1	12” - 23.9”	39° 8'52.64"N 121°34'41.79"W	
Almond *(Prunus dulcis)*	8 (orchard)	4” - 11.9”	Approximate locations: 39° 8'50.54"N 121°34'43.63"W; 39° 8'49.24"N 121°34'45.19"W;	Estimated number of trees; PG&E did not stake the locations; average DBH 10”

Species	Number of stems	Average DBH Range	Location (Lat. and Long.)	Notes
			39° 8'47.78"N 121°34'46.94"W; 39° 8'46.53"N 121°34'48.44"W; 39° 8'45.21"N 121°34'50.03"W; 39° 8'43.90"N 121°34'51.59"W; 39° 8'42.55"N 121°34'53.21"W; 39° 8'41.05"N 121°34'55.01"W	
CA black walnut *(Juglans californica)*	1	> 36”	39° 8'36.78"N 121°34'55.79"W	
English walnut *(Juglans regia)*	1	> 36”	39° 8'37.23"N 121°34'56.20"W	
Boxelder maple *(Acer negundo)*	1	12” - 23.9”	39° 8'36.77"N 121°34'56.35"W	
Chinese elm *(Ulmus parvifolia)*	1	12” - 23.9”	39° 8'51.71"N 121°34'45.42"W	
CA black walnut *(Juglans californica)*	5	24” - 35.9”	39° 8'35.22"N 121°34'56.67"W	
Tasmanian blue gum *(Eucalyptus globulus)*	1	12” - 23.9”	39° 8'57.60"N 121°34'37.69"W	
Pinus sp.	1 (Trim)	12” - 23.9”	39° 9'18.60"N 121°34'10.99"W	Tree would likely only need some branches trimmed.

3.2.6.4 Mitigation

Project activities resulting in impacts to vegetation and wildlife, including a loss of woodland habitat, would be reduced to less-than-significant levels with implementation of the mitigation measures applicable from the 2010 EA/IS and 2019 SEA/IS. The amount of acreage required to mitigate for removal of woody riparian vegetation would be determined by USFWS and discussed in the Final Supplemental CAR (anticipated February 2021). Additionally, mitigation of woodland acreage would be compensated for by purchasing credits at a USFWS-approved conservation bank within the MRL Phases 2B and 3 approved service area.

Additionally, BMPs would be implemented during construction and operations phases to reduce the risk of introducing invasive species to the Project Area or transporting such species from the Project Area. BMPs would be developed in accordance with the directives of the California Invasive Plant Council, the California Aquatic Invasive Species Management Plan, and the National Invasive Species Council.

3.2.7 Cultural Resources

3.2.7.1 Regulatory Setting

The Cultural Resources Section of the 2019 SEA/IS (USACE 2019) sufficiently characterizes the regulatory setting for this resource.

3.2.7.2 Environmental Setting

The Cultural Resources Section of the 2019 SEA/IS (USACE 2019) sufficiently characterizes the affected environment for this resource.

3.2.7.3 Effects

USACE has previously reached a finding of "no adverse effects to historic properties", with conditions, for the Project. USACE is in the process of completing compliance activities for all utility relocations in Phases 2B and 3, with the exception of the three buried electrical utility lines described in section 3.2.3.2 of this report (Map 12), which will be the subject of forthcoming supplementary consultation. The in-progress consultation includes historic property identification for the majority of utility locations outside the original APE (utilities shown outside the current APE, Maps 3-10). This complies with the required identification of historic properties specified in 36 CFR §800.4 and changes in the project APE as outlined in the MOA between USACE and the California SHPO for these areas. Consultation with potentially interested Native American Tribes was also completed and consultation with the SHPO regarding the proposed finding of effect for these utilities initiated on 11 Jan 2021, as specified in 36 CFR §800.4 through §800.5. Concurrence on a finding of "no adverse effects to historic properties" regarding these activities is expected shortly.

USACE is also working on a supplementary consultation effort regarding the remaining buried utility lines; together the two consultations will cover all of the PG&E relocations. Once the identification of historic properties for the buried utility lines has been completed, USACE will consult with the SHPO and Native American Tribes with interests in the Project area. Consultation is expected to conclude by early 2021.

3.2.7.4 Mitigation

The finding of "no adverse effects to historic properties" is expected to be carried forward for the PG&E relocations, and as such, no mitigation would be required to resolve adverse effects to historic properties pursuant to 36 CFR §800.6. However, if adverse effects are identified, USACE would comply with the procedures in 36 CFR §800.13.

3.2.8 Agriculture and Prime and Unique Farmland

3.2.8.1 Regulatory Setting

"Unique farmland is land other than prime farmland that is used for the production of specific high-value food and fiber crops, such as citrus, tree nuts, olives, cranberries, and other fruits and vegetables. It has the special combination of soil quality, growing season, moisture supply, temperature, humidity, air drainage, elevation, and aspect needed for the soil to economically produce sustainable high yields of these crops when properly managed. The water supply is dependable and of adequate quality. Nearness to markets is an additional consideration. Unique farmland is not based on national criteria. It commonly is in areas where there is a special microclimate, such as the wine country in California." (NRCS 2019). The Agriculture and Prime and Unique Farmland Section of the 2010 EA/IS (USACE 2010) sufficiently characterizes the regulatory setting for this resource.

3.2.8.2 Environmental Setting

Phase 2B. This portion of the MRL Project was adequately described in the previous joint NEPA/CEQA documentation (USACE 2010), under 'Phase 2' which described the environmental setting in detail.

Phase 3. There are approximately 1.56 acres of Unique farmland located along the northeastern portion of Phase 3 in the Project Area. Additionally, the southeastern portion of Phase 3 contains approximately 1.43 acres of Unique farmland and 0.25 acres of Prime farmland (See Figures 13 and 14).

Figure 13. Unique Farmland and Farmland of Statewide Importance in Northeastern Portion of Phase 3.

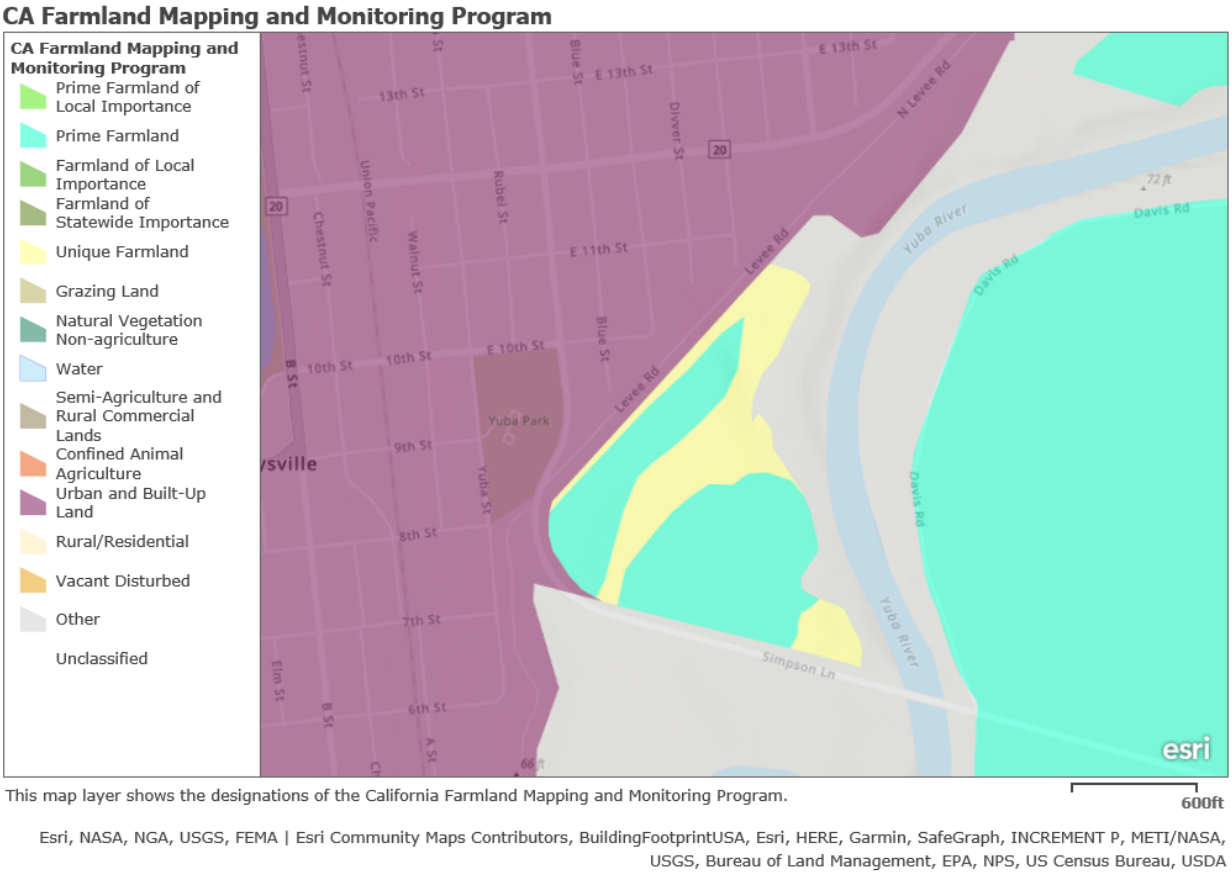

Figure 14. Prime and Unique Farmland in Southeastern Portion of Phase 3.

3.2.8.3 Effects

Significance Criteria

An action would be considered to have a significant effect on agriculture or Prime and Unique farmland if it would result in any of the following:

- 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.
- Conflict with existing zoning for agricultural use, or a Williamson Act contract.
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use.

Alternative 1 (No Action)

Under the No Action Alternative, the MRL Project would commence as described in the most recent environmental document (USACE 2019), with portions of Phase 3 proceeding to construction. There would be no permanent loss of Prime or Unique farmlands, or farmlands of Statewide Importance associated with construction of Phases 2B and 3. The physical features

of Phases 2B and 3 would remain within the existing footprint in most areas, including where Prime and Unique farmlands are present. There would be some temporary, short-term effects to Prime and Unique farmlands and local agriculture. Agricultural production would continue in the area at its current level after the completion of the levee improvements.

Alternative 2 (Proposed Action)

Staging areas for the proposed work activities are situated to avoid Prime and Unique farmlands. All use of privately owned farmland would need to be negotiated with the landowners prior to the start of construction. Most effects to these lands would be temporary and landowners would be able to return to their normal agricultural operations following completion of the utility work activities. However, the Proposed Action would result in some permanent impacts to orchard trees including removal of 10 English walnut trees (*Juglans regia*). Figure 15 below, shows one of the walnut trees that would be removed. These orchard trees are growing in land designated as 'Other' on the California Mapping and Farmland webpage. The seven walnut trees would need to be removed due to installation of new utility poles. The average DBH of these seven trees is 10 inches.

Figure 15. English Walnut Identified for Removal in Phase 3.

Additionally, there are eight almond trees (*Prunus dulcis*) that require removal from an orchard that falls within Unique farmland, with an example photo shown in Figure 16 below. The average DBH of these eight almond trees is 10 inches. New utility poles would be installed where these trees are currently growing.

Project activities would not result in the loss of Prime Farmlands, Unique Farmland, or Farmland of Statewide Importance. Concurrently, the Project would not cause a conflict with existing zoning or lands conserved under the Williamson Act, and Project Activities would not cause any farmland to be permanently taken out of production. Therefore, no effects to Agriculture or Prime and Unique Farmland are expected to result from the Project. Compensation for property impacts would be addressed and negotiated through the right-of-way process and acquisition of real estate easements.

Figure 16. Row of almond trees in a portion of Unique farmland in Phase 3.

3.2.8.4 Mitigation

All applicable mitigation measures from the 2010 EA/IS would be implemented to avoid or minimize adverse effects to agriculture and areas designated as Prime and Unique Farmland. Effects to these lands would be temporary and landowners would be able to return to their normal agricultural operations following completion of the utility work activities.

4.0 CUMULATIVE IMPACTS

NEPA and CEQA regulations require the discussion of project effects that, when combined with the effects of other projects, result in significant cumulative effects. The NEPA regulations define a cumulative effect as:

"The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor or collectively significant actions taken over a period of time" (40 CFR 1508.7).

The CEQA Guidelines define cumulative effects as:

"Two or more individual effects which, when considered together, compound or increase other environmental impacts" (Section 15355).

The cumulative impact analysis captures the effects that result from the Proposed Action in combination with the effects of other actions in the same geographic area within the timeframe of the Proposed Action. This SEA/IS considers the past, present, and reasonably foreseeable short-term and long-term effects of implementing the Proposed Action.

Chapter 3.0 of the SEA/IS identifies potential direct and indirect environmental effects of the Proposed Action. These effects are assessed in terms of their potential to combine with similar environmental effects of the local projects listed below, resulting in cumulative impacts. This analysis is focused on considering the potential for those impacts identified in Chapter 3.0 to create a considerable contribution that would result in significant adverse cumulative effects.

The Proposed Action would likely have no adverse cumulative effects on greenhouse gases, wetlands and other waters of the U.S., surface water (including water quality), public utilities, or cultural resources. The effects of the Proposed Action would result in cumulative impacts to vegetation and special status species; however, no net loss of these resources would occur through implementation of compensatory mitigation measures. There would be short-term cumulative impacts on traffic, air quality, as well as agriculture and Prime and Unique Farmland as a result of the Proposed Action. The amounts of traffic and emissions would increase due to utility work activities and mitigation measures would be implemented to reduce these effects. Significance of cumulative effects is determined by meeting federal and state mandates as well as specified criteria identified in this document for affected resources.

4.1 Geographic Scope

The extent of the geographic area that may be affected varies depending on the resource under consideration. Each of the projects considered below are limited to those that have similar potential effects and could interact with impacts generated by the Proposed Action. The following are the general geographic areas associated with the different resources addressed in the analysis:

- Air Quality: regional (area under the jurisdiction of the FRAQMD, consisting of Yuba and Sutter Counties).
- Agriculture and Prime and Unique Farmland: City of Marysville (the city is the local

agency with land use authority) and Yuba County for unincorporated areas on the waterside of the levees.

- Traffic and Circulation: regional (roadways in the Project Area where traffic generated by multiple projects might interact on a cumulative basis).
- Cultural Resources: local (cultural resource sites are stationary and effects are typically limited to the borders of a project site).

4.2 Local Projects

This section briefly describes other major local, state, and federal projects near the Project Area. Evaluation of these projects is required to evaluate the effects of the Proposed Action on the environmental resources in the area. In addition, mitigation or compensation measures must be developed to avoid or reduce any adverse effects to less-than-significant based on federal, state, and local agency criteria. Effects that cannot be avoided or reduced to less-than-significant are more likely to contribute to cumulative effects in the area.

4.2.1 Local Development Projects

North Beale Road Complete Street Revitalization Project (Phase 2)

Phase 2 of the project would consist of various improvements from Hammonton-Smartville Road to Linda Avenue. Yuba County previously received funding to design the entire corridor of North Beale Road from Lindhurst Avenue to Griffith Avenue and to acquire the rights-of-way necessary for Phase 2 (completed 2016). Phase 1 construction began in 2016 and Phase 2 construction is anticipated to begin in 2021.

Yuba 70 Continuous Passing Lanes Project

The California Department of Transportation (Caltrans) proposes a project on State Route 70 from Laurellen Road to Honcut Creek Bridge in Yuba County, California, north of Marysville. The project proposes to provide additional pavement to a separate safety project to achieve a 4-lane facility with 8-foot shoulders and a continuous two-way left turn lane bounded by a minimum 20-foot Clear Recovery Zone. At county-maintained roads and certain agriculture-related businesses, the project will provide designated left turn pockets and intersections/driveways that reflect the tractor trailer traffic associated with agricultural operations in this area. The proposed project would connect to two projects; one presently in construction and one planned for future construction. At the south end of the proposed project in the summer of 2019, the Simmerly Slough Bridge Replacement construction was initiated. In 2022, at the north end of the proposed project, the Butte 70 Safety and Capacity Project will construct a five-lane facility. The proposed project does not conflict with other reasonably foreseeable transportation projects in this segment of SR 70.

Natomas Basin Project

The Sacramento Area Flood Control Agency (SAFCA) implemented the Natomas Levee Improvement Project between 2007 and 2010 to improve levees surrounding the Natomas Basin, and Natomas Basin Project was authorized in 2014, allowing USACE to complete the construction of the levee improvements that SAFCA initiated. The Natomas Basin includes portions of Sacramento and Sutter Counties as well as a portion of the City of Sacramento, California. The Natomas Basin levees are divided into nine reaches including Reach D on the Natomas Cross Canal in Sutter County and Reach E on the Pleasant Grove

Creek Canal in Sutter County. Construction on Reach D (and Reach I on the American River) began in 2018 and is anticipated to continue into 2020. Construction on other reaches of the Natomas Project are anticipated to begin in 2019 and continue through 2024, with some reaches to be constructed concurrently.

4.3 Analysis of Potential Cumulative Effects

4.3.1 Traffic

The Proposed Action would overlap with the construction activities of other local projects, including construction of levee improvements in Phases 2B and 3. To the greatest extent possible, access for work activities would be achieved through existing public and private roads. This would result in short-term traffic level increases on some local and regional roadways and temporarily decrease the Level of Service in these areas. It is expected that traffic impacts from other projects in the City of Marysville would be similar in that impacts would be primarily from equipment and material hauling to and from the proposed project sites.

All applicable mitigation measures from the 2010 EA/IS and 2019 SEA/IS would be implemented to reduce any short-term effects on traffic. To further minimize impacts on traffic, some work activities would be implemented outside of Yuba County's construction exempt hours (7:00 a.m. – 10:00 p.m.). PG&E would obtain all applicable permits including a Construction Encroachment Permit for work that would be performed on the public ROW, and any city permits for work activities outside of construction exempt hours. PG&E would be responsible for preparing a Traffic Control Plan to minimize traffic flow interference, and for coordinating with state, county, and city agencies as appropriate, to reduce adverse effects on traffic.

Although there would be an increase in traffic in the Project Area, this increase would be short-term (only lasting a single construction season) and would be reduced to less-than-significant levels with implementation of the mitigation measures discussed above. Therefore, the Proposed Action would not significantly contribute to cumulative impacts.

4.3.2 Air Quality

The Proposed Action would result in a direct effect on air quality from construction-generated criteria air pollutants and precursor compounds. It is expected that local project impacts are similar to the Proposed Action and would be primarily from construction activities, including truck travel (material transport) and equipment operation at work area and staging area locations. If the local projects are implemented concurrently with the Proposed Action, the combined cumulative effect could surpass CEQA and *de minimis* thresholds for air quality emissions. Without consideration for scheduling and sequence of activities, concurrent construction projects within Sutter and Yuba County could result in significant adverse cumulative air quality impacts.

However, any significant adverse cumulative impacts to air quality would be temporary and intermittent based on limitations and variations in construction timeframes. Emissions generated from the Proposed Action would exceed local (FRAQMD) thresholds for PM_{10}. Emissions generated from the Proposed Action would be mitigated below significance thresholds through incorporation of mitigation measures documented in the 2010 EA/IS and the 2019 SEA/IS during PG&E utility activities, therefore, based on the analysis and review,

the Proposed Action would not significantly contribute to air quality cumulative impacts.

4.3.3 Agriculture and Prime and Unique Farmland

Most effects from the Proposed Action would be temporary and landowners would be able to return to their normal agricultural operations following completion of the utility work activities. However, the Proposed Action would result in the removal of orchard trees along Phase 3 and individual landowners would require compensation for the permanent loss of their seasonal profits. Impacts from other local projects on agriculture and important farmland (Prime farmland, farmland of Statewide Importance, farmland of local importance, and Unique farmland) are anticipated to be similar to those of the Proposed Action. However, because important farmland in Yuba County comprises approximately 83,562 acres in total, even when project impacts are combined, they are not anticipated to be cumulatively significant.

Utility work activities resulting in adverse effects to agriculture and areas designated as Unique farmland would be reduced to less-than-significant levels with implementation of mitigation measures described in Section 3.2.6.4 and in the 2010 EA/IS.

4.4 Growth-Inducing Effects

The Proposed Action would not directly induce growth, result in population increases, or encourage and facilitate other activities that could significantly affect the environment. Local population growth and development would be consistent with the Land Use Element of the Yuba County General Plan Update (Yuba County 2030). The goal of the Proposed Action alternative is to facilitate the construction levee improvements along the Marysville Ring Levee that meet USACE requirements for levee height and width. The proposed MRL improvements would reduce the risk of levee failure in the Project Area, therefore reducing the risk of flooding to the city of Marysville. The city of Marysville is self-contained and completely surrounded by the ring levee which inhibits potential for future growth or expansion. In addition, construction, operation, and maintenance of the improved levee would not result in a substantial increase in the number of permanent workers or employees.

5.0 COORDINATION AND REVIEW OF SEA/IS

The draft SEA/IS, draft Mitigated FONSI, and draft Mitigated Negative Declaration was circulated for 30 days (December 14 to January 12) to agencies, organizations, and individuals known to have interest in the Marysville Ring Levee Project. No public comments were received; however, PG&E did provide some clarifying comments on the proposed project features. These have been incorporated into the final SEA/IS, as described in the responses to the PG&E comments included in Appendix E. Electronic copies of this final SEA/IS have been posted on the USACE website and a link to that website is provided on the CVFPB website. A hard copy is available at the Yuba County library in Marysville, the Yuba County Clerk's Office, and CVFPB office. This final document will also be provided upon request. The Project is being coordinated with interested Native American Tribes and with all relevant government agencies, including USFWS, CDFW, the SHPO, the City of Marysville, and Yuba County.

6.0 LIST OF PREPARERS

USACE, Sacramento District, CVFPB (represented by DWR staff), MGE Engineering, Inc., and the Marysville Levee Commission contributed technical information or reviewed the SEA/IS. Principal report analysts, authors, and reviewers are listed below.

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APPENDICES

APPENDIX A

AIR QUALITY EMISSIONS SPREADSHEETS

Road Construction Emissions Model — Version 9.0.0

Data Entry Worksheet

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

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

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Input Type

Project Name	MRL Project Phases 2B and 3 (Utility Relocation)	
Construction Start Year	2021	Enter a Year between 2014 and 2040 (inclusive)
Project Type For 4. Other Linear Project Type, please provide project specific off-road equipment population and vehicle trip data	4	1) New Road Construction : Project to build a roadway from bare ground, which generally requires more site preparation than widening an existing roadway 2) Road Widening : Project to add a new lane to an existing roadway 3) Bridge/Overpass Construction : Project to build an elevated roadway, which generally requires some different equipment than a new roadway, such as a crane 4) Other Linear Project Type: Non-roadway project such as a pipeline, transmission line, or levee construction
Project Construction Time	4.00	months
Working Days per Month	30.00	days (assume 22 if unknown)
Predominant Soil/Site Type: Enter 1, 2, or 3 (for project within "Sacramento County", follow soil type selection instructions in cells E18 to E20 otherwise see instructions provided in cells J18 to J22)	1	1) Sand Gravel : Use for quaternary deposits (Delta/West County) 2) Weathered Rock-Earth : Use for Laguna formation (Jackson Highway area) or the Ione formation (Scott Road, Rancho Murieta) 3) Blasted Rock : Use for Salt Springs Slate or Copper Hill Volcanics (Folsom South of Highway 50, Rancho Murieta)
Project Length	3.00	miles
Total Project Area	58.60	acres
Maximum Area Disturbed/Day	29.30	acres
Water Trucks Used?	1	1. Yes 2. No

Please note that the soil type instructions provided in cells E18 to E20 are specific to Sacramento County. Maps available from the California Geologic Survey (see weblink below) can be used to determine soil type outside Sacramento County.

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

Material Hauling Quantity Input

Material Type	Phase	Haul Truck Capacity (yd³) (assume 20 if unknown)	Import Volume (yd³/day)	Export Volume (yd³/day)
Soil	Grubbing/Land Clearing			
	Grading/Excavation			
	Drainage/Utilities/Sub-Grade			
	Paving			
Asphalt	Grubbing/Land Clearing			
	Grading/Excavation			
	Drainage/Utilities/Sub-Grade	20.00	345.50	
	Paving			

Mitigation Options

On-road Fleet Emissions Mitigation	2010 and Newer On-road Vehicles Fleet
Off-road Equipment Emissions Mitigation	Tier 4 Equipment
Will all off-road equipment be tier 4?	All Tier 4 Equipment

Select "2010 and Newer On-road Vehicles Fleet" option when the on-road heavy-duty truck fleet for the project will be limited to vehicles of model year 2010 or newer.
Select "20% NOx and 45% Exhaust PM reduction" option if the project will be required to use a lower emitting off-road construction fleet. The SMAQMD Construction Mitigation Calculator can be used to confirm compliance with this mitigation measure (http://www.airquality.org/Businesses/CEQA-Land-Use-Planning/Mitigation).
Select "Tier 4 Equipment" option if some or all off-road equipment used for the project meets CARB Tier 4 Standard

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

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

Construction Periods	User Override of Construction Months	Program Calculated Months	User Override of Phase Starting Date	Program Default Phase Starting Date
Grubbing/Land Clearing	0.60	0.40		1/1/2021
Grading/Excavation	0.50	1.60		1/17/2021
Drainage/Utilities/Sub-Grade	2.75	1.40		2/2/2021
Paving	0.25	0.60		4/27/2021
Totals (Months)		4		

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

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

2010+ Model Year Mitigation Option Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Grading/Excavation (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Draining/Utilities/Sub-Grade (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Paving (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Grubbing/Land Clearing (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling Emissions	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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

Asphalt Hauling Emissions User Input	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing				0	0.00
Miles/round trip: Grading/Excavation				0	0.00
Miles/round trip: Drainage/Utilities/Sub-Grade	24.00			13	312.00
Miles/round trip: Paving				0	0.00

Road Construction Emissions Model, Version 8.1.0

2010+ Model Year Mitigation Option Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Grading/Excavation (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Draining/Utilities/Sub-Grade (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Paving (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Grubbing/Land Clearing (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.03	0.29	2.21	0.08	0.03	0.01	1,223.87	0.00	0.19	1,281.24
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.01	0.09	0.00	0.00	0.00	50.48	0.00	0.01	52.85
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.01	0.09	0.00	0.00	0.00	50.48	0.00	0.01	52.85

Road Construction Emissions Model, Version 8.1.0

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

Worker Commute Emissions	User Override of Worker			
User Input	Commute Default Values	Default Values		
Miles/ one-way trip	45		Calculated	Calculated
One-way trips/day	72		Daily Trips	Daily VMT
No. of employees: Grubbing/Land Clearing	6		432	19,440.00
No. of employees: Grading/Excavation	6		432	19,440.00
No. of employees: Drainage/Utilities/Sub-Grade	36		2592	116,640.00
No. of employees: Paving	0		0	0.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.02	1.10	0.10	0.05	0.02	0.00	339.80	0.00	0.01	342.28
Grading/Excavation (grams/mile)	0.02	1.10	0.10	0.05	0.02	0.00	339.80	0.00	0.01	342.28
Draining/Utilities/Sub-Grade (grams/mile)	0.02	1.10	0.10	0.05	0.02	0.00	339.80	0.00	0.01	342.28
Paving (grams/mile)	0.02	1.10	0.10	0.05	0.02	0.00	339.80	0.00	0.01	342.28
Grubbing/Land Clearing (grams/trip)	1.18	2.95	0.34	0.00	0.00	0.00	72.81	0.08	0.04	85.39
Grading/Excavation (grams/trip)	1.18	2.95	0.34	0.00	0.00	0.00	72.81	0.08	0.04	85.39
Draining/Utilities/Sub-Grade (grams/trip)	1.18	2.95	0.34	0.00	0.00	0.00	72.81	0.08	0.04	85.39
Paving (grams/trip)	1.18	2.95	0.34	0.00	0.00	0.00	72.81	0.08	0.04	85.39
Emissions	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Pounds per day - Grubbing/Land Clearing	2.00	50.03	4.48	1.99	0.83	0.14	14,632.30	0.29	0.37	14,750.73
Tons per const. Period - Grubbing/Land Clearing	0.01	0.38	0.03	0.01	0.01	0.00	109.74	0.00	0.00	110.63
Pounds per day - Grading/Excavation	2.00	50.03	4.48	1.99	0.83	0.14	14,632.30	0.29	0.37	14,750.73
Tons per const. Period - Grading/Excavation	0.01	0.38	0.03	0.01	0.01	0.00	109.74	0.00	0.00	110.63
Pounds per day - Drainage/Utilities/Sub-Grade	11.97	300.16	26.87	11.96	4.98	0.87	87,793.78	1.71	2.24	88,504.35
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.49	12.38	1.11	0.49	0.21	0.04	3,621.49	0.07	0.09	3,650.80
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.52	13.13	1.18	0.52	0.22	0.04	3,840.98	0.08	0.10	3,872.07

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

Water Truck Emissions	User Override of	Program Estimate of	User Override of Truck	Default Values	Calculated	User Override of	Default Values	Calculated
User Input	Default # Water Trucks	Number of Water Trucks	Round Trips/Vehicle/Day	Round Trips/Vehicle/Day	Trips/day	Miles/Round Trip	Miles/Round Trip	Daily VMT
Grubbing/Land Clearing - Exhaust	1		0.00					0.00
Grading/Excavation - Exhaust	1		0.00					0.00
Drainage/Utilities/Subgrade	1		13.00					0.00
Paving								0.00

2010+ Model Year Mitigation Option Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Grading/Excavation (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Draining/Utilities/Sub-Grade (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Paving (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Grubbing/Land Clearing (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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

Fugitive Dust	User Override of Max Acreage Disturbed/Day	Default Maximum Acreage/Day	PM10 pounds/day	PM10 tons/per period	PM2.5 pounds/day	PM2.5 tons/per period
Fugitive Dust - Grubbing/Land Clearing			293.00	2.20	60.94	0.46
Fugitive Dust - Grading/Excavation			293.00	2.20	60.94	0.46
Fugitive Dust - Drainage/Utilities/Subgrade			293.00	12.09	60.94	2.51

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

Off-Road Equipment Emissions

Grubbing/Land Clearing	Default Number of Vehicles	Mitigation Option Override of	Default		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Override of Default Number of Vehicles	*Program-estimate*	Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Equipment Tier	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
			Tier 4	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Tier 4	Bore/Drill Rigs	0.29	5.07	0.58	0.03	0.03	0.01	912.06	0.30	0.01	921.92
3.00			Tier 4	Cement and Mortar Mixers	0.08	1.60	1.42	0.08	0.07	0.00	151.55	0.02	0.00	152.32
			Tier 4	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Tier 4	Forklifts	0.05	1.16	0.09	0.00	0.00	0.00	148.03	0.05	0.00	149.63
			Tier 4	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12.00			Tier 4	Off-Highway Trucks	4.84	84.06	9.70	0.48	0.45	0.16	15,342.29	4.96	0.14	15,507.54
			Tier 4	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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

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

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing	pounds per day	5.26	91.89	11.80	0.60	0.55	0.17	16,553.93	5.32	0.15	16,731.40
Grubbing/Land Clearing	tons per phase	0.04	0.69	0.09	0.00	0.00	0.00	124.15	0.04	0.00	125.49

Grading/Excavation	Default Number of Vehicles	Mitigation Option Override of	Default		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Override of Default Number of Vehicles	*Program-estimate*	Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Equipment Tier	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
			Tier 4	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Tier 4	Bore/Drill Rigs	0.29	5.07	0.58	0.03	0.03	0.01	912.06	0.30	0.01	921.92
			Tier 4	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Tier 4	Excavators	0.16	3.92	0.32	0.02	0.01	0.01	500.19	0.16	0.00	505.59
			Tier 4	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Tier 4	Graders	0.20	3.52	0.41	0.02	0.02	0.01	641.68	0.21	0.01	648.60
			Tier 4	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.00			Tier 4	Off-Highway Trucks	0.81	14.01	1.62	0.08	0.07	0.03	2,557.05	0.83	0.02	2,584.59
1.00			Tier 4	Other Construction Equipment	0.19	4.71	0.38	0.02	0.02	0.01	598.52	0.19	0.01	604.99
			Tier 4	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Tier 4	Other Material Handling Equipm	0.18	4.39	0.36	0.02	0.02	0.01	559.68	0.18	0.01	565.71
			Tier 4	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Tier 4	Rubber Tired Dozers	0.26	4.53	0.52	0.03	0.02	0.01	827.35	0.27	0.01	836.26
			Tier 4	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Tier 4	Scrapers	0.47	8.08	0.93	0.05	0.04	0.02	1,467.91	0.47	0.01	1,483.74
			Tier 4	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Tier 4	Surfacing Equipment	0.21	3.62	0.42	0.02	0.02	0.01	656.47	0.21	0.01	663.55
1.00			Tier 4	Sweepers/Scrubbers	0.10	1.92	1.73	0.01	0.01	0.00	246.18	0.08	0.00	248.83
			Tier 4	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment	If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Number of Vehicles	Equipment Tier	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Grading/Excavation	pounds per day	2.86	53.76	7.26	0.29	0.26	0.09	8,967.10	2.90	0.08	9,063.77
	Grading/Excavation	tons per phase	0.02	0.40	0.05	0.00	0.00	0.00	67.25	0.02	0.00	67.98

Drainage/Utilities/Subgrade	Default Number of Vehicles	Mitigation Option Override of	Default		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Override of Default Number of Vehicles	*Program-estimate*	Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Equipment Tier		pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
1.00			Tier 4	Aerial Lifts	0.06	1.27	1.15	0.01	0.01	0.00	162.62	0.05	0.00	164.37
			Tier 4	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Tier 4	Bore/Drill Rigs	0.29	5.07	0.58	0.03	0.03	0.01	912.06	0.30	0.01	921.92
1.00			Tier 4	Cement and Mortar Mixers	0.03	0.53	0.47	0.03	0.02	0.00	50.52	0.01	0.00	50.77
			Tier 4	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.00			Tier 4	Cranes	0.35	6.14	0.71	0.04	0.03	0.01	1,117.48	0.36	0.01	1,129.52
			Tier 4	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.00			Tier 4	Forklifts	0.09	2.32	0.19	0.01	0.01	0.00	296.06	0.10	0.00	299.26
			Tier 4	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24.00			Tier 4	Off-Highway Trucks	9.69	168.12	19.40	0.97	0.89	0.32	30,684.58	9.93	0.28	31,015.07
			Tier 4	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment	If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Number of Vehicles	Equipment Tier	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Drainage/Utilities/Sub-Grade	pounds per day	10.52	183.46	22.50	1.08	0.99	0.34	33,223.32	10.74	0.30	33,580.92
	Drainage/Utilities/Sub-Grade	tons per phase	0.43	7.57	0.93	0.04	0.04	0.01	1,370.46	0.44	0.01	1,385.21

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Paving Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
			Tier 4	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Tier 4	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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

Number of Vehicles	Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving		pounds per day	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving		tons per phase	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Emissions all Phases (tons per construction period) =>			0.49	8.66	1.07	0.05	0.05	0.02	1,561.87	0.50	0.01	1,578.68

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

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

Road Construction Emissions Model, Version 9.0.0

Daily Emission Estimates for -> MRL Project Phases 2B and 3 (Utility Relocation)

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	7.26	141.91	16.27	295.59	2.59	293.00	62.32	1.38	60.94	0.32	31,186.23	5.61	0.52	31,482.13
Grading/Excavation	4.86	103.78	11.74	295.28	2.28	293.00	62.04	1.09	60.94	0.24	23,599.40	3.19	0.45	23,814.49
Drainage/Utilities/Sub-Grade	22.52	483.91	51.68	306.11	13.11	293.00	66.95	6.00	60.94	1.22	122,240.97	12.45	2.73	123,366.50
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum (pounds/day)	22.52	483.91	51.68	306.11	13.11	293.00	66.95	6.00	60.94	1.22	122,240.97	12.45	2.73	123,366.50
Total (tons/construction project)	1.02	21.80	2.34	17.06	0.58	16.48	3.69	0.27	3.43	0.05	5,453.33	0.58	0.12	5,503.59

Notes:
Project Start Year -> 2021
Project Length (months) -> 4
Total Project Area (acres) -> 59
Maximum Area Disturbed/Day (acres) -> 29
Water Truck Used? -> Yes

Phase	Total Material Imported/Exported Volume (yd^3/day) Soil	Asphalt	Daily VMT (miles/day) Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	0	0	0	0	19,440	0
Grading/Excavation	0	0	0	0	19,440	0
Drainage/Utilities/Sub-Grade	0	246	0	312	116,640	0
Paving	0	0	0	0	0	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 -> MRL Project Phases 2B and 3 (Utility Relocation)

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	0.05	1.06	0.12	2.22	0.02	2.20	0.47	0.01	0.46	0.00	233.90	0.04	0.00	214.20
Grading/Excavation	0.04	0.78	0.09	2.21	0.02	2.20	0.47	0.01	0.46	0.00	177.00	0.02	0.00	162.03
Drainage/Utilities/Sub-Grade	0.93	19.96	2.13	12.63	0.54	12.09	2.76	0.25	2.51	0.05	5,042.44	0.51	0.11	4,616.59
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum (tons/phase)	0.93	19.96	2.13	12.63	0.54	12.09	2.76	0.25	2.51	0.05	5042.44	0.51	0.11	4,616.59
Total (tons/construction project)	1.02	21.80	2.34	17.06	0.58	16.48	3.69	0.27	3.43	0.05	5453.33	0.58	0.12	4,992.83

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 B

USFWS SUPPLEMENTAL COORDINATION ACT REPORT (CAR)

[Note: The USFWS Supplemental CAR will be included in the final SEA/IS when received.]

APPENDIX C

ENDANGERED, THREATENED, AND CANDIDATE SPECIES LISTS

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To:
Consultation Code: 08ESMF00-2020-SLI-2488
Event Code: 08ESMF00-2020-E-07667
Project Name: Phases 2B and 3 Utility Relocations

July 29, 2020

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2020-SLI-2488

Event Code: 08ESMF00-2020-E-07667

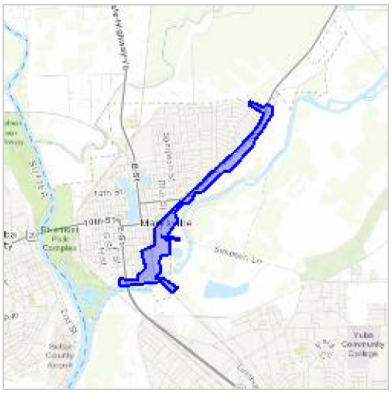
Project Name: Phases 2B and 3 Utility Relocations

Project Type: LAND - FLOODING

Project Description: Levee improvements and associated utility relocations.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/39.14945624461387N121.57636254282238W



Counties: Yuba, CA

Endangered Species Act Species

There is a total of 9 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Birds

NAME	STATUS
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **proposed** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Reptiles

NAME	STATUS
Giant Garter Snake *Thamnophis gigas* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4482	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog *Rana draytonii* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891 Species survey guidelines: https://ecos.fws.gov/ipac/guideline/survey/population/205/office/11420.pdf	Threatened

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
Valley Elderberry Longhorn Beetle *Desmocerus californicus dimorphus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7850 Habitat assessment guidelines: https://ecos.fws.gov/ipac/guideline/assessment/population/436/office/11420.pdf	Threatened

Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp *Branchinecta conservatio* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8246	Endangered
Vernal Pool Fairy Shrimp *Branchinecta lynchi* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp *Lepidurus packardi* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2246	Endangered

Flowering Plants

NAME	STATUS
Hartweg's Golden Sunburst *Pseudobahia bahiifolia* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1704	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

CALIFORNIA DEPARTMENT OF FISH and WILDLIFE **RareFind**

Query Summary:
Quad IS (Yuba City (3912125))

Print Close

CNDDB Element Query Results

Scientific Name	Common Name	Taxonomic Group	Element Code	Total Occs	Returned Occs	Federal Status	State Status	Global Rank	State Rank	CA Rare Plant Rank	Other Status	Habitats
Agelaius tricolor	tricolored blackbird	Birds	ABPBXB0020	955	6	None	Threatened	G2G3	S1S2	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_EN-Endangered, NABCI_RWL-Red Watch List, USFWS_BCC-Birds of Conservation Concern	Freshwater marsh, Marsh & swamp, Swamp, Wetland
Astragalus tener var. ferrisiae	Ferris' milk-vetch	Dicots	PDFAB0F8R3	18	1	None	None	G2T1	S1	1B.1	null	Meadow & seep, Valley & foothill grassland, Wetland
Buteo swainsoni	Swainson's hawk	Birds	ABNKC19070	2535	2	None	Threatened	G5	S3	null	BLM_S-Sensitive, IUCN_LC-Least Concern, USFWS_BCC-Birds of Conservation Concern	Great Basin grassland, Riparian forest, Riparian woodland, Valley & foothill grassland
Coccyzus americanus occidentalis	western yellow-billed cuckoo	Birds	ABNRB02022	165	2	Threatened	Endangered	G5T2T3	S1	null	BLM_S-Sensitive, NABCI_RWL-Red Watch List, USFS_S-Sensitive, USFWS_BCC-Birds of Conservation Concern	Riparian forest
Delphinium recurvatum	recurved larkspur	Dicots	PDRAN0B1J0	120	1	None	None	G2?	S2?	1B.2	BLM_S-Sensitive, SB_SBBG-Santa Barbara Botanic Garden	Chenopod scrub, Cismontane woodland, Valley & foothill grassland
Desmocerus californicus dimorphus	valley elderberry longhorn beetle	Insects	IICOL48011	271	1	Threatened	None	G3T2	S2	null	null	Riparian scrub
Great Valley Cottonwood Riparian Forest	Great Valley Cottonwood Riparian Forest	Riparian	CTT61410CA	56	2	None	None	G2	S2.1	null	null	Riparian forest
Great Valley Mixed Riparian Forest	Great Valley Mixed Riparian Forest	Riparian	CTT61420CA	68	1	None	None	G2	S2.2	null	null	Riparian forest
Lepidurus packardi	vernal pool tadpole shrimp	Crustaceans	ICBRA10010	324	1	Endangered	None	G4	S3S4	null	IUCN_EN-Endangered	Valley & foothill grassland, Vernal pool, Wetland
Linderiella occidentalis	California linderiella	Crustaceans	ICBRA06010	508	1	None	None	G2G3	S2S3	null	IUCN_NT-Near Threatened	Vernal pool
Melospiza melodia	song sparrow ("Modesto" population)	Birds	ABPBXA3010	92	1	None	None	G5	S3?	null	CDFW_SSC-Species of Special Concern	null
Monardella venosa	veiny monardella	Dicots	PDLAM18082	4	1	None	None	G1	S1	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_UCBG-UC	Cismontane woodland, Valley & foothill grassland

											Botanical Garden at Berkeley	
Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	Fish	AFCHA0209K	31	2	Threatened	None	G5T2Q	S2	null	AFS_TH-Threatened	Aquatic, Sacramento/San Joaquin flowing waters
Oncorhynchus tshawytscha pop. 6	chinook salmon - Central Valley spring-run ESU	Fish	AFCHA0205A	13	1	Threatened	Threatened	G5	S1	null	AFS_TH-Threatened	Aquatic, Sacramento/San Joaquin flowing waters
Pseudobahia bahiifolia	Hartweg's golden sunburst	Dicots	PDAST7P010	27	1	Endangered	Endangered	G1	S1	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Cismontane woodland, Valley & foothill grassland
Riparia riparia	bank swallow	Birds	ABPAU08010	298	8	None	Threatened	G5	S2	null	BLM_S-Sensitive, IUCN_LC-Least Concern	Riparian scrub, Riparian woodland
Vireo bellii pusillus	least Bell's vireo	Birds	ABPBW01114	503	1	Endangered	Endangered	G5T2	S2	null	IUCN_NT-Near Threatened, NABCI_YWL-Yellow Watch List	Riparian forest, Riparian scrub, Riparian woodland

APPENDIX D

USFWS BIOLOGICAL OPINION

[Note: The USFWS Biological Opinion will be included in the final SEA/IS when received.]

APPENDIX E

PG&E Comments from the Public Comment Period and Corrections Made to this Document

INTRODUCTION

This appendix documents alterations to the Marysville Ring Levee Phases 2B and 3 Utility Relocation (MRL) Draft Supplemental Environmental Assessment (SEA)/Initial Study (IS). Changes to the SEA/IS are made to ensure the document accurately reflects the Proposed Action. No changes made to the document after public review alter the findings reflected in the Draft SEA/IS.

SUMMARY OF EDITS MADE TO THE SEA/IS

Edits included in this appendix reflect changes made to the SEA/IS after public review, but before the document has been finalized. All changes to the document reflect minor corrections to the information in the Draft SEA/IS or additional information provided by PGE.

The Draft SEA/IS was available for public comment per the requirements of the National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA). The Draft SEA/IS was available for comment from December 11, 2020 to January 11, 2021, and a virtual public meeting was held to discuss the Draft SEA/IS with the public on December 15, 2020. No comments were received from the public.

The changes contained within this appendix have been reviewed by USACE and DWR staff, and would not alter the environmental impacts analyzed in the draft SEA/IS.

EDITS

1) Section 2.2.1 Access Routes and Work Areas – Paragraph 1

Draft SEA/IS Text: Fencing would be removed once utility work is complete. The electric distribution work would require up to an additional 103 work areas (approximately 30 feet by 30 feet). The electrical transmission work would require up to 29 work areas (up to 100 feet by 100 feet).

Final SEA/IS Text: . Fencing would be removed once utility work is complete. The electric distribution work would require up to an additional 120 work areas (approximately 30 feet by 30 feet). The electrical transmission work would require up to 50 work areas (up to 100 feet by 100 feet).

Reason for Change: Change made to accurately reflect the number of work areas required by PGE for electrical transmission and distribution. This change does not reflect additional work areas, but reflects a change in the way work areas are counted. The environmental impacts of these work areas have been analyzed in the Draft SEA/IS as written.

2) Section 2.2.1 Figure 5 and Figure 6.

Draft SEA/IS Figures: The draft SEA/IS includes two identical figures showing figures 2B and 3

Final SEA/IS Figures: Figure 5 and Figure 6 have been altered to zoom in on Phase 2B and Phase 3 (respectively).

Reason for Change: The figures have been adjusted to better identify the phases and areas of analysis. No information has changed, only the figures' scales have been adjusted.

3) Section 2.2.2 Workers and Schedule - Paragraph 1.

Draft SEA/IS Text: All work will occur from January 2021 to the second week in April.

Final SEA/IS Text: Work may occur in from April 2021 to December 2022 for electrical transmission and distribution. Gas line work will occur during levee construction 2021-2022.

Reason for Change: Change made to accurately reflect potential work window.

4) Section 3.2.3.2 Public Utilities – Alternative 2 (Proposed Action) Paragraph 3

Draft SEA/IS Text: These poles would be a maximum of 100 feet tall and would be comprised of wood or steel. TSPs would be installed on a concrete foundation measuring up to seven feed in diameter and extending to a maximum depth of 30 feet (depending on foundation location and soil conditions). A maximum of 71 poles would be installed during the electrical transmission work and construction activities at these locations would encompass a disturbance area of approximately 75 feet in diameter.

Final SEA/IS Text: These poles would be a maximum of 120 feet tall and would be comprised of wood or steel. TSPs would be installed on a concrete foundation measuring up to eight feet in diameter and extending to a maximum depth of 35 feet (depending on foundation location and soil conditions). A maximum of 75 poles would be installed during the electrical transmission work and construction activities at these locations would encompass a disturbance area of approximately 75 feet in diameter.

Reason for Change: Change made to accurately report electrical transmission and distribution pole characteristics.

5) Section 3.2.3.2 Public Utilities – Alternative 2 (Proposed Action) Paragraph 7

Draft SEA/IS Text: Construction techniques for these types of installation activities include trench excavation up to 40 feet wide by four feet deep, and up to 150 feet in length. Typically, the trench would be aligned in the middle of the new utility corridor.

Final SEA/IS Text: Construction techniques for these types of installation activities include trench excavation up to 40 feet wide by four feet deep, and up to 420 feet in length. Typically, the trench would be aligned in the middle of the new utility corridor.

Reason for Change: Change made to accurately reflect the length of electrical distribution to be placed in conduit underground.

6) Section 3.2.3.2 Public Utilities – Natural Gas Transmission and Distribution Paragraph 1

Draft SEA/IS Text: PG&E would install roughly 300 feet of gas transmission steel pipe measuring approximately 8 inches in diameter.

Final SEA/IS Text: PG&E would install roughly 300 feet of gas transmission steel pipe measuring approximately 8 inches in diameter. The existing gas transmission pipeline will be abandoned in place.

Reason for Change: Change made to accurately reflect the length of gas transmission pipe to be installed and to identify that existing line would be abandoned in place rather than removed.

7) Section 3.2.3.2 Public Utilities – Natural Gas Transmission and Distribution Paragraph 2

Draft SEA/IS Text: Gas pipe installation techniques include digging a trench approximately two feet wide by up to six feet deep and up to approximately 600 feet long.

Final SEA/IS Text: Gas pipe installation techniques include digging a trench approximately three feet wide by up to six feet deep and up to approximately 1,000 feet long.

Reason for Change: Change made to accurately reflect the length of gas pipe to be installed as part of the proposed action.

8) Section 3.2.3.2 Public Utilities – Natural Gas Transmission and Distribution Paragraph 2

Draft SEA/IS Text: Vegetation replacement within the area of the permanent easement would have restrictions of trees within 10 feet of the pipeline.

Final SEA/IS Text: Vegetation replacement within the area of the permanent easement would have restrictions of trees within 15 feet of the pipeline

Reason for Change: Change made to accurately reflect the vegetation restrictions near pipelines after completion of the Proposed Action.

9) Section 3.2.6.3 Vegetation and Wildlife – Phase 2B- Woodland Habitat Paragraph 1

Draft SEA/IS Text: Areas of permanent easement associated with gas and electric facilities (which would be obtained by CVFPB in coordination with PG&E) would restrict trees from being located within 10 feet of the pipeline.

Final SEA/IS Text: Areas of permanent easement associated with gas and electric facilities (which would be obtained by CVFPB in coordination with PG&E) would restrict trees from being located within 15 feet of the pipelines and 30 feet of the electric facilities.

Reason for Change: Change made to accurately reflect the vegetation restrictions near pipelines after completion of the Proposed Action.