

Draft Subsequent Environmental Impact Report

Napa River/Napa Creek Flood Protection Project
– Increment 2, Floodwalls North of the Bypass

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Executive Summary

This executive summary provides background information for the Napa River/Napa Creek Flood Protection Project – Increment 2, Floodwalls North of the Bypass (Proposed Project), identifies the purpose of preparing this Subsequent Environmental Impact Report (SEIR), describes the Project alternatives considered, and identifies the environmental impacts that would result under the Proposed Project.

The environmental effects are evaluated in accordance with the requirements of the California Environmental Quality Act (CEQA), and mitigation measures are recommended where applicable. The Napa County Flood Control and Water Conservation District (District) is the lead agency under CEQA and is collaborating with the United States Army Corps of Engineers (USACE), who is the lead agency under NEPA. A separate Supplemental Environmental Assessment is being prepared for the Proposed Project by the USACE.

Project Background

The Napa River/Napa Creek Flood Protection Project was authorized for construction by Section 204 of the Flood Control Act of 1965 (Pub. L. No. 89-298, 79 Stat. 1F073, 1084 (October 27, 1965)) for the purposes of flood control and recreation substantially in accordance with the 1965 Chief of Engineers Report for the Napa River Basin (H. Doc. 89-222), and modified by Section 136 of the Water Resources Development Act of 1976 (Pub. L. No. 94-587, 90 Stat. 2917, 2929 (October 22, 1976)) (U.S. Army Corps of Engineers [USACE] Authorized Project). Designs for the USACE Authorized Project were further refined in the Supplemental General Design Memorandum, dated October 1998 (1998 SGDM), and the Napa River/Napa Creek Flood Protection Project Final Supplemental Environmental Impact Statement/Environmental Impact Report, dated March 1999 (1999 Final SEIS/EIR), approved by the USACE.

The USACE Authorized Project also referred to as the Overall Flood Protection Project in the SEIR includes improvements to meet 100-year level flood protection for 6.9 miles along the Napa River from State Route (SR) 29 at the Butler Bridge/Southern Crossing to near Trancas Street, and Napa Creek from its outfall to the Napa River for about 1 mile upstream.

For the purposes of this Draft SEIR, the District, proposes to construct one of the two remaining federally justified increments of the USACE Authorized Project – Increment 2, Floodwalls North of the Bypass (Proposed Project). Accordingly, the District has prepared this Draft SEIR in support of proposed scope/design changes and additions for the Proposed Project, which are part of the Overall Flood Protection Project, as well as the changed regulatory conditions that have transpired since the 1999 Final SEIS/EIR was completed.

Project Location

The Proposed Project Area is along the west bank of the Napa River, north of the dry bypass in the City of Napa, Ca. The Proposed Project Area would be accessed from multiple streets including: Soscol Avenue, Elks Way, River Glen Drive, Trout Way, Pike Drive, Stonehouse Drive, Imperial Way, Jordan Lane, North Bay Drive, Wall Street, and Lincoln Avenue.

Purpose, Need, and Objectives

The primary purpose of the Overall Flood Protection Project, as identified in the 1999 Final SEIS/EIR, is to provide an economically feasible and environmentally sensitive method to protect the City and County of Napa from periodic flooding (District and USACE 1999). The existing natural

drainage system provided by the Napa River is not sufficient to adequately prevent extensive flooding and associated property damage in the Proposed Project Area. Therefore, the Proposed Project is needed to provide protection from the anticipated 100-year flood event. The original purposes and need for the Overall Flood Protection Project are still valid and have not changed. Project Purposes and Objectives are outlined in **Table ES-1** below.

Table ES-1. Project Purposes and Objectives

Agency	Purposes and Objectives
USACE	<ul style="list-style-type: none"> • To achieve 100-year level of flood protection; • To achieve flood damage reduction benefits that exceed project costs when calculated according to official USACE benefit-to-cost methodologies; • To mitigate impacts and effects to fish and wildlife from the project; and • To provide recreational facilities in the project area.
District	<p>The District concurs with the above purposes and objectives and has worked with the Community Coalition on additional needs and objectives at the local level also mentioned in the 1999 Final SEIS/EIR:</p> <ul style="list-style-type: none"> • To attain an environmentally restored Napa River; • To approach aesthetic and environmental excellence; • To enhance opportunities for economic development; • To secure a local financing plan that the community can support; and • To comply with current or modified federal guidelines.

Proposed Project Components

The Proposed Project would achieve 100-year level of flood protection; achieve flood damage reduction benefits that exceed project costs when calculated according to official USACE benefit-to-cost methodologies; mitigate impacts to fish and wildlife from the project; and provide recreational facilities in the study area. The Proposed Project includes four major elements: floodwalls south of Lincoln Avenue, floodwalls north of Lincoln Avenue, scour protection under the Lincoln Avenue Bridge, and two short floodwall closures at the Dry Bypass. These elements are discussed in detail in Chapter 2, *Project Description*, and summarized below:

- *Floodwalls south of Lincoln Avenue* – 2,375 linear feet of floodwall. Floodwall would be constructed on the west bank of the Napa River beginning at the River Terrace Inn and continuing north toward Lincoln Avenue. New 10- to 12-foot-wide recreational trail would be constructed on the water side of the floodwall.
- *Floodwalls north of Lincoln Avenue* - 4,110 linear feet of floodwall. Floodwall would tie into the north side of the western parapet wall at the Lincoln Avenue Bridge and continue north following the existing trail on the water side of businesses and homes.
- *Rock scour protection under the Lincoln Avenue Bridge* - Rock scour protection would be placed in the river channel bottom and on bridge abutment aprons beneath the Lincoln Avenue Bridge.
- *Floodwall closures at the Dry Bypass* - 230 linear feet of floodwall - Work includes two short floodwall closures at the dry bypass to complete the existing floodwall. Drainage areas previously facilitating overland flow to re-enter the river during flood events on either side of the Soscol Avenue Bridge would be closed off by constructing additional

floodwalls. Utility infrastructure and relocations would be constructed between Soscol Avenue and the Napa Valley Wine Train.

Schedule

Construction of the Proposed Project is expected to begin in the fall of 2025 and end in 2028. In water work at the Lincoln Avenue Bridge is anticipated to last occur in one 4-month construction season, during allowable work windows for aquatic species (June 1 through October 31).

Project Alternatives

Two alternatives are analyzed in detail in this SEIR: the No Project Alternative and the Proposed Project Alternative. Additional Project Alternatives were considered and are discussed further in Chapter 4, Alternatives.

Proposed Project Impacts and Mitigation Measures

Table ES-2 summarizes impacts from construction and operation of the Proposed Project, which are fully analyzed and discussed in Chapter 3 of this SEIR. **Table ES-2** also lists mitigation measures to be incorporated as part of the Proposed Project implementation. Full descriptions for each mitigation measure can be found in Chapter 3 of this SEIR. Mitigation measures are named after the relevant resource area. Mitigation measures are proposed, where feasible, to avoid, minimize, rectify, reduce, or compensate for significant and potentially significant impacts of the alternatives, in accordance with Section 15126.4 of the CEQA Guidelines, and they accompany each impact discussion.

Table ES-2. Summary of Proposed Project Impacts

Impact Statement	Avoidance, Minimization, and Mitigation Measures	CEQA Significance Determination
<i>Aesthetics/Visual Resources</i>		
AES-1 - Have a substantial adverse effect on a scenic vista?	• N/A	No impact
AES-2 - Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	• N/A	No impact
AES-3 - If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	• N/A	Less than significant impact
AES-4 - Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	• N/A	Less than significant impact
<i>Air Quality</i>		
AQ-1 - Conflict with or obstruct implementation of the applicable air quality plan?	<ul style="list-style-type: none"> • MM-AQ-1: Implement Fugitive Dust Control Measures • MM-AQ-2: Implement Enhanced Fugitive Dust Control Measures 	Less than significant impact with mitigation incorporated

Impact Statement	Avoidance, Minimization, and Mitigation Measures	CEQA Significance Determination
AQ-2 - Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard?	<ul style="list-style-type: none"> MM-AQ-1: Implement Fugitive Dust Control Measures MM-AQ-2: Implement Enhanced Fugitive Dust Control Measures 	Less than significant impact with mitigation incorporated
AQ-3 - Expose sensitive receptors to substantial pollutant concentrations?	<ul style="list-style-type: none"> MM-AQ-1: Implement Fugitive Dust Control Measures MM-AQ-2: Implement Enhanced Fugitive Dust Control Measures 	Less than significant impact with mitigation incorporated
AQ-4 - Result in other emissions (such as those leading to odors adversely affecting a substantial number of people)?	<ul style="list-style-type: none"> N/A 	Less than significant impact
<i>Cultural Resources</i>		
CUL-1 - Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	<ul style="list-style-type: none"> N/A 	Less than significant impact
CUL-2 - Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<ul style="list-style-type: none"> MM-CUL-1: Implement 1999 Programmatic Agreement MM-CUL-2: Cultural Resources Awareness Training MM-CUL-3: Unrecorded Cultural Resources Discovery MM-CUL-4: Inadvertent Discovery Plan 	Significant and unavoidable impact with mitigation incorporated ¹
CUL-3 - Disturb any human remains, including those interred outside of dedicated cemeteries?	<ul style="list-style-type: none"> MM-CUL-1: Implement 1999 Programmatic Agreement MM-CUL-5: Inadvertent Discovery of Human Remains 	Less than significant impact with mitigation incorporated
<i>Fisheries and Aquatic Biological Resources</i>		
BIO-A-1 - Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by or by the CDFW, NMFS, or USFWS?	<ul style="list-style-type: none"> MM-BIO-A-1: Implement Measures to Avoid and Minimize Effects from Acoustic Disturbance MM-BIO-A-2: Implement Fisheries Salvage Plan 	Less than significant impact with mitigation incorporated
BIO-A-2 - Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW, NMFS, or USFWS?	<ul style="list-style-type: none"> N/A 	Less than significant impact
BIO-A-3 - Interfere substantially with the movement of any native resident or migratory fish?	<ul style="list-style-type: none"> MM-BIO-A-2: Implement Fisheries Salvage Plan 	Less than significant impact with mitigation incorporated
BIO-A-4 - Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<ul style="list-style-type: none"> N/A 	Less than significant impact

Impact Statement	Avoidance, Minimization, and Mitigation Measures	CEQA Significance Determination
<i>Geology and Soils</i>		
GEO-1 - Cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking, or seismic-related ground failure, including liquefaction or inducing landslides?	<ul style="list-style-type: none"> N/A 	Less than significant impact
GEO-2 - Result in substantial soil erosion or the loss of topsoil?	<ul style="list-style-type: none"> N/A 	Less than significant impact
GEO-3 - Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<ul style="list-style-type: none"> N/A 	Less than significant impact
GEO-4 - Destroy a unique paleontological resource or site or unique geologic feature?	<ul style="list-style-type: none"> MM-GEO-1: Paleontological Resources 	Less than significant impact with mitigation incorporated
<i>Greenhouse Gas Emissions and Climate Change</i>		
GHG-1 - Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<ul style="list-style-type: none"> N/A 	Less than significant impact
GHG-2 - Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gas emissions?	<ul style="list-style-type: none"> N/A 	Less than significant impact
<i>Hazards and Hazardous Materials</i>		
HAZ-1 - Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<ul style="list-style-type: none"> N/A 	Less than significant impact
HAZ-2 - Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?	<ul style="list-style-type: none"> N/A 	Less than significant impact
HAZ-3 - Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<ul style="list-style-type: none"> MM-AQ-1: Implement Fugitive Dust Control Measures MM-AQ-2: Implement Enhanced Fugitive Dust Control Measures 	Less than significant impact with mitigation incorporated
HAZ-4 - Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<ul style="list-style-type: none"> MM-HAZ-1: Soil Management Plan MM-HAZ-2: Asbestos Containing Materials 	Less than significant impact with mitigation incorporated

Impact Statement	Avoidance, Minimization, and Mitigation Measures	CEQA Significance Determination
HAZ-5 - Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<ul style="list-style-type: none"> N/A 	Less than significant impact
<i>Hydrology and Water Quality</i>		
HYD-1 - Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<ul style="list-style-type: none"> N/A 	Less than significant impact
HYD-2 - Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<ul style="list-style-type: none"> N/A 	Less than significant impact
HYD-3 - Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: result in substantial erosion or siltation on or off-site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows?	<ul style="list-style-type: none"> N/A 	Less than significant impact
HYD-4 - In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<ul style="list-style-type: none"> N/A 	Less than significant impact
<i>Noise and Vibration</i>		
NOISE-1 - Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<ul style="list-style-type: none"> MM-NOISE-1: Construction Noise Reduction 	Significant and unavoidable impact with mitigation incorporated ¹
NOISE-2 - Generation of excessive groundborne vibration or groundborne noise levels?	<ul style="list-style-type: none"> MM-NOISE-1: Construction Noise Reduction MM-NOISE-2: Vibration Screening Assessment 	Less than significant impact with mitigation incorporated

Impact Statement	Avoidance, Minimization, and Mitigation Measures	CEQA Significance Determination
NOISE-3 - For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<ul style="list-style-type: none"> N/A 	No impact
<i>Recreation</i>		
REC-1 - Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<ul style="list-style-type: none"> N/A 	Less than significant impact
REC-2 - Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	<ul style="list-style-type: none"> N/A 	Less than significant impact
<i>Terrestrial Biological Resources</i>		
BIO-T-1 - Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?	<ul style="list-style-type: none"> MM BIO-T-1a: Implement Measures to Avoid and Minimize Effects on Monarch Butterfly MM BIO-T-1b: Implement Measures to Avoid and Minimize Effects to northwestern pond turtle MM BIO-T-1c: Preconstruction Nesting Bird Surveys MM BIO-T-1d: Preconstruction Rare Plant Surveys MM BIO-T-1e: Conduct Preliminary Field Assessment for Bats MM BIO-T-1f: Bat Mitigation Plan Development MM BIO-T-1g: Bat Mitigation Plan Development of Temporal and Physical Buffer Areas MM BIO-T-1h: Minimization of Light 	Less than significant impact with mitigation incorporated
BIO-T-2 - Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW, NMFS, or USFWS?	<ul style="list-style-type: none"> MM BIO-T-2: Sensitive Community Fencing 	Less than significant impact with mitigation incorporated

Impact Statement	Avoidance, Minimization, and Mitigation Measures	CEQA Significance Determination
BIO-T-3 - Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<ul style="list-style-type: none"> N/A 	Less than significant impact
BIO-T-4 - Interfere substantially with the movement of any native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	<ul style="list-style-type: none"> N/A 	Less than significant impact
BIO-T-5 - Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<ul style="list-style-type: none"> N/A 	Less than significant impact
<i>Traffic/Transportation</i>		
TRA-1 - Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<ul style="list-style-type: none"> MM-TRA-1: Establish detours, signage and a notification system for the Napa River Trail closure between Lincoln Avenue and Trancas Street and the northern paved trail in the dry bypass. MM-TRA-2: Prepare and Implement a Traffic Control Plan 	Less than significant impact with mitigation incorporated
TRA-2 - Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<ul style="list-style-type: none"> N/A 	Less than significant impact
TRA-3 - Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<ul style="list-style-type: none"> N/A 	Less than significant impact
TRA-4 - Result in inadequate emergency access?	<ul style="list-style-type: none"> N/A 	Less than significant impact
<i>Tribal Cultural Resources</i>		
TCR-1 - Cause a substantial adverse change in the significance of a tribal cultural resource, listed or eligible for listing in the California Register of Historical Resources as defined in PRC § 5020.1(a), or in a local register of historical resources as defined in PRC § 5020.1(k)?	<ul style="list-style-type: none"> MM-CUL-1: Implement 1999 Programmatic Agreement 	Significant and unavoidable impact with mitigation incorporated

Impact Statement	Avoidance, Minimization, and Mitigation Measures	CEQA Significance Determination
TCR-2 - Cause a substantial adverse change in the significance of a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC § 5024.1. In applying the criteria set forth in subdivision (c) of PRC § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<ul style="list-style-type: none"> MM-CUL-1: Implement 1999 Programmatic Agreement 	Significant and unavoidable impact with mitigation incorporated
<i>Utilities and Service Systems</i>		
UTIL-1 - Require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<ul style="list-style-type: none"> N/A 	Less than significant impact
UTIL-2 - Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<ul style="list-style-type: none"> N/A 	Less than significant impact

¹ This finding was previously disclosed in the 1999 Final SEIS/EIR and remains the same. Effects of the Proposed Project would not be greater in scope or intensity than previously disclosed.

Areas of Known Controversy

CEQA Guidelines Section 15123 states that an EIR must identify areas of known controversy that may have been raised by other agencies, the public, or other stakeholders. There are currently no areas of communicated controversy related to the Proposed Project or identified in the SEIR scoping process. Due to the previous coordination and community coalition efforts, the design has evolved, and the current approach does not appear to be controversial. Coordination with other agencies such as the USACE, Regional Water Quality Control Board, and CDFW, is ongoing to address any potential areas of concern. CEQA Guidelines Section 15123 calls for the lead agency to include issues to be resolved in the EIR, including the choice among alternatives and whether or how to mitigate significant effects. Issues to be resolved related to the Proposed Project or SEIR include areas of significant impacts. Mitigation measures have been identified to address these impacts, where appropriate.

Significant and Unavoidable Impacts

CEQA Guidelines Section 15126.2(c) requires an EIR to discuss significant effects, including those that can be mitigated but not reduced to a level of insignificance. The CEQA Guidelines state that: “[w]here there are impacts that cannot be alleviated without imposing an alternative design, their implications, and reasons why the project is being proposed, notwithstanding their effect, should be

described.” Significant and unavoidable impacts were identified in the 1999 Final SEIS/EIR and would remain significant and unavoidable as a result of the Proposed Project in the following areas: Cultural Resources, Noise and Vibration, and Tribal Cultural Resources. A discussion of these impacts is provided in the SEIR.

Environmentally Superior Alternative

CEQA Guidelines Section 15126.6 requires that an “environmentally superior” alternative be selected among the alternatives that are evaluated in an EIR. Generally, the environmentally superior alternative is the alternative that would be expected to generate the fewest adverse impacts. Of the alternatives evaluated, the No Project Alternative is the environmentally superior alternative because it would avoid all construction-related impacts of the Proposed Project. However, the No Project Alternative would not meet the objectives, purpose and need of the project related to flood protection. In cases when the No Project Alternative is the environmentally superior alternative, an EIR must also identify an environmentally superior alternative from among the other alternatives (CEQA Guidelines Section 15126.6[e][2]). Accordingly, in addition to the No Project Alternative, the Proposed Project Alternative is considered the other environmentally superior alternative. The Proposed Project meets the project objectives, purpose and need, and would result in less environmental impacts than other alternatives.

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Abbreviations

µg/m ³	micrograms per cubic meter
AB	Assembly Bill
ACM	Asbestos-Containing Materials
BAAQMD	Bay Area Air Quality Management District
Basin Plan	San Francisco Bay RWQCB's Water Quality Control Plan
Bay Area	San Francisco Bay Area
BER	business environmental risk
BO	Biological Opinion
BP	before present
BMP	Best Management Practices
CAAQS	California Ambient Air Quality Standards
CAL FIRE	California Department of Forestry and Fire Protection
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Board
CCC	Central California Coast
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CH ₄	methane
CHMIRS	California Hazardous Material Incident Report System
City	City of Napa
CNDDB	California Natural Diversity Database
CO	Carbon Monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
CR	Conservation Recommendations
CREC	Controlled Recognized Environmental Condition
CRHR	California Register of Historical Resources
dB	decibel
dBA	A-weighted decibel
DCV	Double Check Valve
District	Napa County Flood Control and Water Conservation District
DOC	Department of Conservation
DPM	diesel particulate matter
DPS	Distinct Population Segment
DTSC	Department of Toxic Substances Control
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
ERNS	Emergency Response Notification System
ESA	Endangered Species Act
ESA	Environmental Site Assessment
ESU	Evolutionarily Significant Unit
FC	Federal Candidate for Listing
FE	Federally Endangered
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FID	Federal Interest Determination
FT	Federally Threatened

FTA	Federal Transit Administration
GDM	General Design Memorandum
GHG	Greenhouse Gas
GIS	Geographic Information System
Gpm	gallons per minute
GSP	Groundwater Sustainability Plan
GWP	Global Warming Potential
HAPCs	Habitat Areas of Particular Concern
HIST TANK	Historical Hazardous Substance Storage Container Information – Facility Summary
in/sec	inch per second
IPaC	Information for Planning and Consulting
IPCC	Intergovernmental Panel on Climate Change
L _{dn}	Day-Night Average Sound Level
L _{eq}	Equivalent Sound Level
L _{max}	Maximum Sound Level
LOS	Level of Service
LUST	Leaking Underground Fuel Tank Reports
L _v	Vibration Velocity Level
MCE	Marin Clean Energy
MLD	Most Likely Descendent
MMT	million metric tons
MSA	Magnuson-Stevens Fishery Conservation and Management Act
MT	metric tons
MTC	Metropolitan Transportation Commission
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCDEM	Napa County Division of Environmental Management
NCGSA	Napa County Groundwater Sustainability Agency
NCRWS	Napa County Recycling and Waste Services
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NO ₂	Nitrogen Dioxide
NOAA	National Oceanic and Atmospheric Administration
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NapaSan	Napa Sanitation District
NTU	Nephelometric Turbidity Unit
NVTA	Napa Valley Transportation Authority
O&M	Operations and maintenance
O ₃	Ozone
OHP	California Office of Historic Preservation
OPR	Office of Planning and Research
Overall Flood Protection Project	Napa River/Napa Creek Flood Protection Project
Pb	Lead
PCB	polychlorinated biphenyls
PFAS	per- and polyfluoroalkyl substances
PG&E	Pacific Gas & Electric
PM ₁₀	particulate matter 10 micrometers and smaller
PM _{2.5}	particulate matter 2.5 micrometers and smaller
Ppb	parts per billion
Ppm	parts per million
Ppt	parts per thousand
PPV	Peak Particle Velocity
PRC	Public Resources Code

Proposed Project	Napa River/Napa Creek Flood Protection Project – Increment 2, Floodwalls North of the Bypass
RCP	Reinforced Concrete Pipe
REC	Recognized Environmental Condition
Region	San Francisco Bay Hydrologic Region
RMS	Root Mean Square
ROGs	reactive organic gases
RPM	Reasonable and Prudent Measures
RWQCB	Regional Water Quality Control Board
SE	State Endangered
SEA	Supplemental Environmental Assessment
SEIS	Supplemental Environmental Impact Statement
SFBAAB	San Francisco Bay Area Air Basin
SGDM	Supplemental General Design Memorandum
SGMA	Sustainable Groundwater Management Act
SLF	Sacred Lands File
SO ₂	Sulfur Dioxide
SR	State Route
SRA	shaded riverine aquatic
SSC	State Species of Special Concern
ST	State Threatened
SWP	State Water Project
SWPPP	Stormwater Pollution Prevention Plan
TAC	toxic air contaminant
TC	Terms and Conditions
TCR	tribal cultural resource
TMDL	Total Maximum Daily Load
USACE	United States Army Corps of Engineers
USC	United States Code
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST SWEEPS	Statewide Environmental Evaluation and Planning System
UVWMA	Upper Valley Waste Management Agency
VdB	vibration decibel
VEIA	Value Engineering and Incremental Analysis
VMT	Vehicle Miles Traveled
WDR	Waste Discharge Requirements
WTP	Water Treatment Plant
N ₂ O	nitrous oxide

1 Introduction

The Napa River/Napa Creek Flood Protection Project was authorized for construction by Section 204 of the Flood Control Act of 1965 (Pub. L. No. 89-298, 79 Stat. 1F073, 1084 (October 27, 1965)) for the purposes of flood control and recreation substantially in accordance with the 1965 Chief of Engineers Report for the Napa River Basin (H. Doc. 89-222), and modified by Section 136 of the Water Resources Development Act of 1976 (Pub. L. No. 94-587, 90 Stat. 2917, 2929 (October 22, 1976)) (U.S. Army Corps of Engineers [USACE] Authorized Project). Designs for the USACE Authorized Project were further refined in the Supplemental General Design Memorandum, dated October 1998 (1998 SGDM), and the Napa River/Napa Creek Flood Protection Project Final Supplemental Environmental Impact Statement/Environmental Impact Report, dated March 1999 (1999 Final SEIS/EIR), approved by the USACE Deputy Director of Civil Works on May 24, 1999.

The USACE Authorized Project also referred to as the Overall Flood Protection Project includes improvements to meet 100-year level flood protection for 6.9 miles along the Napa River from State Route (SR) 29 at the Butler Bridge/Southern Crossing to near Trancas Street, and Napa Creek from its outfall to the Napa River for about 1 mile upstream. Elements of the Overall Flood Protection Project include bank terracing, bridge replacements, bypass channels, culverts, floodwalls, levees, and wetland and riparian habitat restoration. As described in Appendix A, *Project Background*, several components of the authorized Overall Flood Protection Project were constructed between 2000 to 2013. In 2011, the USACE determined that the remaining Overall Flood Protection Project elements left to be constructed at that time could not be considered economically justifiable. An incremental economic analysis of one element, the dry bypass, was subsequently determined to be justifiable, but all remaining elements of the Overall Flood Protection Project failed to meet federal cost-benefit criteria. While the Dry Bypass element was being constructed in 2014-2015, the District conducted a Value Engineering and Incremental Analysis (VEIA) and demonstrated that, with value engineering modifications, some of the remaining elements of the Overall Flood Protection Project can be made economically viable. The USACE concurred with the District's VEIA determination and value engineering modifications, issued a Federal Interest Determination (FID), and the District requested additional funds from Congress. These actions ultimately led to the Proposed Project as presented in this SEIR.

For the purposes of this Draft Subsequent Environmental Impact Report (SEIR), the USACE Authorized Project's non-Federal sponsor, the Napa County Flood Control and Water Conservation District (District), proposes to construct one of the two remaining federally justified increments of the USACE Authorized Project – Increment 2, Floodwalls North of the Bypass (Proposed Project) – pursuant to Section 204 of the Water Resources Development Act of WRDA 1986, as amended (33 U.S.C. 2232) (Section 204). Accordingly, the District has prepared this Draft SEIR in support of proposed scope/design changes and additions for the Proposed Project, which are part of the Overall Flood Protection Project, as well as the changed regulatory conditions that have transpired since the 1999 Final SEIS/EIR was completed. The District is the lead agency under CEQA. USACE and the District are proposing to implement the Proposed Project to provide 100-year level flood protection in the northwest area of the City of Napa. The Proposed Project primarily involves constructing concrete or sheet pile floodwalls along the west bank of the Napa River in the City of Napa from approximately the Napa River Terrace Inn to the Elks Lodge and drainage improvements

to the Dry Bypass. The USACE is preparing a separate Supplemental Environmental Assessment (SEA) to meet the requirements of the National Environmental Policy Act (NEPA).

1.1 Project Location

Figure 1.2-1 shows the Proposed Project Area associated with Increment 2, Floodwalls North of the Bypass. The Proposed Project Area would be accessed from multiple streets including: Soscol Avenue, Elks Way, River Glen Drive, Trout Way, Pike Drive, Stonehouse Drive, Imperial Way, Jordan Lane, North Bay Drive, Wall Street, and Lincoln Avenue.

1.2 Background

Following project authorization in 1965, a General Design Memorandum (GDM) for project design was issued in 1970, but it was met with public resistance. A revised GDM was issued in 1975, and an EIS prepared for the project based on the revised GDM was completed the same year. However, after being defeated in two County referenda, the Overall Flood Protection Project was placed on inactive status. In 1987, after the devastating flood of 1986, the District petitioned USACE and Congress to reactivate the Overall Flood Protection Project culminating in the 1998 SGDM and the 1999 Final SEIS/EIR and subsequent construction referenced in Chapter 1, *Introduction*, above. This SEIR is a supplement to the 1999 Final SEIS/EIR.

As described in Appendix A, *Project Background*, several components of the authorized Overall Flood Protection Project were constructed between 2000 to 2013. In 2011, USACE determined that the remaining Overall Flood Protection Project elements left to be constructed at that time were not economically justifiable. An incremental economic analysis of one element, the dry bypass, was subsequently determined to be justifiable, but all remaining elements of the overall flood Project failed to meet federal cost-benefit criteria. Accordingly, the Dry Bypass element was constructed in 2014-2015.

In 2017, the District conducted a value engineering and incremental analysis (VEIA) to reevaluate the remaining USACE Authorized Project elements. The VEIA, detailed in Appendix A, *Project Background*, consisted of several analyses including a hydraulic analysis to identify discrete increments of the remaining elements of the Overall Flood Protection Project. Four discrete increments were identified and are also shown in **Figure 1.2-2**:

- Increment 1: Oxbow East Bank and Oxbow West Bank Floodwalls;
- Increment 2: Lincoln Avenue Floodwalls and Rock Scour Protection under the Lincoln Avenue Bridge;
- Increment 3: Riverside Drive - Imola Avenue to the Hatt Building Floodwalls; and,
- Increment 4: Tulocay Floodwalls

The VEIA documents and demonstrates that design modifications would allow certain elements of the Overall Flood Protection Project to meet federal economic criteria, specifically Increments 2 and 3. The design modification among those proposed by the District that most significantly reduced the cost of the project was removing pump stations within Increments 2 and 3. The District presented the VEIA and modified designs to USACE for their review and reconsideration for federal interest. In 2019, USACE concurred with the District's assessment and issued a FID to demonstrate the intent to move forward with design and construction of Increments 2 and 3 from the VEIA, as modified, to advance the Overall Flood Protection Project. In 2021, Congress authorized additional funding.

Figure 1.2-1. Proposed Project Area

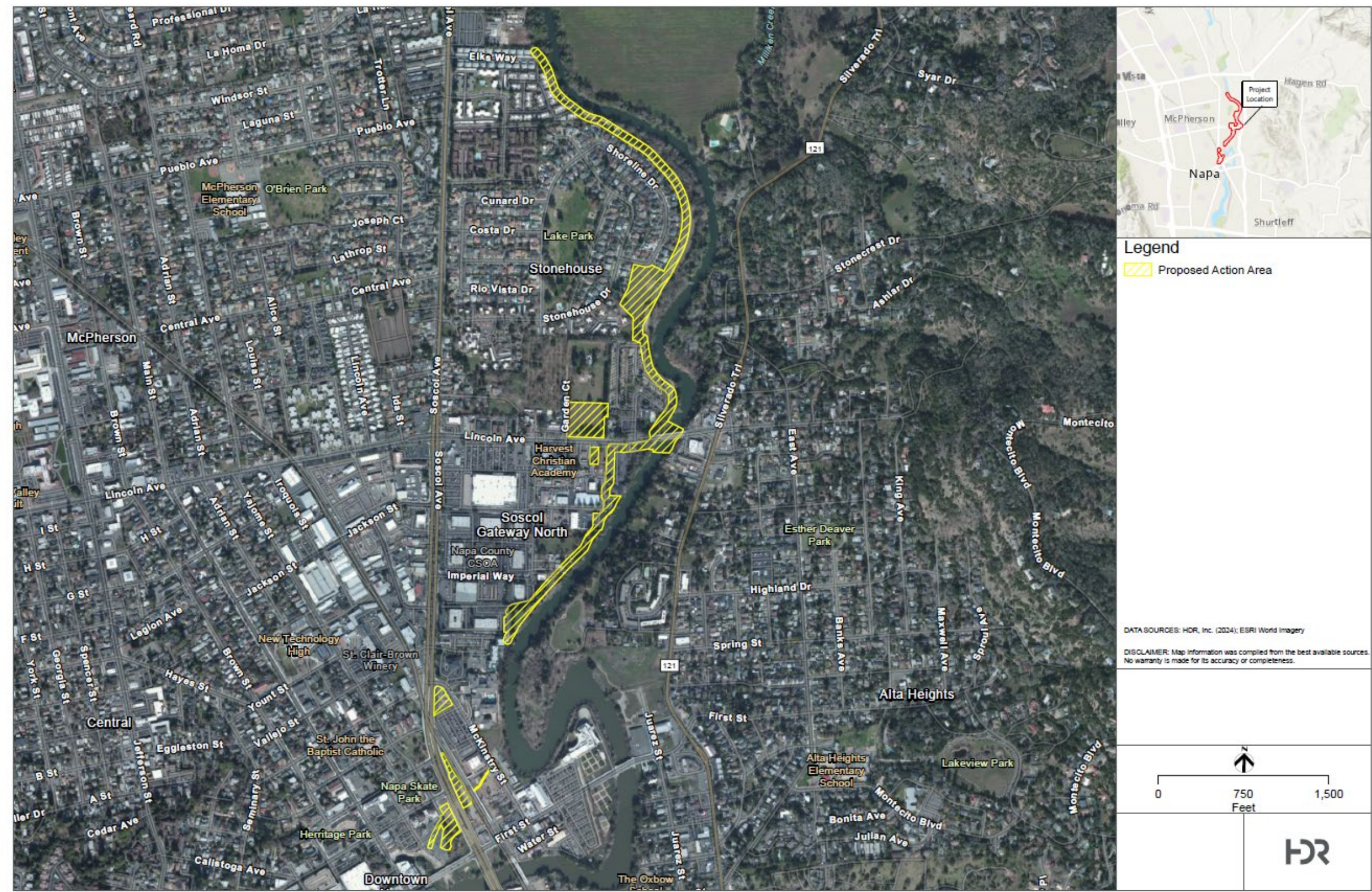
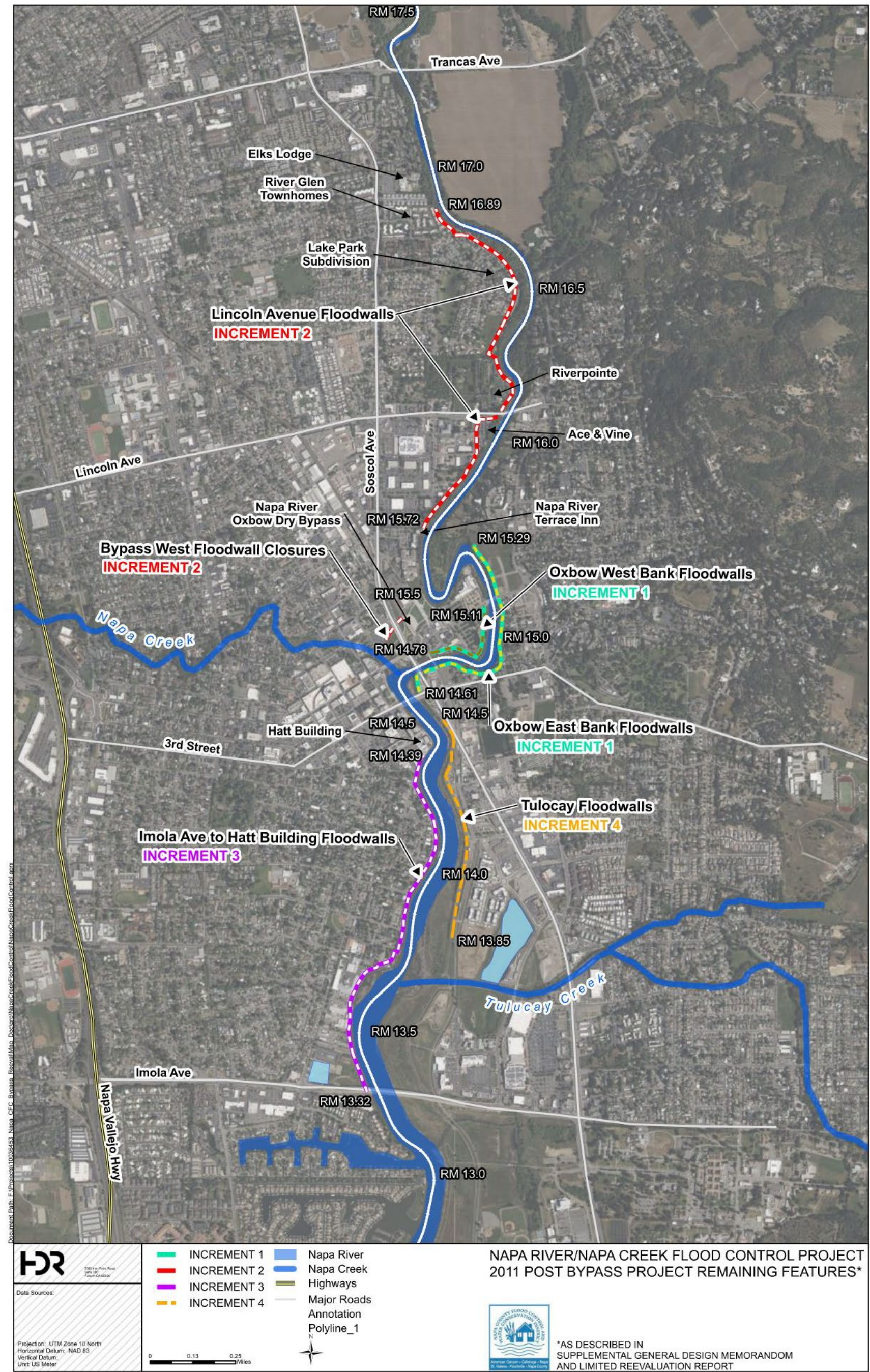


Figure 1.2-2. Napa River Incremental Overall Flood Protection Project Improvement Areas



The purpose of this Draft SEIR is to supplement the 1999 Final SEIS/EIR and disclose design informed changes associated with Increment 2. A subsequent NEPA and CEQA document will be prepared to evaluate Increment 3, Riverside Drive – Imola Avenue to the Hatt Building Floodwalls, design changes when they become available.

Although at this time USACE has determined Increments 1 and 4 of the Overall Flood Protection Project are not economically justified and are therefore not eligible for federal funding, there is no intention to deauthorize Increments 1 and 4. If future analyses demonstrate the economic viability of Increments 1 and 4, they may still be submitted for federal funding consideration. The District does not currently have plans to construct Increments 1 and 4 at this time.

For a more detailed background of the Overall Flood Protection Project and the previous environmental reviews conducted, see Appendix A, *Project Background*.

1.3 Project Purpose, Need, and Objectives

The primary purpose of the Overall Flood Protection Project as identified in the 1999 Final SEIS/EIR is to provide an economically feasible and environmentally sensitive method to protect the City and County of Napa from periodic flooding. The existing natural drainage system provided by the Napa River is not sufficient to adequately prevent extensive flooding and associated property damage in the Proposed Project Area. Therefore, the Proposed Project is needed to provide protection from the anticipated 100-year flood event. The original purposes and need for the Overall Flood Protection Project are still valid and have not changed. Project Purposes and Objectives are outlined in **Table 1.3-1** below.

Table 1.3-1. Project Purposes and Objectives

Agency	Purposes and Objectives
USACE	<ul style="list-style-type: none"> • To achieve 100-year level of flood protection; • To achieve flood damage reduction benefits that exceed project costs when calculated according to official USACE benefit-to-cost methodologies; • To mitigate impacts and effects to fish and wildlife from the project; and • To provide recreational facilities in the project area.
District	<p>The District concurs with the above purposes and objectives and worked with the Community Coalition on additional needs and objectives at the local level also mentioned in the 1999 Final SEIS/EIR:</p> <ul style="list-style-type: none"> • To attain an environmentally restored Napa River; • To approach aesthetic and environmental excellence; • To enhance opportunities for economic development; • To secure a local financing plan that the community can support; and • To comply with current or modified federal guidelines.

1.4 Purpose and Reason for this Draft SEIR

This SEIR describes the existing environmental conditions in the Proposed Project Area, evaluates the reasonably foreseeable environmental effects of the alternatives, including the Proposed Project, and identifies mitigation measures developed and previously completed to avoid or reduce any significant adverse environmental effects to a less-than-significant level where practicable. This SEIR has been prepared in accordance with CEQA and its related Guidelines, and, in combination with the 1999 Final SEIS/EIR, which it supplements. This SEIR fully discloses the reasonably

foreseeable environmental effects of the Proposed Project to the public and provides an opportunity for the public to review and comment.

In accordance with the CEQA guidelines, this SEIR also analyzes the new information which was not known at the time the 1999 Final SEIS/EIR was certified and analyzes additional design refinements since the 1999 Final SEIS/EIR. The basis for preparing a supplemental document is provided in **Table 1.4-1** below.

Table 1.4-1. Basis for Supplemental Documentation

Environmental Guidance	SEIR Compliance Approach
CEQA Guidelines for Supplemental Documentation	<p>According to the CEQA Guidelines (14 California Code of Regulations (CCR) § 15064(f)(1) (2024)), preparation of an EIR is required whenever a project may result in a significant environmental impact. An EIR is an informational document used to inform public agency decision makers and the general public of the significant environmental effects of a project, identify possible ways to mitigate, reduce, or avoid the significant effects, and describe a range of reasonable alternatives to the project that could feasibly attain most of the basic objectives of the project while substantially lessening or avoiding any of the significant environmental impacts. Public agencies are required to consider the information presented in the EIR when determining whether to approve a project.</p> <p>CEQA requires that state and local government agencies consider the environmental effects of projects over which they have discretionary authority before taking action on those projects (California Public Resources Code (PRC) § 21000 et seq.). CEQA also requires that each public agency avoid or reduce to less-than-significant levels, wherever feasible, the significant environmental effects of projects it approves or implements. If a project would result in significant environmental impacts that cannot be feasibly mitigated to less-than-significant levels, the project can still be approved, but the lead agency's decision makers must issue a "statement of overriding considerations" explaining in writing the specific economic, social, or other considerations that they find, based on substantial evidence, make those significant and unavoidable effects acceptable.</p> <ol style="list-style-type: none"> 1. Section 15162 of the CEQA Guidelines provides that, when an EIR has been certified for a project, a subsequent EIR need not be prepared unless a substantial change in the project, a substantial change in the surrounding circumstances, or new information of substantial importance comes to light which reveals that the project would have one or more significant environmental effects not discussed in the certified EIR. A lead agency may choose to prepare a supplement to an EIR, rather than a subsequent EIR, when conditions that require preparation of a subsequent EIR are met, but "only minor additions or changes would be necessary to make the previous EIR adequately apply to the project in the changed situation" (CEQA Guidelines § 15163).

1.4.1 Proposed Subsequent Environmental Documentation

According to the CEQA Guidelines § 15162 mentioned in **Table 1.4-1** above, the District has determined that a Subsequent EIR is the appropriate level of documentation for the Proposed Project and meets the requirements under CEQA. This SEIR tiers from the previously certified 1999 Final SEIS/EIR and addresses project modifications, changed circumstances, and new information that could not have been known with the exercise of reasonable diligence at the time the prior document was certified (CEQA Guidelines § 15162). Pursuant to the CEQA Guidelines, the SEIR need contain only the information necessary to analyze project changes/modifications, changed circumstances, and new information that triggered the need for additional environmental review.

Additionally, since the 1999 Final SEIS/EIR was certified, changes in the regulatory environment have also triggered the need for additional environmental review. Changes in the CEQA Guidelines now require the analysis of additional environmental resources. Changes in federal and state special-status species listings also require additional analysis. CEQA and Assembly Bill (AB) 52 requires tribal consultation and consideration of project effects to tribal cultural resources. Additionally, changes in the federal regulatory environment such as revised federal air quality standards and new executive orders under NEPA require additional environmental review. These regulatory changes are listed in **Table 1.4-2** below and addressed in this Draft SEIR.

Table 1.4-2. Regulatory Changes in Resource Analysis

Regulatory Status	Environmental Resources
Environmental resources not considered in 1999 Final SEIS/EIR (not required by existing regulations at the time) but are analyzed in this Draft SEIR for the Proposed Project	Agriculture and forestry Energy Paleontological resources Greenhouse gas emissions Minerals Vibration impacts and effects to residences Recreation Transportation Tribal cultural resources Utilities Wildfire
Environmental resources that require further environmental review due to changes in Proposed Project	Aesthetics Air quality Cultural resources Hydrology and water quality Noise Environmental Justice Socioeconomics

1.5 CEQA Scoping and Public Involvement Process

A public scoping period for the Proposed Project took place from November 1 through December 1, 2023. A public scoping meeting was held virtually on November 9, 2023, to present information about the Proposed Project and the District's decision-making process, and to listen to the views of the public on the range of issues relevant to the scope and context of the future Draft SEIR.

The District and USACE received three written comments from the California Department of Fish and Wildlife, the California Department of Transportation, and the Native American Heritage Commission regarding project description information, regulatory requirements, habitat considerations, impacts and effects to state rights-of-way, equitable access, and AB 52 consultation and cultural resources assessments. These comments have been taken into consideration and incorporated into this SEIR. Comment letters and additional details of the scoping process can be found in Appendix B, *CEQA Scoping*.

The District and USACE have engaged interested tribes in consultation under AB 52 and Section 106 of the National Historic Preservation Act. Tribal consultation is currently ongoing with the Wappo Tribe and Yocha Dehe Tribe.

Project information will also be posted periodically at <https://www.countyofnapa.org/1083>.

1.6 Document Overview

The format of this Draft SEIR is outlined in **Table 1.6-1** below to assist the reader's review of the document.

Table 1.6-1. Document Overview

Section/ Chapter	Description of Section/Chapter
Executive Summary	Summarizes the contents and findings contained in this Draft SEIR. It also contains a brief description of the Proposed Project, alternatives, public review procedures, and a summary table listing Proposed Project impacts and effects, mitigation measures that have been recommended to reduce significant impacts, and the level of significance of each impact following mitigation.
Chapter 1	Introduction to the Draft SEIR. This chapter describes the project location, a background of environmental review completed for the project to date, a description of the purpose, need and objectives of the Proposed Project, a description of the purpose of this environmental document under CEQA regulations, and outlines contents and organization of this environmental document.
Chapter 2	Contains the description of the Proposed Project as well as the No Project Alternative under consideration.
Chapter 3	Consists of the environmental resource sections and analyses that are required under CEQA. Some environmental resource sections are not discussed in detail and those are included in Section 3.2. The environmental resource sections that are discussed in detail are organized according to the following framework. <ul style="list-style-type: none"> • Affected Environment: Environmental Setting and Regulatory Setting • Environmental Consequences: Methods of Analysis, Thresholds of Significance, and Direct and Indirect Impacts and Effects for the Proposed Project and No Project Alternative • Mitigation Measures for the Proposed Project and No Project Alternative
Chapter 4	Contains a discussion of the CEQA alternatives to the Proposed Project and No Project Alternative, including those that have been previously considered. As allowed by CEQA, most of the impacts of these alternatives are evaluated at a more general level than the analyses contained in Chapter 3.
Chapter 5	Contains discussions of additional topics required by CEQA, specifically, cumulative impacts and effects, growth-inducing impacts, and significant and unavoidable impacts and effects, if any.
Chapter 6	Lists the Draft SEIR preparers.
Chapter 7	Lists the references used during preparation of the Draft SEIR.

2 Project Description

This chapter describes and compares the alternatives evaluated in detail in this SEIR, including the Proposed Project and the required No Project Alternative. CEQA Alternatives that were considered, but eliminated from further consideration are described in Chapter 4 and are not carried forward for analysis in this Draft SEIR.

This Draft SEIR and chapter focus on the specific components of the proposed flood protection improvements in the Proposed Project Area on the west side of the Napa River north of the Dry Bypass channel that have evolved and been refined since the 1999 Final SEIS/EIR was completed.

The Proposed Project is to construct Increment 2, Floodwalls North of the Bypass, which consists of four major elements: floodwalls south of Lincoln Avenue to the River Terrace Inn, floodwalls north of Lincoln Avenue to Elks Way, scour protection under the Lincoln Avenue Bridge, and two short floodwall closures at the Dry Bypass to complete the existing floodwall at that location. These elements are described in detail below. The No Project Alternative is also described in detail below. Other Project alternatives are discussed in detail in Chapter 4.

2.1 No Project Alternative

The No Project Alternative analyzed in this SEIR is that Increment 2, Floodwalls North of the Bypass, as described in Section 2.2, *Proposed Project Alternative*, would not be constructed. The No Project Alternative would leave portions of the City of Napa, specifically the northern downtown area to Trancas Street, vulnerable to flooding of the Napa River. **Figure 2.1-1a** below depicts the modeled area of potential flooding along the Napa River in the event of a 100-year flood without Increment 2, Floodwalls North of the Bypass constructed. **Figure 2.1-1b** below depicts the modeled area of potential flooding along the Napa River in the event of a 100-year flood with Increment 2, Floodwalls North of the Bypass constructed (i.e. Proposed Project Alternative). The modeled hydraulic simulation provides a comparison of the current and no project conditions to future conditions with the proposed floodwalls north of the Dry Bypass constructed. In this modeled scenario, and as shown in **Figure 2.1-1a** there would be substantial flooding under the No Project Alternative, approximately 4-5ft in the residential areas north of Lincoln Avenue in the City of Napa.

Figure 2.1-1a. 100-year flood simulation for the No Project Alternative

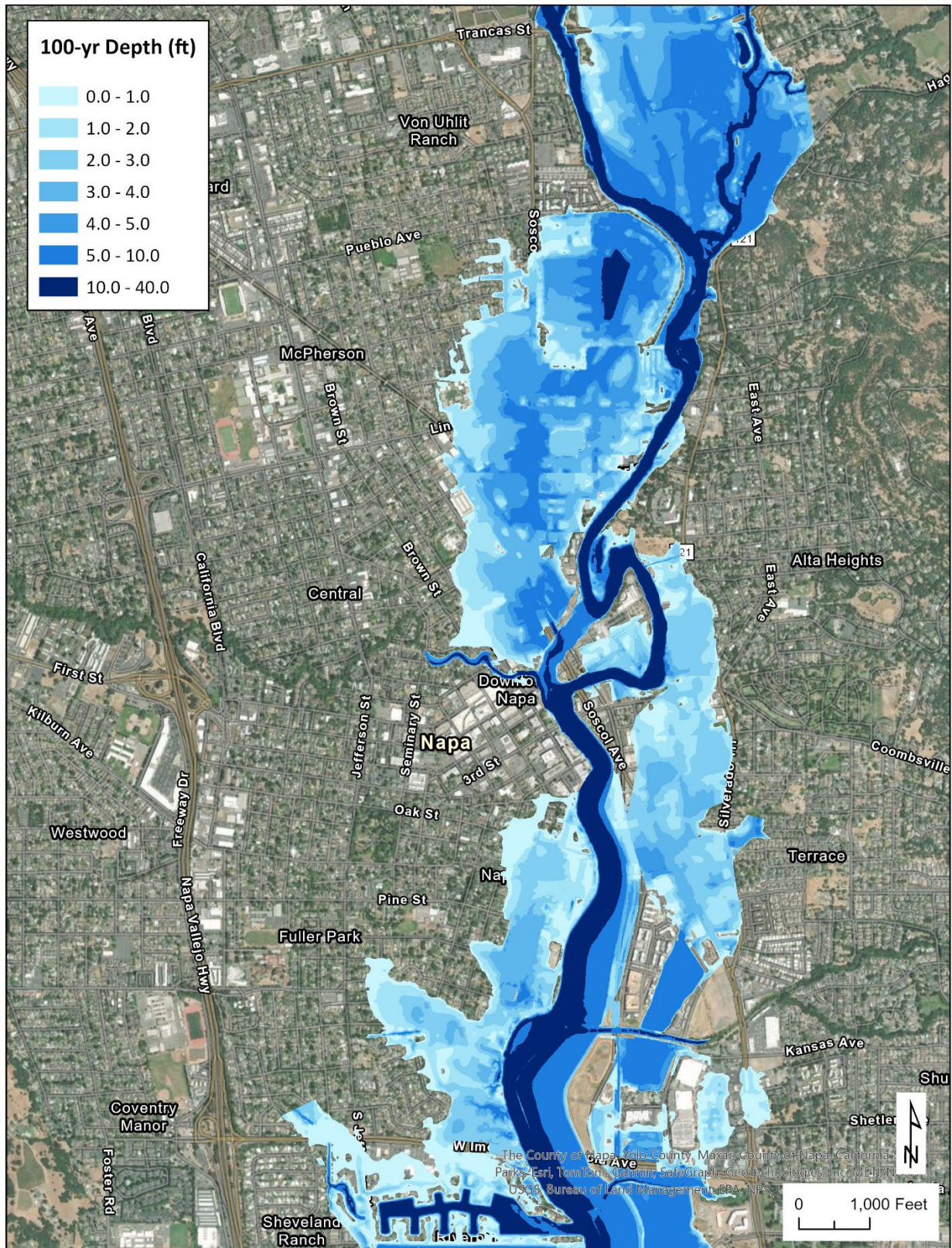
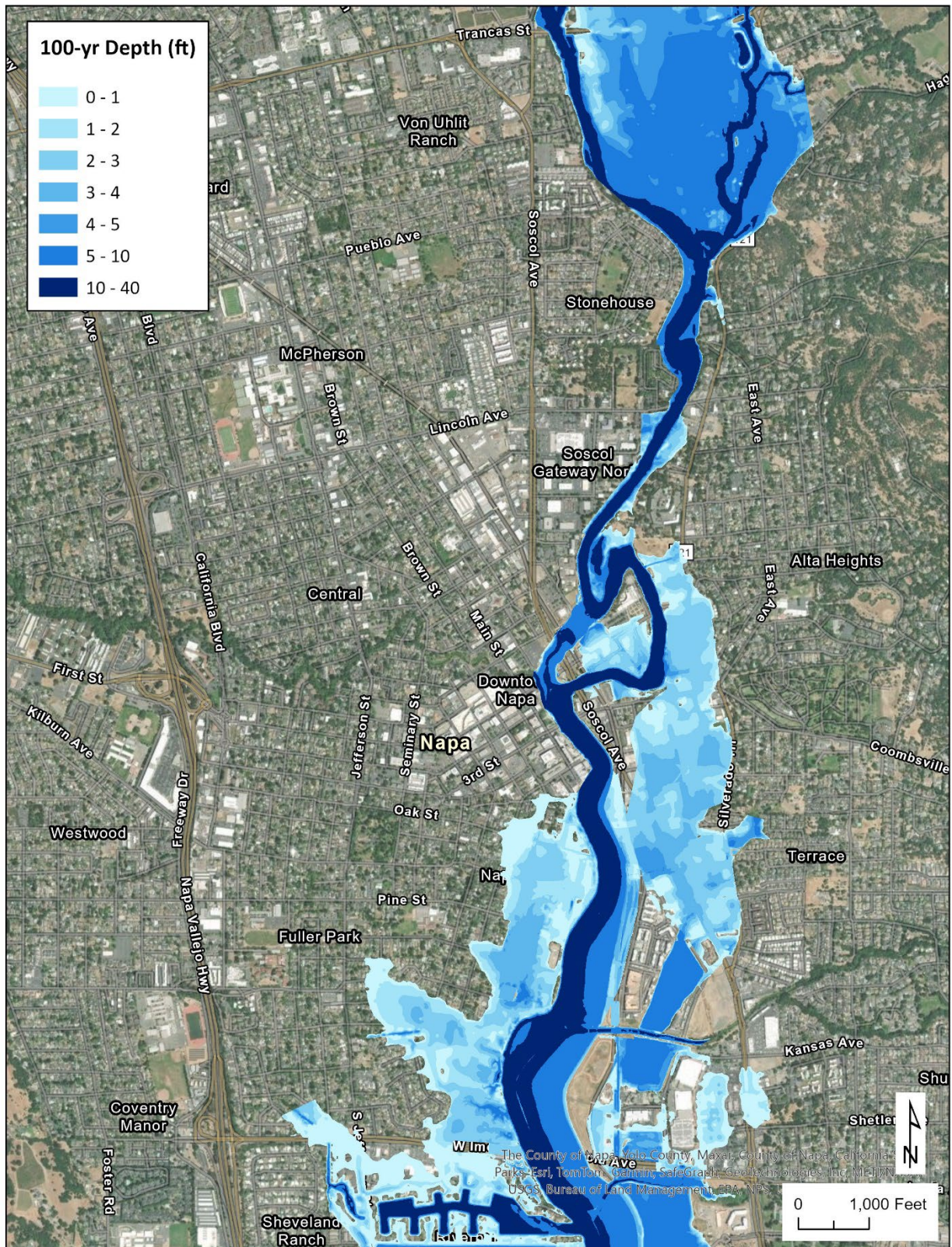


Figure 2.1-2b. 100-year flood simulation for the Proposed Project Alternative



2.2 Proposed Project Alternative

The Proposed Project design generally follows the previously proposed improvements as documented in the 1998 SGDM and its 1999 Final SEIS/EIR; however, there are some notable changes including a reduction in overall impacts to riparian habitat in the area north of Lincoln Avenue. Notable changes from the 1998 SGDM and its 1999 Final SEIS/EIR are summarized in **Table 2.2-2**. As stated previously, the Proposed Project consists of four major elements: floodwalls south of Lincoln Avenue, floodwalls north of Lincoln Avenue, scour protection under the Lincoln Avenue Bridge, and two short floodwall closures at the Dry Bypass. These elements and specific design changes within these elements are described further below. **Figure 2.2-1a** through **Figure 2.2-5e** shows the Proposed Project Area and proposed floodwalls.

Construction of the Proposed Project is expected to begin in the fall of 2025 and end in 2028. In water work at the Lincoln Avenue Bridge is anticipated to last occur in one 4-month construction season, during allowable work windows for aquatic species (June 1 through October 31). Work hours would be Monday through Friday for 10 hours per day. The sequence and duration of construction activities is shown in **Table 2.2-1** below.

Table 2.2-1. Anticipated sequence of construction activity

Construction Activity	2025	2026				2027				2028
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
North of Lincoln Ave										
Trail Closure, Lincoln Ave										
Tree Clearing, Lincoln Ave										
Floodwalls, RiverPointe										
Floodwalls, Lake Park										
Floodwalls, River Glen										
Water Main, Lake Park										
Landscaping, Lincoln Ave										
Bridge Protection, Lincoln Ave										
South of Lincoln Ave										
Tree Clearing, Lincoln Ave										
Floodwalls, Wall St										
Roadwork & Utilities, Wall St										
Floodwalls, Wall St										
Utilities, Lincoln Ave										
Floodwalls, Lincoln Ave										
Bridge Protection, Lincoln Ave										

Construction Activity	2025	2026				2027				2028
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
North of Lincoln Ave										
Dry Bypass Floodwall and Structures										
Landscaping, Lincoln Ave										

Appendix C provides further details on construction of the Proposed Project pertaining to features location in Increment 2, only. These include site preparation, construction methods, equipment and materials to be used, removal and relocation of utilities, and post-construction operations and maintenance (O&M). Site preparation would consist of mobilization and delivery of equipment, followed by installation of traffic control and sediment control measures. Construction equipment and materials to be used are detailed in Appendix C. There would be daily deliveries of equipment and materials including concrete, aggregate, rebar, asphalt, pipe, and sheet piles. Construction traffic would utilize the Proposed Project Area and paved roads, as identified. Construction traffic would flow throughout the respective work areas – north of Lincoln Ave and south of Lincoln Ave and between staging areas. It is anticipated that a maximum of 30 workers, and personal vehicles, would be on the various project sites at a given time. The anticipated area of disturbance associated with the Proposed Project is 14.37 acres in project work areas and 5.39 acres in staging areas. Construction of the Proposed Project would require the removal and relocation of some utilities in the Proposed Project Area. Utility conflicts are described in Appendix C. Utilities would either be protected in place, demolished and removed, abandoned in place, relocated, or maintained through the proposed floodwall.

After construction, all O&M activities would be undertaken by the District indefinitely as part of their areawide O&M activities. The 15-foot-wide O&M corridor on the land side of the floodwall and the existing Napa River Trail on the water side of the floodwall would serve as maintenance corridors. Any damage to the existing Napa River Trail as a result of construction would be repaired as necessary in coordination with the City of Napa. Ongoing maintenance activities for the Proposed Project include routine inspections and minor vegetation trimming.

Figure 2.2-1a. Proposed Project Alternative



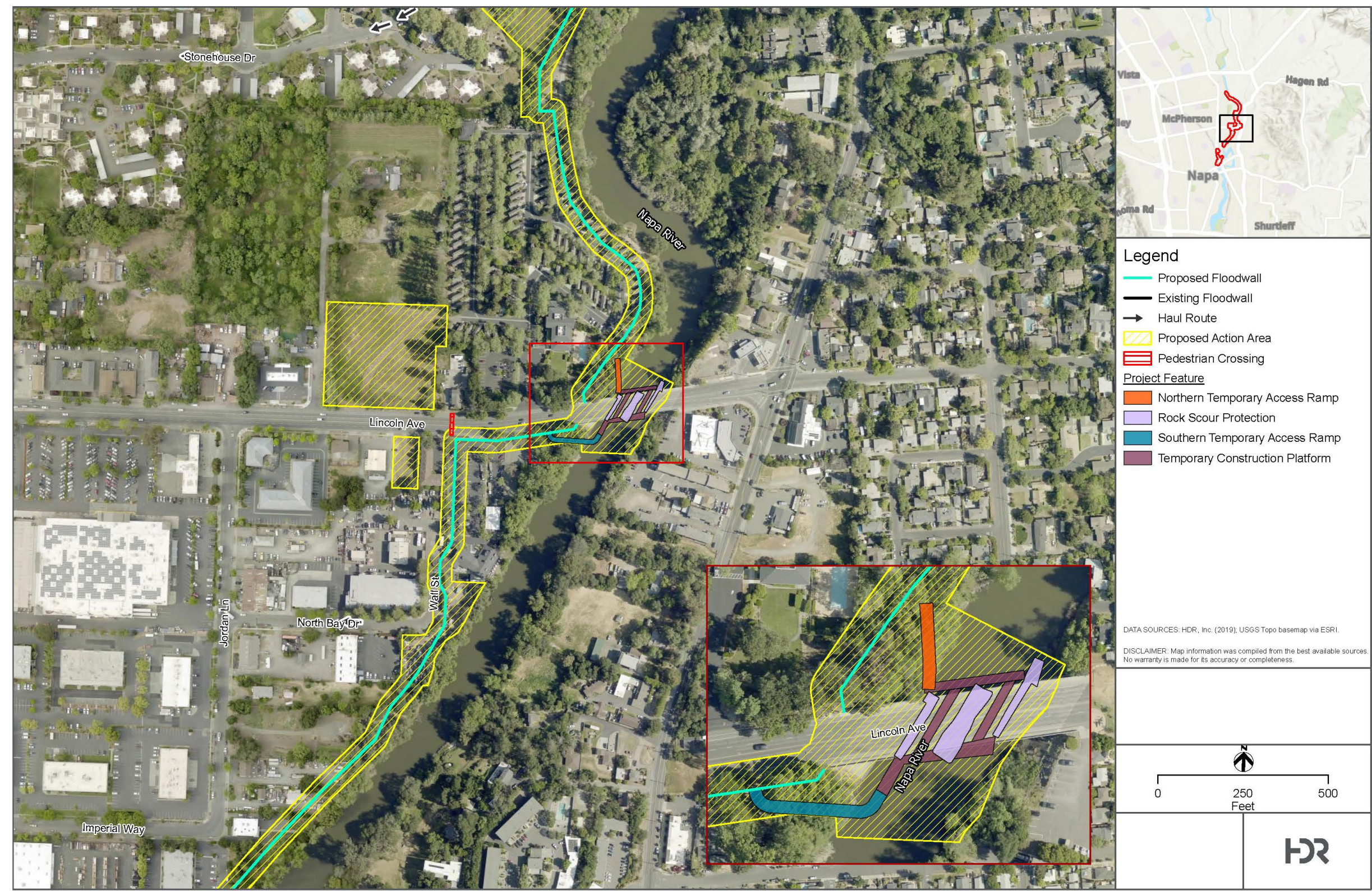
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Figure 2.2-2b. Proposed Project Alternative



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Figure 2.2-3c. Proposed Project Alternative



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Figure 2.2-4d. Proposed Project Alternative



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Figure 2.2-5e. Proposed Project Alternative



Table 2.2-2. Proposed Project Changes to Increment 2 of the Overall Flood Protection Project from the 1998 SGDM and the 1999 Final SEIS/EIR

Area	Description
Floodwalls South of Lincoln Avenue to River Terrace Inn	In the area south of Lincoln Avenue, the current Proposed Project includes continuation of the Napa River Trail from its current terminus on the river side of the River Terrace Inn and connecting it to the City of Napa's existing River Trail that extends between Lincoln Avenue and Trancas Street. The new trail would be on the river side of the new floodwall until just south of Wall Street where it would cross the floodwall alignment through a stoplog closure structure just south of Wall Street and run landside of the floodwall in the 15-ft O&M corridor up to Lincoln Avenue. A mid-block lighted pedestrian crossing is proposed to allow trail users to safely cross Lincoln Avenue. A few additional updates to the Project design in the area south of Lincoln Avenue include providing two flood gates for the two businesses at Lincoln Avenue versus the single gate proposed in the 1998 SGDM and the 1999 Final SEIS/EIR. Additionally, at the Lincoln Avenue Bridge, the footprint of rock scour protection proposed under the current Proposed Project is less than half of what was proposed under the SGDM based upon updated scour modeling.
Floodwalls North of Lincoln Avenue to Elks Way	The element north of Lincoln Avenue deviates the most from the 1998 SGDM and the 1999 Final SEIS/EIR. The 1998 SGDM, the 1999 Final SEIS/EIR, and the Proposed Project consist of providing flood protection from the Lincoln Avenue bridge, around the RiverPointe parcel, through the Lake Park and River Glen subdivisions and tie into high ground at Elks Way. The alignment and methods of providing flood protection for this reach vary between the authorized and proposed designs. For the RiverPointe element, the Proposed Project eliminates in-water work for this area with construction of a new floodwall alignment that has been setback from the existing riverbank sufficiently such that in the event of continued erosion, the floodwall footing would not be undermined. This setback of the floodwall alignment retains the existing riverbank and existing riparian area but requires the removal of a row of trailer vacation rental units and pads and utility services in the RiverPointe parcel. The floodwall would extend through this reach and continue north into the existing levee embankment around the Lake Park subdivision.
Lake Park Subdivision	For the Lake Park subdivision, the 1998 SGDM and the 1999 Final SEIS/EIR proposed reconstruction and raising of the existing levee approximately 3 feet, creating a new levee meeting the current USACE levee design standards for the full length of the Lake Park subdivision. The Proposed Project replaces the levee with a new floodwall that is embedded within the waterside slope of the existing levee embankment roughly 15-feet waterward of the existing backyard fences on top of the existing levee crown. This change results in a much smaller footprint for the new flood protection feature and retains additional riparian area as compared to the 1998 SGDM design and the 1999 Final SEIS/EIR.
River Glen Townhomes	For the River Glen townhome section, the Proposed Project floodwall alignment would be located roughly 15-feet waterward of the existing townhome backyard fence line, but instead of being a concrete T-floodwall, the floodwall would be a steel sheet pile I-floodwall with a concrete cap. Finally, instead of terminating at the rear of the Elks Lodge, the floodwall would terminate in high ground at the north end of the River Glen townhomes roughly at Elks Way road.
Dry Bypass	Starting at the southern end of the Proposed Project Area, within the Dry Bypass, where the 1998 SGDM, the 1999 Final SEIS/EIR, and the current Proposed Project design differ is at the existing gap in the floodwall between Soscol Avenue and the Napa Valley Wine Train Bridge embankments. The 1998 SGDM and the 1999 Final SEIS/EIR proposed floodwalls to close the gap between the two embankments with a 350 cfs capacity pump station located on the protected side of the floodwall to address the existing drainage outfalls in the area. The current Proposed Project includes a new outfall control structure with a manually operated sluice gate constructed in line with the floodwalls.

The Proposed Project design for each of the four main elements located within Increment 2 are described in additional detail below.

2.2.1 Floodwalls South of Lincoln Avenue to River Terrace Inn

A floodwall would be constructed on the west bank of the Napa River beginning at the River Terrace Inn and continuing north toward Lincoln Avenue. The floodwall would start at the high ground near the edge of the River Terrace Inn property. The floodwall would consist of 30 feet in length of sheet pile “I” wall embedment into the high ground near River Terrace Inn and would then transition to a concrete “T” wall with a foundation constructed below ground. The exposed stem of the floodwall would be approximately 3 to 7 feet high above ground and less than 2 feet wide as it goes north. The floodwall would be set back from the existing bank on the water side of existing businesses and the O&M corridor. A new 10-foot-wide recreational trail would be constructed on the water side of the floodwall starting at the high ground at River Terrace Inn and running north to Wall Street, where the trail would then cross the wall through a 15-foot-wide stop log pedestrian gate.

Continuing north, the floodwall would jog to the land side of the Ace & Vine and Napa River Pet Hospital businesses. The 10-foot-wide recreational trail would run on the land side of the floodwall in this area and run along the west side of the Ace & Vine parcel, where it would cross Lincoln Avenue with a mid-block crossing crosswalk with activatable yellow lights. The trail would then run east along the north side of Lincoln Avenue until it ties into a new waterside 10-foot-wide recreation trail on the waterside of the floodwall by crossing the wall through a new 15-foot-wide stop log pedestrian and emergency access gate. The floodwall along the south side of Lincoln Avenue would run along the frontage of both the Ace & Vine and Napa River Pet Hospital that would also consist of two roughly 20-foot-wide swing gates and business signage that would be installed in the floodwall at the existing driveway locations on Lincoln Avenue to allow access to the businesses on the other side of the wall. The floodwall would tie into and terminate at the south side of the western parapet wall of the Lincoln Avenue Bridge. In total, the floodwall south of Lincoln Avenue would consist of 2,345 linear feet of concrete “T” wall and 30 linear feet of “I” wall.

There are five outfall structures in this element south of Lincoln Avenue that would generally be modified to provide for crossing the new floodwall and positive closure devices, such as a headwall with a sluice gate or flap gate and appropriate scour protection.

2.2.2 Floodwalls North of Lincoln Avenue to Elks Way

At the Lincoln Avenue Bridge, the floodwall would tie into the north side of the western parapet wall and continue north following the existing trail on the water side of businesses and homes. A 15-foot-wide stop log pedestrian and emergency access gate would be installed at the start of the existing Napa River Trail access point located just north of the Lincoln Avenue Bridge. This gate would allow pedestrian and emergency vehicle access to the existing Napa River Trail on the water side of the floodwall. The floodwall alignment would be set back from the riverbank because of the active scour along this section of the Napa River.

Constructing the floodwall would require removing the eastern most row of trailer vacation rental units closest to the river to make space for the floodwall. Burrows Court may be realigned adjacent to the floodwall. Currently, the affected trailer vacation rental units at RiverPointe are removed during the winter, as required by the flood action plan for the resort, due to flood risk. After the proposed floodwall is constructed and the flood action plan for the resort is updated, the remaining trailer

vacation rental units could be left in place all year because the wall is anticipated to provide increased flood protection. In this area, the floodwall would be approximately 3 to 10 feet high.

North of the RiverPointe property is the Lake Park subdivision. There is an existing noncertified levee on the land side of the trail behind the homes on Shoreline Drive. This levee, which is not part of the federal project, was originally constructed in the 1960s by the Lake Park subdivision contractor, when the Lake Park subdivision was built to provide some flood protection to the homes in the community. This levee was also modified and raised at a later date. For the Proposed Project, the existing levee berm would be partially excavated from the river side, and the floodwall would be constructed approximately 15 feet toward the river from the existing backyard fences. The area behind the wall would then be filled to provide a flat surface at roughly the elevation of the old top of levee. Homes on the water side of Shoreline Drive have existing levee maintenance easements in their back yards. These easements are not suitable for construction of the Proposed Project and O&M of completed features, so new easements would be acquired. After construction of the Proposed Project, the reconstructed levee berm top would serve as an O&M road, and existing fences would be replaced. Cross fences at each property line would also be constructed across the O&M road, to further delineate individual properties. The floodwall location would minimize impacts to back yards from construction and future O&M activities. In this area, the exposed portion of the floodwall would be approximately 1 to 3 feet tall with a pedestrian rail on top when viewed from the landside. Existing trees on the water-side slope of the existing berm would be removed as well as some on the levee crest to allow for construction of the Proposed Project and provide the required clear space next to the floodwall for O&M. Trees on the land-side slope of the existing berm would not be removed. Some trees may need to be trimmed or removed on the water side of the trail to allow clearance for construction equipment. **Figure 2.2-6** provides a rendering of the proposed floodwall adjacent to the Lake Park subdivision.

An existing 36-inch-diameter steel water line crosses underneath the existing Lake Park berm along the trail. This water line would be backfilled with concrete or removed and relocated along the water side of the trail.

The section of waterline between stations 24+50± to 29+50± would be relocated waterward as a landside relocation is not suitable based on the proximity of the homes adjacent to the floodwall alignment and the complete relocation of the waterline into a nearby roadway would also require a new crossing underneath Napa River which would be prohibitively expensive.

The Proposed Project includes installation of approximately 810 linear feet of 36-inch welded steel pipe and would intersect the proposed floodwall at one location, station 11+28, as a result making it easier for maintenance.

North of the Lake Park subdivision, the floodwall would transition from a concrete “T” wall to a sheet pile “I” wall to accommodate a narrower footprint and setback requirements in this element of the floodwall corridor while also providing flood protection. The sheet pile wall would have a concrete cap surrounding it so that it appears the same as the other parts of the concrete floodwall.

Between stations 30+00 and 35+00, the existing 36-inch waterline would cross the floodwall alignment. This section of pipe would be replaced in its existing alignment to allow for a new penetration through the floodwall and the installation of two-36” butterfly valves, one located on either side of the floodwall allowing for the closure of the pipeline in the event of an emergency or maintenance needs.

The sheet pile wall would continue north along the water side of the townhomes on Trout Way, Pike Drive, and Elks Way and tie into high ground on the north side of Elks Way. The sheet pile wall may be up to 22 feet deep in some areas. Beneath Trout Way is an existing 72-inch-diameter drain outfall that the sheet pile wall would span over. The sheet pile spanning the storm drain pipe would be reinforced and supported. The drain outfall would be avoided during construction. In total, the floodwall north of Lincoln Avenue would consist of 3,300 linear feet of concrete “T” wall and 810 linear feet of “I” wall.

There are three outfall structures in this element north of Lincoln Avenue that would generally be improved to provide for crossing the new floodwall and positive closure devices, such as a headwall with a sluice gate or flap gate and appropriate scour protection.

2.2.3 Rock Scour Protection under the Lincoln Avenue Bridge

Rock would be placed under Lincoln Avenue Bridge to reduce the potential for scour to occur and to protect the banks of the Napa River as well as the central pier footings of the bridge. As shown in **Figure 2.2-7**, this area of construction would be accessed from temporary ramps on the northwest and northeast sides of the Lincoln Avenue Bridge, on the west bank. Access ramps would be constructed on the bank of the Napa River using approximately 300 tons of rock in each ramp and later removed at the completion of construction. Best management practices (BMPs) would be installed at the temporary access points, including straw wattles on the temporary access ramps to prevent sediment from entering the Napa River, including the installation of a silt fence at the limits of work. Post construction, willow pole stakes and other native vegetation would be installed to reestablish riparian habitat on the slopes where the ramps are constructed.

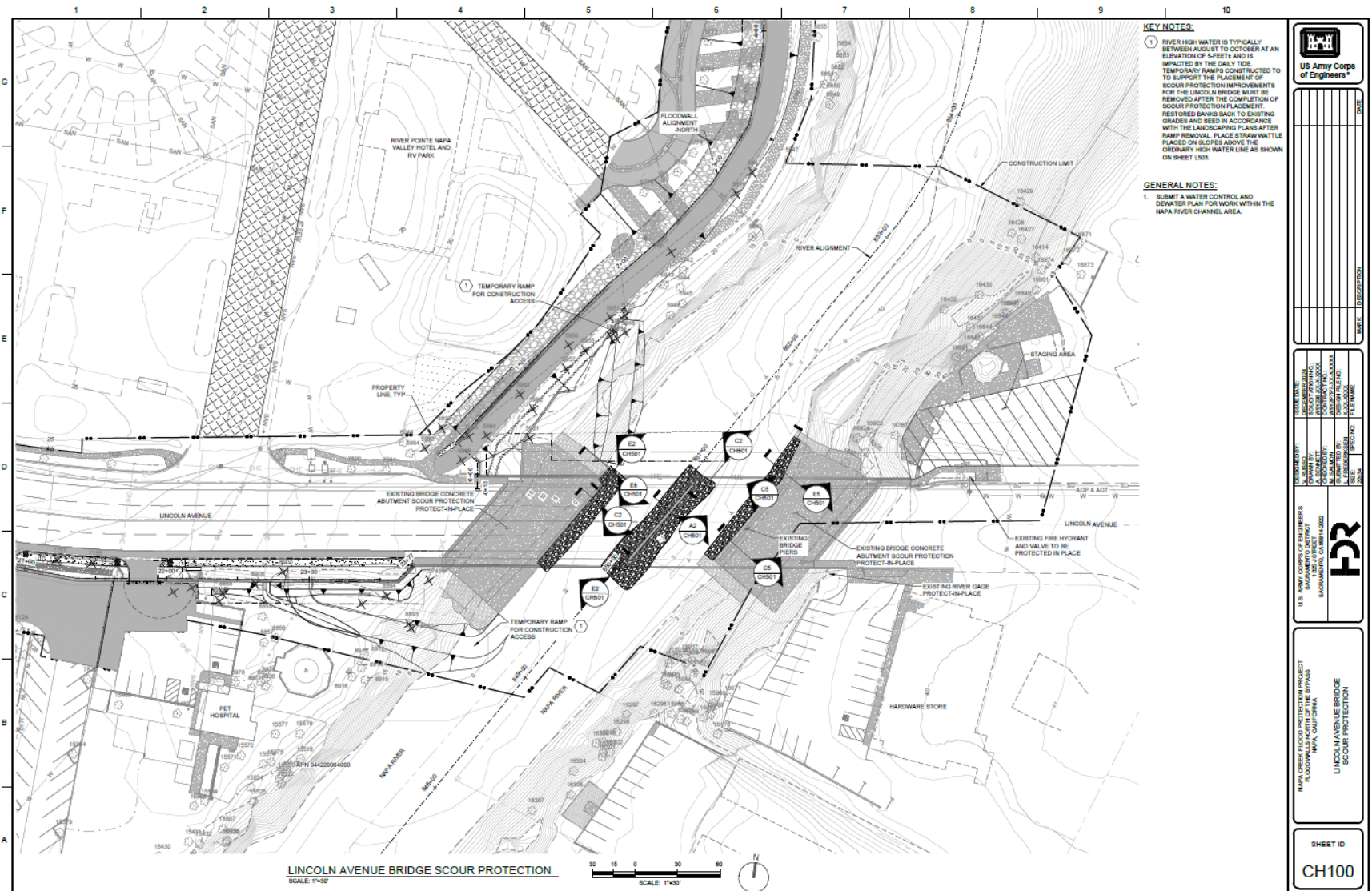
During construction, water management in the Napa River would be required to place the rock scour protection under Lincoln Avenue Bridge and to control turbidity. The primary work area isolation approach would be to place turbidity curtains on the up- and down-stream sides of the work area, due to the tidal nature of the location. Work within the river would be completed with equipment working from temporary platforms above the water level. Work platforms would be constructed to allow river flows and fish passage past the work area. The platforms would be 20 to 25 feet wide, built with an excavator, and could include supersacks or other material support for crane mats, and temporary railings for safety. Water and water quality management during construction in the Napa River would be conducted pursuant to Sections 401 and 404(b)(1) of the Clean Water Act, Waste Discharge Requirements (WDR) Order #99-074 issued by the California State Water Quality Control Board, and any additional permitting requirements necessary to support the Proposed Project to limit any potential water quality impacts (RWQCB 1999). The rock scour protection requires the excavation of approximately 2-5 feet of existing bed material adjacent to the existing piers (approximately 450 cubic yards of material) which would be replaced with approximately 1,560 tons of Class V riprap with a D_{50} of 18-inches on top of a 6-inch-thick granular filter (gravel). Excavated material would be temporarily stockpiled before being disposed of at the site or off hauled to a permitted location.

The rock scour protection would be placed in the Napa River during the dry season (June 1–October 31), in one work window. After the rock scour protection is placed, the access platforms and access ramps would be removed, and the banks would be restored. Lastly, permanent BMPs would be applied in place of the temporary BMPs, and native riparian vegetation would be installed.

Figure 2.2-6. Rendering of Lake Park Subdivision Proposed Floodwall



Figure 2.2-7. Rock Scour Protection at Lincoln Avenue Bridge



2.2.4 Floodwalls at the Dry Bypass

As part of previous construction of the Overall Flood Protection Project at the Dry Bypass, floodwalls were constructed on both sides of the new Dry Bypass channel (i.e., below Soscol Avenue and the Napa Valley Wine Train). With the Proposed Project, drainage areas previously facilitating overland flow to reenter the Dry Bypass and river during flood events on either side of the Soscol Avenue Bridge would be closed off by constructing additional floodwalls. The proposed floodwalls would comprise approximately 230 linear feet of “T” wall. The exposed portion of the concrete “T” walls would be approximately 4-7 feet tall west of the Soscol Avenue bridge and approximately 4-7 feet tall east of the Soscol Avenue bridge. The proposed improvements in the Dry Bypass would occur on the east and west sides of the Soscol Avenue Bridge, as discussed in **Table 2.2-3** below.

Table 2.2-3. Improvements in the Dry Bypass

Area of Dry Bypass	Proposed Improvements
East of Soscol Avenue Bridge	The demolition work east of Soscol Avenue Bridge would consist of: removing existing rock scour protection, approximately 20-feet of existing concrete barrier of Soscol Avenue to install a gate for O & M, and gabion basket wall; exposure and removal of an existing 18-inch pipe, a 42-inch pipe, 20-feet of the bridge concrete barrier, and an inactive 27-inch sanitary sewer force main; clearing and grubbing of debris from construction areas above the original ground; and disposal of materials resulting from clearing and grubbing activities.
West of Soscol Avenue Bridge	<p>The demolition work on the west of Soscol Avenue Bridge would consist of removing 75 linear feet of 6-inch concrete curb for drainage improvements; saw cutting of pavement; abandonment of existing catch basin near the proposed location of floodwall; clearing and grubbing of debris from construction areas above the original ground; and disposal of materials resulting from clearing and grubbing activities.</p> <p>The proposed work on the west of Soscol Avenue Bridge would re-establish existing swale to improve drainage by capturing surface runoff, hydroseed to prevent erosion, place Class I Rock Slope Protection before the flow reaches the new concrete valley gutter, construct concrete valley gutter per City of Napa design standards to drain the surface runoff to the catch basin downstream, replacing and relocating the existing catch basin with circular frame and grate with a new catch basin with rectangular frame and grate, placing 3-inches of hot mix asphalt before the new floodwall and grading to drain water away from the floodwall to drain to new catch basin.</p>
East end of the Soscol Avenue Bridge, between Soscol Avenue and the Napa Valley Wine Train	The work proposed for the east end of the Soscol Avenue Bridge, between Soscol Avenue and the Napa Valley Wine Train, involves installation of improvements to address internal storm drainage, including extending the current 36-inch reinforced concrete pipe (RCP) at the outlet to align with the flow line of the new swale and creating a natural swale to preserve stormwater treatment upstream of the floodwall, while addressing levee safety standards and protecting existing infrastructure. A weir drop inlet with a trash rack and concrete headwall would be installed to effectively collect upstream surface flow from the swale, along with approximately 70 linear feet of double 4 ft by 4 ft reinforced concrete box to collect the upstream flow from the existing double 36-inch RCP, 36-inch RCP, and 48-inch HDPE pipe. Dry Bypass Control Structure would connect the double 4 ft by 4 ft reinforced concrete box culvert. Sluice/slide gates closures would be installed at the exterior end of the Dry Bypass Control Structure to comply with the requirements of EM 1110-2-1413 for Hydrologic Analysis of Interior Areas. Approximately 85 linear feet of 42-in diameter RCP would be installed between Dry Bypass Control Structure and a new manhole on the 42-in pipe. There would also be a 5 ft by 5 ft reinforced concrete box culvert to manage surface overflow from the upstream swale, covering 45 linear feet, and a concrete wing wall with a flap gate at the outlet of the box culvert.

Area of Dry Bypass	Proposed Improvements
Upstream Drainage System	<p>The planned improvements to the upstream drainage system would entail routing the flow through penetrations in the outfall drainage control structure and then releasing it into either the dry bypass or the Napa River's low-flow channel by connecting to the existing 42-inch diameter RCP. Installation of a new outfall drainage vault structure (35 linear feet in length, approximately 29 feet in depth, and the width would vary from 19 to 22 linear feet and would house three penetrations- a double 4-feet by 4-feet reinforced concrete box culvert, 5-feet by 5-feet reinforced concrete box with sluice/ slide gates, and 42-inch RCP with sluice/ slide gate). On the landside, there would be a 10-foot by 10-foot drop inlet vault with a trash rack.</p> <p>Excavation would require dewatering and would involve installing temporary sheet piles around the excavation area. Any remaining water in the work area would be pumped out into a temporary holding area before being discharged to the low-flow swale leading to the river.</p> <p>The discharge into the low flow channel would be done with 47 linear feet of new a 5-feet by 5-feet reinforced concrete box culvert with flap gate daylighting to the existing bypass low flow channel with a new headwall and flap gate. Discharge back into the existing 42-inch RCP system would be done with 64 linear feet of new 42-inch RCP connecting to a new 60-inch diameter manhole tying into the existing 42-inch RCP system within the Dry Bypass.</p>

O&M for the proposed floodwall between the Soscol Avenue and Napa Valley Wine Train bridges would be accessed by maintenance crews from the northbound land of Soscol Avenue Bridge where a 12-foot-wide O&M road and a turnaround pad of around 3,125 square feet would be constructed at the floodwall to accommodate a Vactor truck-type maintenance vehicle. Maintenance crews would access the floodwall west of Soscol via Yajome Street.

2.3 Permits and Approvals

The City of Napa is considered a Responsible Agency under CEQA based on their discretionary approval power over some aspects of the Proposed Project and will consider use of this SEIR for their CEQA compliance. There are other agencies who do not fit the definition of Responsible Agency but will have permitting authority. Additionally, USACE is preparing a separate SEA to meet the requirements of NEPA. Anticipated permits and approvals for the Proposed Project are included in **Table 2.3-1** below.

Table 2.3-1. Anticipated permits and approvals

Agency	Type of Approval
California Department of Fish and Wildlife	Fish and Game Code Section 1602 Streambed Alteration Agreement
California Department of Fish and Wildlife	California Endangered Species Act, Section 2081 Incidental Take Permit
California Native American Heritage Commission	Consultation for effects on Native American burials or artifacts
State Historic Preservation Officer	National Historic Preservation Act, Section 106 Consultation
National Marine Fisheries Service	Endangered Species Act, Section 7 Consultation
US Fish and Wildlife Service	Endangered Species Act, Section 7 Consultation

Napa County Flood Control and Water Conservation District
Napa River/Napa Creek Flood Protection Project – Increment 2, Floodwalls North of the Bypass

Agency	Type of Approval
State of California Regional Water Quality Control Board	Clean Water Act Section 402 National Pollutant Discharge Elimination System General Permit for Stormwater Discharges Associated with Construction Activities, Clean Water Act Section 401 Waste Discharge Requirements – Acquired September 1999; letter of approval in process
US Army Corps of Engineers	Clean Water Act Section 404 – no permit required under Section 204 Guidance
Bay Area Air Quality Management District	Consultation for Authority to Construct/Permit to Operate

3 Environmental Setting, Impacts, and Mitigation Measures

This Chapter presents supplemental analyses to the 1999 Final SEIS/EIR and focuses on the changes in environmental impacts and conditions in the Proposed Project Area. This Chapter describes the resources within the Proposed Project Area, as well as the impacts of the proposed alternatives on these environmental resources. Each subsection presents the existing environmental resource conditions in the Proposed Project Area, environmental impacts of the Proposed Project, and, when necessary, measures that are proposed to avoid, reduce, minimize, mitigate or compensate for potentially significant impacts. This Chapter is organized by issue area and includes all of the topics in the CEQA Environmental Checklist (State CEQA Guidelines Appendix G, as amended). Potential cumulative impacts of the Proposed Project are discussed in Chapter 5.

3.1 Approach to Analysis

Each section of Chapter 3 identifies the key setting or existing conditions information and impacts analysis for a particular topic area. The existing conditions in the Proposed Project Area in each section provides the baseline for analyzing the impacts of the No Project Alternative and Proposed Project Alternative. The potentially affected environment for this Proposed Project, previously and hereafter referred to as the “Proposed Project Area,” is along the west bank of the Napa River in and north of downtown Napa. The State CEQA Guidelines require an EIR to include an evaluation of potentially significant effects on the physical environment associated with a “proposed project” and to identify feasible mitigation for any significant adverse effects (CEQA Guidelines Section 15126.2). The impacts analysis sections discuss the environmental impacts of the No Project Alternative and Proposed Project Alternative. The No Project Alternative impact analyses also provide a comparison of the scale of potential impacts in relation to the Proposed Project Alternative. Proposed Project impacts are generally identified as either short-term/temporary or long-term.

The 1999 Final SEIS/EIR described the affected environment in detail and evaluated the potential effects of implementing the Overall Flood Protection Project, including Increment 2, on resources of concern, including hydrology, water quality, hazardous substances, biological resources, cultural resources, land use, aesthetics and visual factors, traffic, socioeconomic issues, public utilities, recreation, noise, and air quality. Appendix A includes summaries of the previously identified impacts and effects for these resources from the 1999 Final SEIS/EIR. The majority of the impact conclusions reached in the 1999 Final SEIS/EIR are still valid for the current Proposed Project Alternative. The general design and scope of the Proposed Project Alternative remains the same as what was considered and evaluated for the Increment 2, Floodwalls North of the Bypass in the 1999 Final SEIS/EIR.

Section 3.2 below includes the resources that are not considered in detail and where substantial changes have not occurred for the Proposed Project. Sections 3.3 through 3.16 include the environmental resources that are considered in more detail, and where changes in the affected environment or regulatory setting have occurred and reevaluation of effects on these resources is warranted.

The regulatory setting related to each resource can be found in Appendix D, *Regulatory Framework*. Thresholds used to evaluate the significance of impacts are carried forward from the 1999 Final

SEIS/EIR, with updated thresholds and significance criteria identified as applicable. Under each resource, any significance criteria lacking an evaluation section remains unchanged from the 1999 Final SEIS/EIR, and previous analyses remain sufficient. For some impacts, mitigation measures described in the 1999 Final SEIS/EIR may not apply to the Proposed Project. For other impacts, additional or different mitigation measures are required to reduce effects of the Proposed Project. In either case, any proposed change in mitigation from the 1999 Final SEIS/EIR is identified. While potential impacts from O&M activities would be temporary and minor in scale, they are discussed where relevant in the resource sections.

As described in Section 2.1, the No Project Alternative would consist of no floodwall construction within Increment 2, north of the dry bypass for the purposes of this SEIR.

Three new topic areas were added to the CEQA Guidelines in 2018: energy, tribal cultural resources (TCRs), and wildfire. These topic areas were not specifically addressed in the 1999 Final SEIS/EIR. All three topic areas are addressed in this SEIR; energy and wildfire are described in Section 3.2 Resource Topics Not Discussed in Detail, and TCRs are addressed in Section 3.15 Tribal Cultural Resources.

3.2 Resource Topics Not Discussed in Detail

Some resources were not analyzed in detail in this SEIR, either because environmental impacts would be negligible or the Proposed Project would not create new or substantially more significant environmental effects that were not otherwise analyzed in the 1999 Final SEIS/EIR. Moreover, no new significant impacts (not disclosed in the 1999 Final SEIS/EIR), or significantly exacerbated impacts (disclosed in the 1999 Final SEIS/EIR), would occur to these resources if the Proposed Project were implemented.

The resources not analyzed in detail are Agriculture and Forestry, Energy, Environmental Justice, Land Use and Planning, Mineral Resources, Population and Housing, Public Services, Socioeconomics, and Wildfire. For further discussion about why these resources are not analyzed in detail in this SEIR, please refer to Appendix E, *Resource Topics Not Discussed in Detail*.

3.3 Aesthetics / Visual Resources

3.3.1 Existing Conditions

The Proposed Project is located along the west bank of the Napa River in downtown Napa. The proposed floodwalls would be constructed along the Napa River riparian corridor and the Napa River Trail, a multi-use recreational trail. Views of the area include views of mature trees and the Napa River, as well as single family homes and multi-story buildings and businesses. No scenic vistas have been identified in the Proposed Project Area in the Napa County General Plan or the City of Napa General Plan. According to the National Wild and Scenic Rivers System map, the Napa River is not designated as a wild and scenic river (National Scenic Rivers System 2023). The existing aesthetic and visual conditions are presented in **Table 3.3-1** below.

Table 3.3-1. Aesthetic and Visual Conditions

Aesthetic Category	Discussion
Distinct Visual Features	As discussed in the 1999 Final SEIS/EIR, the Napa River Corridor is a distinct visual feature that traverses the City of Napa. The corridor is a natural amenity that includes significant vegetation in the northern portion of the corridor and vast expansive views of grasslands to the south. The density and quality of riparian habitat gradually decreases proceeding downstream in the Proposed Project Area. Most of the riparian areas in the southern portion of the Napa River, south of the Proposed Project Area, have been cleared, and much of the river is lined with constructed levees, dikes, and riprap. In some areas, the river has been physically constrained by urbanization which has resulted in narrow corridors of the river. As a result of surrounding development, the river has become highly channelized, flanked by steep, eroding banks on both sides of the river throughout most of the City of Napa, including in the Proposed Project Area.
Scenic Resources	Scenic resources highlighted in the Napa County General Plan Community Character Element include internationally distinguished vineyards, hundreds of architecturally unique wineries, and mountains, hills, and valleys in the rugged eastern portion of the county. The scenery of the valleys is characterized by forested groves of redwood, oak, and pine; shrub and grasslands; rolling, grass-covered hills punctuated by large oak trees; and Lake Berryessa (Napa County 2008). A natural scenic feature adjacent to the southern end of the Proposed Project Area is Oxbow Preserve, which is approximately 12.7 acres of land adjacent to the Napa River featuring recreational areas and riparian and wetland habitat (City of Napa 2023; City of Napa 2022). Other aesthetic resources in the vicinity of the Proposed Project Area include mature trees and riparian vegetation along the riverbanks. There are a number of notable mature trees in the Proposed Project Area, some of which are also visible from beyond the immediate river area due to their height.
Public Views	There are only a limited number of public views of the Napa River from surrounding areas because private development backs onto the river in many areas. The majority of public views of the river can be grouped into the following categories: views from bridges and overpasses; views from public parks and open spaces; and views from public streets. Most views of the Napa River are available through private property. This is especially true in the northern portions of the Napa River corridor. In this area, most development that is directly adjacent to the river is residential, with backyards extending to the Napa River Trail and the river. There are also several commercial and industrial uses south of Lincoln Avenue, which back directly onto the river, though it is likely that the visual amenity of the river is not enjoyed by these uses.

Aesthetic Category	Discussion
Scenic Roadways	There are approximately 280 miles of county-designated scenic roadways in Napa County. None of these roads have been designated as official Scenic Highways by the State of California. However, segments of SR 29, SR 121, and SR 221 are eligible for scenic highway designation. SR 121 is located along the Napa River in the vicinity of the Proposed Project Area to the east. Historically, the County of Napa has not pursued official state designation from the California Department of Transportation (Caltrans) due to concerns about maintenance and improvement costs; however, these roads are not precluded from future official Scenic Highway status (Napa County 2008). Additionally, none of the roads in the Proposed Project Area are considered National Scenic Byways (FHWA 2024).

3.3.2 Impact Analysis

Method of Analysis

This section describes the methods used to analyze aesthetics within the Proposed Project Area. The potential impacts from construction, O&M of the Proposed Project on aesthetics were evaluated qualitatively using available private and public views and regulations that would be applicable to the Proposed Project. To evaluate the potential impacts the Proposed Project would have on aesthetics, federal and state designations for aesthetic and visual resources in the Proposed Project Area were assessed. The following methods were utilized to determine potential impacts on aesthetics and to evaluate whether construction and operation of the Proposed Project would cause conflict with aesthetic resources as well as with state and local plans and regulations.

- Analysis of the Caltrans California State Scenic Highway System Map GIS open data.
- Analysis of U.S. Department of Transportation Federal Highway Administration data on America's byways.
- Analysis of National Park Service data for Wild and Scenic Rivers.
- Analysis of construction methods, rights-of-way, and staging areas and their potential impacts on aesthetic resources.

CEQA Significance Criteria

For the purposes of this SEIR, the Proposed Project would result in a significant impact on aesthetics if it would:

- Have a substantial adverse effect on a scenic vista.
- Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
- In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public views are those that are experienced from publicly accessible vantage points).
- Conflict with applicable zoning and other regulations governing scenic quality.
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Summary of Aesthetics/Visual Resources Impacts

The No Project Alternative and Proposed Project Alternative impacts are summarized in **Table 3.3-2**.

Table 3.3-2. Summary of Aesthetics/Visual Resources Impacts

Impact Number	Impact Statement	CEQA Significance Determination
<i>No Project Alternative</i>		
AES-1	Have a substantial adverse effect on a scenic vista.	No impact
AES-2	Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.	No impact
AES-3	If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	No impact
AES-4	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.	No impact
<i>Proposed Project Alternative</i>		
AES-1	Have a substantial adverse effect on a scenic vista.	No impact
AES-2	Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.	No impact
AES-3	In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public views are those that are experienced from publicly accessible vantage points). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Less than significant impact
AES-4	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.	Less than significant impact

Impact AES-1: Have a substantial adverse effect on a scenic vista.

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same and no construction would occur; therefore, there would be no direct impact to scenic vistas. The District would continue

current O&M activities on the west bank of the Napa River and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a larger flood event, there would be the potential for the Napa River to rise and floodwaters to encroach on adjacent habitat as well as the Napa River Trail in the Proposed Project Area. However, these conditions would be temporary and would not be expected to have a substantial adverse effect on a scenic vista, especially since there are no designated scenic vistas located near the Proposed Project Area, and because no construction would take place impacting a scenic vista. Therefore, **no impact** would occur, and no mitigation is required or recommended.

Proposed Project Alternative

No scenic vistas have been identified in the Proposed Project Area. During construction, the Proposed Project would involve the use of heavy construction vehicles and equipment, which would be staged while not in use. Staging activities would occur within the Proposed Project Area. Additionally, construction vehicles and equipment would be kept within the staging areas when not in use. Approximately 287 total trees would need to be removed in the Proposed Project Area to allow construction and equipment clearance; 52 of which are located along the west bank of the Napa River. However, these trees are not located within a designated scenic vista, and trees that are removed would be replaced (according to current regulations) to match the current visual quality of the Proposed Project Area, where permitted and feasible. The City of Napa-approved trees and hardy and herbaceous perennials would be planted along disturbed roadways to match the planting seen along the southwest side of Lincoln Avenue. Along the riparian corridor, planting would include native trees and shrubs near the top of bank and herbaceous perennials and wattles with live stake plantings near the ordinary high-water line. Compensatory mitigation for the Overall Flood Protection Project was initiated and implemented in 2000 and included planting trees and creating habitats for the areas to be disturbed by the Overall Flood Protection Project including future phases such as the Proposed Project. Therefore, no additional compensatory mitigation is included in the Proposed Project.

Once constructed, the Proposed Project Area would include proposed floodwalls varying in height from generally 3 to 10 feet tall along the alignment. The proposed floodwalls would affect views in the Proposed Project Area and certain vantage points; however, because there are no designated scenic vistas in the Proposed Project Area, there would be no impacts on a scenic vista. Therefore, the Proposed Project Alternative would result in **no impact**, and no mitigation is required or recommended.

Impact AES-2: Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same and no construction would occur. The District would continue current O&M activities on the west bank of the Napa River and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a larger flood, there would be the potential for the Napa River to rise and floodwaters to encroach on adjacent habitat, the Napa River Trail, and roadways in the Proposed Project Area. However, these conditions would be temporary and would not be expected to substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings located within a designated state scenic highway, especially since there are no designated state scenic

highways located near the Proposed Project Area. Therefore, **no impact** would occur, and no mitigation is required or recommended.

Proposed Project Alternative

Segments of SR 121, located along the Napa River in the vicinity of the Proposed Project Area to the east, are eligible for scenic highway designation, but it not been officially designated. Additionally, none of the roads in the Proposed Project Area are considered National Scenic Byways (FHWA 2024).

As stated in Impact AES-1, trees would need to be removed in construction areas to allow construction and equipment clearance; however, these trees are not designated scenic resources or located within a scenic highway, and any trees removed would be replaced to match the current visual quality of the Proposed Project Area, where permitted and feasible. Also approved planting along Lincoln Avenue that meets the City of Napa requirements would be planted in disturbed areas. Tree and compensatory mitigation have been met for the Overall Flood Protection Project, including the Proposed Project, therefore, no additional compensatory mitigation or tree mitigation is included here. No identified rock outcroppings and historic buildings would be disturbed during construction.

O&M of the Proposed Project is also located outside of a state scenic highway and would not damage scenic resources within a state scenic highway. The Proposed Project Alternative would not substantially damage scenic resources, including trees, rock outcroppings, and historic buildings within a state scenic highway. Therefore, the Proposed Project Alternative would result in **no impact**, and no mitigation is required or recommended.

Impact AES-3: In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings. If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same and no construction would occur. The District would continue current O&M activities on the west bank of the Napa River and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a larger flood event, there would be the potential for the Napa River to rise and floodwaters to encroach on adjacent habitat, the Napa River Trail, and roadways in the Proposed Project Area. However, these conditions would be temporary and would not be expected to substantially change the visual character or quality in the Proposed Project Area or to conflict with applicable zoning and other regulations governing scenic quality, and consequently, there would be no permanent affect to these environmental resources. Therefore, **no impact** would occur, and no mitigation is required or recommended.

Proposed Project Alternative

The impact discussion in **Table 3.3-3** below is divided by the various types of views within the Proposed Project Area.

Table 3.3-3. View Types

View Type	Discussion
Views from Public Streets and Local Businesses	<p>As discussed, during construction, the Proposed Project would involve the use of heavy construction vehicles and equipment, which would be staged while not in use at designated staging areas located off local roadways. Approximately 287 total trees would need to be removed in construction areas to allow construction and equipment clearance; 52 of which are located along the west bank of the Napa River. However, these trees would be replaced to match the current visual quality of the Proposed Project Area, where permitted and feasible. Tree and compensatory mitigation have been met for the Overall Flood Protection Project, including the Proposed Project; therefore, no additional compensatory mitigation or tree mitigation is included here. The floodwall would be constructed in several-hundred-foot segments at a time as it progresses along the alignment. Approximately 40 linear feet of floodwall could be constructed per day. During construction, the proposed placement of excavated material that would be stockpiled could result in mounds that appear unnatural or unsightly along the proposed floodwall alignment; however, visual impacts associated with stockpiling of excavated material would be temporary, not permanent, because the stockpiled material would be hauled offsite for disposal resulting in a less than significant impact.</p> <p>The floodwall along the south side of Lincoln Avenue would run along the frontage of both Ace & Vine and the Napa River Pet Hospital that would also consist of two roughly 20-foot-wide swing gates to allow for driveway access for these businesses. The floodwalls on either side of the Ace & Vine and Napa River Pet Hospital driveways would be lowered to 3 feet and a stop log structure would be constructed on top to improve sight lines for vehicles utilizing the Ace & Vine and Napa River Pet Hospital driveways. See Section 3.14, Traffic/Transportation, for additional information regarding traffic flow and access. Views of the Napa River would not be impeded in this location. However, views between the pet hospital and traffic on Lincoln Avenue would be impaired with construction of the proposed floodwalls. Gates would be left open outside of heavy flood events and signage would be installed in the floodwall at the existing driveway locations on Lincoln Avenue to allow access to the businesses on the other side of the wall. Therefore, impacts would be considered less than significant along the south side of Lincoln Avenue near Ace & Vince and the Napa River Pet Hospital.</p>

View Type	Discussion
Private Views	<p>Constructing the floodwall would require removing the easternmost row of trailer vacation rental units closest to the river to make space for the proposed floodwall. Burrows Court in the RiverPointe parcel may be realigned adjacent to the proposed floodwall. Currently, the affected trailer vacation rental units at RiverPointe are removed during the winter, as required by the flood action plan for the resort, due to flood risk. After the re-alignment of Burrows Court within the RiverPointe property to accommodate the proposed floodwall construction, some vacation rental units would be reinstalled depending on the remaining space available, and other trailer vacation rental units on the property outside of the Proposed Project Area could be left in place all year because the wall is anticipated to provide increased flood protection. In this area, the floodwall would be approximately 3 to 10 feet high.</p> <p>The easternmost row of trailer vacation rental units at RiverPointe, currently have partial views of the Napa River, and views of the riparian corridor of trees and vegetation on the west bank of the Napa River. Other trailer vacation rental units at RiverPointe do not have views of the Napa River because they are set more inland and have limited views of the riparian corridor on the west bank of the Napa River. Since the easternmost row of trailer vacation rental units would be removed to accommodate the proposed floodwalls, there would be no impact to the private views in this area since the viewers would no longer be present. Furthermore, these viewers are only temporary since these are rental units. Therefore, the Proposed Project Alternative would not result in a significant and unavoidable impact in this area, as was concluded in the 1999 Final SEIS/EIR, due to the changes in the proposed floodwall alignment, height, and the removal of the easternmost row of trailer vacation rentals units and the private views from these units no longer existing. Other views from the RiverPointe property would be generally the same as the current views and would not vary substantially from the anticipated views that were evaluated in the 1999 Final SEIS/EIR.</p> <p>Backyard views in the Lake Park subdivision, along Shoreline Drive, would be minimally obstructed by the proposed floodwall along the west bank of the Napa River. In this area, the exposed portion of the floodwall would be approximately 1 to 3 feet tall with a pedestrian rail on top when viewed from the homes (see Chapter 2, Figure 2.2-6). Existing trees on the water-side slope of the existing levee in this area would be removed as well as some on the levee crest to allow for construction of the proposed floodwall and to provide the required space next to the proposed floodwall for O&M activities. Consistent with the 1999 Final SEIS/EIR, impacts to private views from the Lake Park subdivision are not considered significant, because private views are only available to a limited number of people. Additionally, in most cases, homes are positioned downslope of the existing levee, and existing backyard fences would be located in between homes and the proposed floodwall, partially blocking or making the floodwall difficult to see from the vantage point of the residents. Therefore, overall impacts to private viewers north of Lincoln Avenue would be less than significant.</p>

View Type	Discussion
Views from Public Spaces	<p>Recreationalists and viewers on the Napa River Trail, north of Lincoln Avenue would experience a permanent changed view due to the floodwall on the landside of the trail which could detract from the natural visual quality of the area. Some trees would need to be trimmed or removed on the water side of the trail to allow clearance of construction equipment. City of Napa-approved trees and hardy and herbaceous perennials would be planted along disturbed roadways to match the planting seen along the southwest side of Lincoln Avenue to reduce the effects of tree clearing for purposes of construction. Along the riparian corridor, planting would include native trees and shrubs near the top of bank and herbaceous perennials and wattles with live stake plantings near the ordinary high-water line. The 10- to 12-foot-wide recreational trail would be reconstructed on the water side of the floodwall starting at the high ground at River Terrace Inn and running north to Wall Street. The realigned trail would serve as a maintenance corridor and would be repaved in areas that were previously paved. A new crosswalk at Lincoln Avenue would be installed. The concrete wall could be covered with aesthetic treatments to improve the appearance and gate closure structures would be installed. Disturbed areas would be seeded and restored after construction. A combination of native and adaptive drought tolerant plant varieties would be used along the trail network. Aesthetic treatments and installation of native plants would minimize impacts to the existing visual character or quality of public views in the Proposed Project Area from the realigned trail and impacts would be less than significant.</p> <p>The Proposed Project also involves rock scour protection, which would be placed in the river channel bottom and on bridge abutment aprons beneath the Lincoln Avenue Bridge. These permanent improvements would be visible from certain vantage points in the Proposed Project Area. However, rock scour protection would avoid the potential for erosion and degradation of the bridge structure, thereby avoiding resulting impacts to the aesthetic quality in the Proposed Project Area. A natural scenic feature adjacent to the southern end of the Proposed Project Area is Oxbow Preserve, which is approximately 12.7 acres of land adjacent to the Napa River featuring recreational areas, riparian and wetland habitat (City of Napa 2023; City of Napa 2022). Oxbow Preserve can be viewed from the vicinity of River Terrace Inn, located across the Napa River. Views may be partially, although not completely impeded on a permanent basis by the new 3- to 7-foot floodwall in this location. Impacts in this location would be minor and localized. Based on the factors described above, the Proposed Project would not conflict with applicable zoning and other regulations governing scenic quality. Therefore, the Proposed Project Alternative would result in a less than significant impact, and no mitigation is required or recommended.</p>

Impact AES-4: Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same and no construction would occur. The District would continue current O&M activities on the west bank of the Napa River and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a larger flood event, there would be the potential for the Napa River to rise and floodwaters to encroach on adjacent habitat, the Napa River Trail, and roadways in the Proposed Project Area. However, these conditions would be temporary and would not be expected to create a

new source of substantial light or glare which would adversely affect day or nighttime views in the area. Therefore, **no impact** would occur, and no mitigation is required or recommended.

Proposed Project Alternative

Nighttime work is not proposed for construction of floodwalls either north or south of Lincoln Avenue or for construction of the rock scour protection. Limited, short-term nighttime construction work may be required along Lincoln Avenue for utility relocations. If nighttime utility work is required, lighting would be directed down and would be limited to reduce any glare or stray onto adjacent properties. No permanent lighting would be installed in the Proposed Project Area for the proposed floodwalls or other features. However, the mid-block crossing crosswalk on Lincoln Avenue would include activatable yellow lights that would only come on if a pedestrian is present to provide a safe crossing; they would not stay on consistently. The Proposed Project Alternative would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area on either a temporary or permanent basis. Therefore, the Proposed Project Alternative would result in **less than significant impact**, and no mitigation is required or recommended.

3.4 Air Quality

3.4.1 Existing Conditions

The City of Napa (City), including the Proposed Project Area, is located within the boundaries of the San Francisco Bay Area Air Basin (SFBAAB). The SFBAAB comprises all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties, the southern portion of Sonoma, and the southwestern portion of Solano County. The Bay Area Air Quality Management District (BAAQMD) is the regional air quality agency for the SFBAAB.

Regional Climate, Topography, and Meteorology

The topography of the SFBAAB is characterized by complex terrain, consisting of coastal mountain ranges, inland valleys, and bays. This complex terrain, especially at the higher elevations, distorts the normal wind flow patterns in the SFBAAB. The Coast Range splits resulting in a western coast gap, Golden Gate, and an eastern coast gap, Carquinez Strait, which allow air to flow in and out of the SFBAAB and the Central Valley (BAAQMD 2017).

The climate of the SFBAAB is dominated by the strength and location of a semi-permanent, subtropical high-pressure cell. During the summer, the Pacific high-pressure cell is centered over the northeastern Pacific Ocean resulting in stable meteorological conditions and a steady northwesterly wind flow. Upwelling of cold ocean water from below to the surface because of the northwesterly flow produces a band of cold water off the California coast. The cool and moisture-laden air approaching the coast from the Pacific Ocean is further cooled by the presence of the cold-water band, resulting in condensation and the presence of fog and stratus clouds along the Northern California coast. In the winter, the Pacific high-pressure cell weakens and shifts southward, resulting in wind flow offshore, the absence of upwelling, and the occurrence of storms. Weak inversions coupled with moderate winds result in a low air pollution potential (BAAQMD 2017).

The Napa Valley is bordered by relatively high mountains. With an average ridge line height of about 2000 feet, with some peaks approaching 3,000 to 4,000 feet, these mountains are effective barriers to the prevailing northwesterly winds (BAAQMD 2017). The Napa Valley is widest at its southern end and narrows in the north.

During the day, the prevailing winds flow upvalley from the south about half of the time. A strong upvalley wind frequently develops during warm summer afternoons, drawing air in from the San Pablo Bay. Daytime winds sometimes flow downvalley from the north. During the evening, especially in the winter, downvalley drainage often occurs. Wind speeds are generally low, with almost 50 percent of the winds less than 4 miles per hour. Only 5 percent of the winds are between 16 and 18 miles per hour, representing strong summertime upvalley winds and winter storms (BAAQMD 2017).

Summer average maximum temperatures are in the low 80s (degrees Fahrenheit [F°]) at the southern end of the valley and in the low 90s at the northern end. Winter average maximum temperatures are in the high 50s and low 60s, and minimum temperatures are in the high to mid-30s with the slightly cooler temperatures in the northern end (BAAQMD 2017).

The air pollution potential in the Napa Valley could be high if there were sufficient sources of air contaminants nearby. Summer and fall prevailing winds can transport ozone precursors northward from the Carquinez Strait Region to the Napa Valley, effectively trapping and concentrating the pollutants when stable conditions are present. The local upslope and downslope flows created by

the surrounding mountains may also recirculate pollutants already present, contributing to buildup of air pollution. The high frequency of light winds and stable conditions during the late fall and winter contribute to the buildup of particulate matter in the Napa Valley (BAAQMD 2017).

Criteria Air Pollutants

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards to protect public health and welfare. There are six criteria air pollutants: Ozone (O₃); Particulate Matter, which consists of particulate matter 10 micrometers and smaller (PM₁₀) and particulate matter 2.5 micrometers and smaller (PM_{2.5}); Carbon Monoxide (CO); Nitrogen Dioxide (NO₂); Sulfur Dioxide (SO₂); and Lead (Pb). O₃ is considered a regional pollutant because its precursors (i.e., nitrogen oxides [NO_x] and reactive organic gases [ROGs]) affect air quality on a regional scale. Pollutants such as CO, NO₂, SO₂, and Pb are considered local pollutants that tend to accumulate in the air locally. Particulate matter is both a regional and local pollutant. The primary criteria pollutants generated by the Proposed Project are O₃ precursors (NO_x and ROGs), CO, PM₁₀, PM_{2.5}, and SO₂. Pollutants of concern are discussed in Table 3.4-1 below.

Table 3.4-1. Pollutants of Concern

Criteria Air Pollutant	Description of Pollutant
Ozone (O ₃)	O ₃ , also known as smog, is not emitted directly into the atmosphere. Instead, it is a secondary pollutant that is formed when ROGs and NO _x (both byproducts of the internal combustion engine exhaust) undergo chemical reactions in the presence of sunlight. ROGs and NO _x are known as O ₃ precursors. Ozone poses a health threat to those who already suffer from respiratory diseases (e.g., asthma) as well as to healthy people. Exposure to O ₃ can cause coughing, sore or scratchy throat, inflamed airways, chest pain, lung infection, and aggravation of lung diseases such as asthma, emphysema, and chronic bronchitis (United States Environmental Protection Agency [USEPA] 2023a). Exposure to elevated concentrations of O ₃ can result in deaths from respiratory causes. Additionally, ozone has been tied to crop damage, typically in the form of stunted growth, reduced photosynthesis, increased risk of diseases, and leaf discoloration (USEPA 2022a).
Reactive Organic Gases (ROGs)	ROGs are compounds made up of primarily hydrogen and carbon atoms. Internal combustion associated with motor vehicles is the major source of hydrocarbons. Other sources of ROGs are emissions associated with the use of paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols. Adverse effects on human health are not caused directly by ROGs but rather by reactions of ROGs to form secondary pollutants such as O ₃ .
Nitrogen Dioxide (NO ₂)	NO ₂ is a major component of the group of highly reactive gases known as oxides of nitrogen or NO _x , which is an O ₃ precursor. NO ₂ primarily gets in the air from the burning of fuel. Breathing air with a high concentration of NO ₂ can irritate airways in the human respiratory system. Short-term exposure to NO ₂ can aggravate respiratory diseases, particularly asthma, leading to respiratory symptoms (such as coughing, wheezing or difficulty breathing), hospital admissions, and visits to emergency rooms (USEPA 2022b). Longer exposures to elevated concentrations of NO ₂ may contribute to the development of asthma and potentially increase susceptibility to respiratory infections. In addition to human health effects, NO ₂ and other NO _x can also reduce visibility and contribute to acid rain, which can harm sensitive ecosystems (USEPA 2022b).
Carbon Monoxide (CO)	CO is a colorless, odorless gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. CO concentrations tend to be the highest during winter mornings with little to no wind, when surface-based inversions trap the pollutant at ground levels. The highest ambient CO concentrations are generally found near traffic-congested corridors and intersections. The primary adverse health effect associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation. Exposure to very high levels of CO, which are possible indoors or in other enclosed environments, can cause dizziness, confusion, unconsciousness, and death (USEPA 2023b).

Criteria Air Pollutant	Description of Pollutant
Particulate Matter (PM)	Particulate matter consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Particulate matter includes PM ₁₀ , which are inhalable coarse particles with a diameter of 10 micrometers or less, and PM _{2.5} , which are inhalable fine particles with a diameter of 2.5 micrometers or less. Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. Particles less than 10 micrometers in diameter pose the greatest risk to health because these particles can get deep into the lungs and may even enter the bloodstream. Health effects of exposure to particulate matter include premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms (e.g., irritation of the airways, coughing or difficulty breathing). Particulate matter can also cause environmental effects such as reduced visibility (haze), environmental damage (e.g., making lakes and streams acidic, depleting nutrients in soils, damaging sensitive forests and farm crops, affecting diversity of ecosystems, and contributing to acid rain effects), and aesthetic damage by staining stone and other materials (USEPA 2022c).
Sulfur Dioxide (SO ₂)	SO ₂ is the component of greatest concern for the group of gaseous sulfur oxides (SO _x). The largest source of SO ₂ in the atmosphere is the burning of fossil fuels by power plants and other industrial facilities. Smaller sources of SO ₂ emissions include industrial processes such as extracting metal from ore; natural sources such as volcanoes; and locomotives, ships and other vehicles and heavy equipment that burn fuel with a high sulfur content. Short-term exposures to SO ₂ can harm the human respiratory system and make breathing difficult. These effects of SO ₂ are of particular concern to people with asthma, particularly children. Environmental effects of SO ₂ and other SO _x include damaging foliage and decreasing growth of trees and plants, contributing to acid rain that is harmful for sensitive ecosystems, and reducing visibility (USEPA 2023c).
Lead (Pb)	Major sources of Lead (Pb) in the air are ore and metals processing and piston-engine aircraft operating on leaded aviation fuel. Other sources are waste incinerators, utilities, and lead-acid battery manufacturers. The highest air concentrations of Pb are usually found near lead smelters. Depending on the level of exposure, Pb can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems, and the cardiovascular system. Pb exposure also affects the oxygen carrying capacity of the blood. Infants and young children are especially sensitive to Pb exposures, which may contribute to behavioral problems, learning deficits and lowered IQ. Elevated levels of Pb in the environment can result in decreased growth and reproduction in plants and animals, and neurological effects in vertebrates (USEPA 2023d).
Toxic Air Contaminants	<p>According to the California Health and Safety Code, a toxic air contaminant (TAC) is “an air pollutant which may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health” (California Air Resources Board [CARB] 2023a). CARB has formally identified over 200 substances and groups of substances as TACs. Examples of TACs include benzene; asbestos; formaldehyde; dioxin; toluene; and metals such as cadmium, mercury, chromium, and lead compounds, among many others (CARB 2023a).</p> <p>Diesel engines emit a complex mixture of pollutants, including very small carbon particles, or “soot” coated with numerous organic compounds, known as diesel particulate matter (DPM). DPM contains more than 40 cancer-causing substances, most of which are readily adsorbed onto the soot particles. In 1998, CARB identified DPM as a TAC based on its potential to cause cancer.</p> <p>Most major sources of diesel engine emissions, such as ships, trains, and trucks, operate in and around urban areas. As a result, people living and working in cities and industrial areas and near heavy truck or train traffic are most likely to be exposed to DPM. Exposure to DPM can contribute to a range of health problems, including cancer. Diesel engine emissions are believed to be responsible for about 70 percent of California's estimated known cancer risk attributable to TACs (CARB 2023b). DPM comprises about 8 percent of PM_{2.5} in outdoor air, which is a known health hazard. As a significant fraction of PM_{2.5}, DPM contributes to numerous health impacts that have been attributed to particulate matter exposure, including increased hospital admissions, particularly for heart disease, but also for respiratory illnesses, and even premature death. Additionally, exposure to DPM may contribute to the onset of new allergies.</p>

Criteria Air Pollutant	Description of Pollutant
	DPM also affects the environment by reducing visibility and contributing to global warming (CARB 2023b).
Odor	Other air quality issues of concern in the SFBAAB include nuisance from odors. Objectionable odors may be associated with a variety of pollutants. Common sources of odors include wastewater treatment plants, landfills, composting facilities, refineries, and chemical plants. Odors are generally regarded as an annoyance rather than a health hazard. Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache) (BAAQMD 2017).

Sensitive Receptors

Certain community members are more susceptible to poor air quality. These individuals, referred to as sensitive receptors, are typically children, the elderly, and those with preexisting serious health problems. Land uses where sensitive receptors are most likely to spend time include schools, parks and playgrounds, daycare centers and preschools, hospices, dormitories, prisons, nursing homes, hospitals, and residential communities (BAAQMD 2023).

There are approximately 30 residences in the vicinity of the Proposed Project Area. The nearest sensitive receptors are residences on Shoreline Drive, Pike Drive, and Trout Way, located approximately 25 feet from the limits of the construction area.

Existing Air Quality

Ambient Air Quality

BAAQMD's air quality monitoring network consists of over 30 stations distributed among the nine San Francisco Bay Area (Bay Area) counties. This network measures concentrations of pollutants for which National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) have been set by the United States Environmental Protection Agency (USEPA 2024) and the California Air Resources Board (CARB), respectively.

The closest monitoring station to the Proposed Project Area is the Napa Valley College monitoring station, located approximately 2 miles south of the Proposed Project Area. The Napa Valley College station monitors O₃, PM₁₀, PM_{2.5}, NO₂, and CO. **Table 3.4-2** presents the most recent ambient air quality data at the Napa Valley College monitoring station from 2019 to 2021.

Table 3.4-2. Ambient Air Quality Monitoring Data at the Napa Valley College Monitoring Station

Pollutant Standards ¹	Year		
	2019	2020	2021
O₃			
Maximum 1-hour concentration (ppm)	0.095	0.091	0.070
Maximum 8-hour concentration (ppm)	0.077	0.077	0.064
<i>Number of days standard exceeded</i>			
CAAQS 1-hour (>0.09 ppm)	1	0	0

Pollutant Standards ¹	Year		
	2019	2020	2021
NAAQS 8-hour (>0.07 ppm)	2	1	0
CAAQS 8-hour (>0.07 ppm)	2	1	0
PM₁₀			
National maximum 24-hour concentration (µg/m ³)	37.5	122.9	22.9
State maximum 24-hour concentration (µg/m ³)	39.0	125.0	24.0
National annual average concentration (µg/m ³)	13.5	18.6	9.9
State annual average concentration (µg/m ³)	*	19.0	*
<i>Number of days standard exceeded</i>			
NAAQS 24-hour (>150 µg/m ³)	0	0	0
CAAQS 24-hour (>50 µg/m ³)	0	2	0
PM_{2.5}			
National maximum 24-hour concentration (µg/m ³)	21.5	148.5	17.6
State maximum 24-hour concentration (µg/m ³)	21.5	148.5	17.6
National annual average concentration (µg/m ³)	5.9	10.3	*
State annual average concentration (µg/m ³)	6.0	10.4	*
<i>Number of days standard exceeded</i>			
NAAQS 24-hour (>35 µg/m ³)	0	14	0
NO₂			
Maximum 1-hour concentration (ppb)	36.6	29.9	29.0
Annual average concentration (ppb)	4	4	*
<i>Number of days standard exceeded</i>			
NAAQS 1-hour (>100 ppb)	0	0	0
CAAQS 1- hour (>180 ppb)	0	0	0

Source: CARB 2023c

Notes: O₃ = ozone; PM₁₀ = particles of 10 micrometers and smaller; PM_{2.5} = particles of 2.5 micrometers and smaller; NO₂ = nitrogen dioxide; SO₂ = sulfur dioxide; ppm = parts per million; µg/m³ = micrograms per cubic meter; ppb = parts per billion; NAAQS = National Ambient Air Quality Standards; CAAQS = California Ambient Air Quality Standards; * = insufficient data available to determine the value

1. Carbon monoxide (CO) data is not available on CARB's website

Attainment Status

The Federal Clean Air Act requires that USEPA designate areas within the country as either “attainment” or “nonattainment” for each criteria pollutant based on whether the NAAQS have been achieved. Similarly, the California Clean Air Act requires that CARB designate areas within California

as either “attainment” or “nonattainment” for each criteria pollutant based on whether the CAAQS have been achieved. If a pollutant concentration is lower than the NAAQS or CAAQS, the area is classified as “attainment” for that pollutant. If a pollutant exceeds the NAAQS or CAAQS, the area is classified as “nonattainment” for that pollutant. If there is not enough data available to determine whether the NAAQS or CAAQS is exceeded in an area, the area is designated as “unclassified.”

The designation of “unclassified/attainment” means that the area meets the standard or is expected to be meet the standard despite a lack of monitoring data. Areas that achieve the NAAQS or CAAQS after a nonattainment designation are redesignated as “maintenance” areas and must have approved maintenance plans to ensure continued attainment of the standards. **Table 3.4-3** Table 3.4-3 presents the attainment status for each criteria air pollutant in Napa County.

Table 3.4-3. Attainment Status for Napa County

Pollutant	Federal Standard	California Standard
O ₃	Nonattainment	Nonattainment
PM ₁₀	Unclassified	Nonattainment
PM _{2.5}	Nonattainment	Nonattainment
CO	Unclassified/Attainment	Attainment
NO ₂	Unclassified/Attainment	Attainment
SO ₂	Unclassified/Attainment	Attainment
Pb	Unclassified/Attainment	Attainment

Source: CARB 2023d

Notes: O₃ = ozone; PM₁₀ = particles of 10 micrometers and smaller; PM_{2.5} = particles of 2.5 micrometers and smaller; CO = carbon monoxide; NO₂ = nitrogen dioxide; SO₂ = sulfur dioxide; Pb = lead

As shown in **Table 3.4-3**, Napa County is currently in nonattainment for the federal and state standards for O₃ and PM_{2.5}. Additionally, Napa County is in nonattainment for the state standards for PM₁₀.

3.4.2 Impact Analysis

Method of Analysis

This section describes the methods used to analyze air quality characteristics within the Proposed Project Area. The potential impacts from construction of the Proposed Project on air quality were evaluated quantitatively using industry accepted software tools. Construction of the Proposed Project would generate criteria pollutant emissions (ROG, NO_x, CO, SO₂, PM₁₀, and PM_{2.5}) from equipment and vehicle exhaust during site preparation, excavation, material delivery, construction of proposed improvements, and site cleanup. Major construction activities would require use of off-road construction equipment such as excavators, dozers, cranes, forklifts, backhoes, and loaders. On-road vehicles such as haul trucks and dump trucks would be used for material, borrow, and equipment hauling.

Criteria air pollutant emissions from construction of the Proposed Project were estimated using the California Emissions Estimator Model (CalEEMod) version 2020.4.0. CalEEMod is a statewide land

use emissions computer model designed to quantify potential criteria air pollutant emissions associated with both construction and operation from a variety of land use projects. Construction emissions were estimated in CalEEMod using a combination of Project-specific information presented in Chapter 2, *Project Description*, CalEEMod defaults, and standard assumptions.

CalEEMod used as inputs Proposed Project construction details, such as construction schedule, construction equipment quantities, area of disturbance, and number of construction workers. These are presented in Appendix C, *Project Construction Details*. The concrete trucks presented in **Table 2.2-3** were accounted as on-road vendor trucks. Each worker is assumed to commute to the Proposed Project Area in a separate vehicle. Refer to Appendix F, *Air Quality and Greenhouse Gas Emissions Modeling* for details regarding modeling inputs and assumptions. The average daily emissions (in pounds per day) from construction of the Proposed Project were compared against BAAQMD's construction thresholds to determine significance of air quality impacts.

Upon completion of construction, the District would undertake all O&M activities indefinitely, for as long as the Overall Flood Protection Project remains authorized, as part of areawide O&M activities. Minimal quantities of equipment and vehicles would be required for routine inspections and minor vegetation trimming. Given the limited and infrequent nature of O&M activities, and the infrequent need for anticipated reconstruction or replacement, air quality impacts are evaluated qualitatively.

CEQA Significance Criteria

For the purposes of this SEIR, the Proposed Project would result in a significant impact on air quality if it would:

- Conflict with or obstruct implementation of the applicable air quality plan.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard.
- Expose sensitive receptors to substantial pollutant concentrations.
- Result in other emissions (such as those leading to odors adversely affecting a substantial number of people).

Summary of Air Quality Impacts

The No Project Alternative and Proposed Project Alternative impacts are summarized in **Table 3.4-4**.

Table 3.4-4. Summary of Air Quality Impacts

Impact Number	Impact Statement	CEQA Significance Determination
<i>No Project Alternative</i>		
AQ-1	Conflict with or obstruct implementation of the applicable air quality plan	Less than significant impact

Impact Number	Impact Statement	CEQA Significance Determination
AQ-2	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard.	Less than significant impact
AQ-3	Expose sensitive receptors to substantial pollutant concentrations	Less than significant impact
AQ-4	Result in other emissions (such as those leading to odors adversely affecting a substantial number of people)	Less than significant impact
<i>Proposed Project Alternative</i>		
AQ-1	Conflict with or obstruct implementation of the applicable air quality plan	Less than significant impact with mitigation incorporated
AQ-2	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard.	Less than significant impact with mitigation incorporated
AQ-3	Expose sensitive receptors to substantial pollutant concentrations	Less than significant impact with mitigation incorporated
AQ-4	Result in other emissions (such as those leading to odors adversely affecting a substantial number of people)	Less than significant impact

Impact AQ-1: Conflict with or obstruct implementation of the applicable air quality plan.

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, no criteria air pollutant emissions or TACs would directly be generated. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a larger flood event, there would be the potential for the Napa River to rise and floodwaters to encroach on adjacent habitat and properties in the Proposed Project Area. Potential flood fighting activities would result in temporary effects to air quality that would likely be less than analyzed under the Proposed Project. Since these conditions would be short term and would not be expected to occur frequently or on a regular basis each year, the No Project Alternative is not expected to conflict with or obstruct implementation of the applicable air quality plan. Therefore, the No Project Alternative would result in a **less than significant impact**, and no mitigation is required or recommended.

Proposed Project Alternative

BAAQMD adopted the 2017 Climate Action Plan (CAP) on April 19, 2017. As discussed in Appendix D, *Regulatory Framework*, BAAQMD’s 2017 CAP is the most current applicable air quality plan for the Bay Area. Consistency with the 2017 CAP is the basis for determining whether the Proposed Project would conflict with or obstruct implementation of an air quality plan.

The 2017 CAP includes control measures that are intended to reduce air pollutant emissions in the Bay Area either directly or indirectly. These control measures are grouped into various categories and include stationary source measures, mobile-source measures, and transportation control measures. The control measures pertain to projects such as those involving stationary sources or land use development projects and thus are not applicable to the Proposed Project.

The cumulative air quality emissions and BAAQMD threshold compliance are summarized in **Table 3.4-5**. Total emissions from construction of the Proposed Project Alternative are presented at the average daily time scale and compared with BAAQMD’s construction thresholds. Refer to Appendix F, *Air Quality and Greenhouse Gas Emissions Modeling* for the CalEEMod assumptions and output.

Table 3.4-5. Unmitigated Construction Criteria Air Pollutant Emissions

Year	ROG	NO _x	CO	PM ₁₀ Exhaust	PM ₁₀ Dust	PM _{2.5} Exhaust	PM _{2.5} Dust	SO ₂
<i>Average Daily Emissions in lb/day</i>								
2025	3.78	33.23	38.86	1.41	1.78	1.31	0.35	0.08
2026	4.05	34.66	37.93	1.44	3.10	1.34	0.49	0.09
BAAQMD Thresholds	54	54	N/A ¹	82	N/A ¹	54	N/A ¹	N/A ¹
Exceeds BAAQMD Thresholds?	No	No	N/A	No	N/A	No	N/A	N/A

Source: Appendix F

Notes: ROG = reactive organic gases; NO_x = nitrogen oxides; CO = carbon monoxide; PM₁₀ = particles of 10 micrometers and smaller; PM_{2.5} = particles of 2.5 micrometers and smaller; SO₂ = sulfur dioxide; lb = pounds

¹ BAAQMD does not have daily thresholds of significance for CO and SO₂. These pollutants are shown for informational purposes.

As shown in **Table 3.4-5** above, the unmitigated daily criteria air pollutant emissions during construction of the Proposed Project would not exceed BAAQMD’s thresholds for ROG, NO_x, exhaust PM₁₀, and exhaust PM_{2.5}. Since the Proposed Project’s construction criteria air pollutants would not exceed the applicable BAAQMD thresholds, the Proposed Project would be consistent with the 2017 CAP. However, the Proposed Project construction activities, particularly site preparation, excavation, and material hauling, would result in fugitive dust emissions in the form of PM_{2.5} and PM₁₀. BAAQMD’s 2022 CEQA Guidelines consider a project to have a less than significant impact related to construction-related fugitive dust emissions if BAAQMD’s basic BMPs are implemented to reduce these emissions. Therefore, the Proposed Project would be consistent with applicable air quality plans with the implementation of mitigation measures **MM-AQ-1** and **MM-AQ-2** shown in **Table 3.4-6**. Further, implementation of the Proposed Project would not inhibit BAAQMD or partner agencies from continuing progress toward attaining state and federal air quality standards and eliminating health-risk disparities from exposure to air pollution among Bay Area communities, as described within the 2017 CAP.

Federal conformity standards under the CAA ensure that federally funded or approved projects align with SIPs to maintain or improve air quality. *De minimis* standards under the Clean Air Act establish

pollutant-specific emission thresholds below which projects are presumed to have minimal impact on air quality and are exempt from detailed conformity analyses. If a project's anticipated emissions fall below the *de minimis* thresholds for specific pollutants in nonattainment or maintenance areas, it is presumed to have minimal impact on air quality and is exempt from a full conformity determination. The Proposed Project Area is in Federal nonattainment for O₃ and PM_{2.5}. For O₃ (using NO_x as a precursor), the *de minimis* standard is 100 tons/year of NO_x emitted, and the Proposed Project is projected to emit 6.1 – 6.3 tons/year (converted from the 33.23 – 34.66 lb/day shown in Table 3.4-5). For PM_{2.5}, the *de minimis* standard is 70 tons/year of PM_{2.5} emitted, and the Proposed Project is projected to emit 0.3 – 0.33 tons/year (converted from the 1.66 – 1.83 lb/day shown in Table 3.4-5) (USEPA 2024). Because the Proposed Project is well below the *de minimis* standards for any pollutants for which it is in nonattainment, the Proposed Project is exempt from detailed conformity analysis and in compliance with general conformity standards.

With the implementation of mitigation measures **MM-AQ-1** and **MM-AQ-2**, the Proposed Project would not conflict with or obstruct implementation of the applicable air quality plan. Therefore, the Proposed Project Alternative would result in a **less than significant impact with mitigation incorporated**.

Impact AQ-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard.

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, no criteria air pollutant emissions would directly be generated. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a larger flood event, there would be the potential for the Napa River to rise and floodwaters to encroach on adjacent habitat and properties in the Proposed Project Area. Potential flood fighting activities would result in temporary effects to air quality that would likely be less than analyzed under the Proposed Project. Since these conditions would be short term and would not be expected to occur frequently or on a regular basis each year, the No Project Alternative is not expected to result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard. Therefore, the No Project Alternative would result in a **less than significant impact**, and no mitigation is required or recommended.

Proposed Project Alternative

The Proposed Project would generate criteria pollutant emissions during site preparation, excavation, material delivery, construction of the proposed floodwalls, and site cleanup. Criteria air pollutant emissions generated during construction were estimated using CalEEMod. The unmitigated construction criteria pollutant emissions are summarized in **Table 3.4-5**, shown and explained above. As shown in **Table 3.4-5**, the unmitigated daily criteria air pollutant emissions during construction of the Proposed Project would not exceed BAAQMD's thresholds for ROG, NO_x, exhaust PM₁₀, and exhaust PM_{2.5}. Further compliance with BAAQMD 2022 CEQA Guidelines through implementation of **MM-AQ-1** and **MM-AQ-2**, listed above, would reduce impacts related to criteria air pollutant emissions during construction of the Proposed Project. Therefore, with the

implementation of mitigation measures **MM-AQ-1 and MM-AQ-2**, impacts related to fugitive dust (PM₁₀ and PM_{2.5}) emissions during construction of the Proposed Project would be less than significant, and construction of the Proposed Project would not result in a cumulative air quality impact.

O&M activities would generate limited criteria air pollutant emissions from the use of minimal amounts of equipment and vehicles. Given the limited and infrequent nature of O&M activities in the absence of reconstruction or replacement needs, criteria pollutant emissions from O&M would be substantially less than those generated during construction and thus would not exceed BAAQMD thresholds. Therefore, O&M of the Proposed Project would not result in a cumulative air quality impact.

The Proposed Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard. Implementation of **MM-AQ-1 and MM-AQ-2** would further reduce Proposed Project emissions. Therefore, the Proposed Project Alternative would result in a **less than significant impact with mitigation incorporated**.

Impact AQ-3: Expose sensitive receptors to substantial pollutant concentrations.

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, no TAC emissions would directly be generated. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a larger flood event, there would be the potential for the Napa River to rise and floodwaters to encroach on adjacent habitat and properties in the Proposed Project Area. Potential flood fighting activities would result in temporary effects to air quality that would likely be less than analyzed under the Proposed Project. Since these conditions would be short term and would not be expected to occur frequently or on a regular basis each year, the No Project Alternative is not expected to expose sensitive receptors to substantial concentrations. Therefore, the No Project Alternative would result in a **less than significant impact**, and no mitigation is required or recommended.

Proposed Project Alternative

The Proposed Project has the potential to generate TAC emissions from the use of diesel equipment during site clearing, grading, material delivery, construction of proposed improvements, and site cleanup. The primary TAC of concern associated with the Proposed Project construction is DPM. DPM is a carcinogen emitted by diesel engines that could affect existing sensitive receptors. Several sensitive receptors, including residences, are located adjacent to the Proposed Project Area. The nearest sensitive receptors to the Proposed Project construction activities are residences on Shoreline Drive, Pike Drive, and Trout Way, located approximately 25 feet from the limits of the construction area.

The Proposed Project would be constructed in phases as described in Appendix C, *Project Construction Details*. Thus, portions of the Proposed Project Area would be disturbed over short periods of time throughout the construction period. Construction equipment would operate intermittently throughout the project construction phases with some phases requiring more equipment usage and potentially higher emissions compared to other phases of work. The Proposed

Project construction activities would also progress along the Proposed Project alignment and therefore, would not be concentrated in one area for an extended period of time. As construction progresses through the Proposed Project Area, vehicle use would continuously be shifting with the work area. DPM concentrations, and thus health risks, are generally greatest near the emissions source and dissipate as a function of distance (CARB 2005). Periodic operation of construction equipment would allow for the dispersal of DPM by avoiding continuous construction activity in the portions of the Proposed Project Area closest to existing sensitive receptors.

According to *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (Office of Environmental Health Hazard Assessment 2015), DPM poses a carcinogenic health risk that is generally measured using an exposure period of 30 years for sensitive residential receptors. However, as presented in **Table 3.4-5**, emissions of DPM (which is strongly correlated with PM_{2.5} emissions) are below thresholds and minimal. Although the Proposed Project analysis does not directly measure health risk impacts in the region, it does provide data that can be used to evaluate the potential for the Proposed Project to cause health risk impacts. The low level of PM_{2.5} emissions generated by the Proposed Project construction activities coupled with the short-term duration of construction activity in any one given area would result in an overall low level of DPM concentrations within the Proposed Project Area. When schools, residential areas, or other sensitive land uses are located near the construction site, BAAQMD recommends that projects implement enhanced BMPs, in addition to the basic BMPs, to control fugitive dust emissions (BAAQMD 2023).

No long-term generators or stationary sources are included as part of the Proposed Project. The Proposed Project would not generate significant quantities of operational DPM because O&M activities, in the absence of reconstruction or replacement, would be infrequent and require minimal diesel-powered equipment. Therefore, O&M of the Proposed Project, in the absence of reconstruction or replacement, would not expose sensitive receptors to substantial pollutant concentrations.

To reduce impacts related to fugitive dust emissions during construction to a less-than-significant level, mitigation measures **MM-AQ-1** and **MM-AQ-2** (described under Impact AQ-1) would be implemented.

The Proposed Project would not expose sensitive receptors to substantial pollutant concentrations or generate significant quantities of construction or operational DPM. Implementation of mitigation measures **MM-AQ-1** and **MM-AQ-2** would further reduce Proposed Project emissions. Therefore, the Proposed Project Alternative would result in a **less than significant impact with mitigation incorporated**.

Impact AQ-4: Result in other emissions such as those leading to odors adversely affecting a substantial number of people.

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, no odor emissions would directly be generated. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a larger flood event, there would be the potential for the Napa River to rise and floodwaters to encroach on adjacent habitat and properties in the Proposed Project Area. Potential flood fighting activities would result in temporary construction related odors that would likely

be less than analyzed under the Proposed Project. Since these odors would be short term and would not be expected to occur frequently or on a regular basis each year, the No Project Alternative is not expected to result in odors that would affect a substantial number of people. Therefore, the No Project Alternative would result in a **less than significant impact**, and no mitigation is required or recommended.

Proposed Project Alternative

As described above, there are several residences located adjacent to the Proposed Project Area on Shoreline Drive, Pike Drive, and Trout Way. Construction of the Proposed Project could result in odor emissions in the form of diesel exhaust from construction equipment, equipment and material hauling trucks, and worker commute vehicles. It is anticipated that odors during construction would be temporary, intermittent, and would dissipate rapidly from the source with an increase in distance; therefore, they would not affect a substantial number of individuals.

The Proposed Project does not involve operation of any of the common types of facilities that are known to produce odors (e.g., landfill, wastewater treatment facility, chemical plants, refineries). Frequency of O&M activities would be conducted consistent with the OMRR&R Manual for the Proposed Project, and infrequent and would involve the use of minimal equipment at times and would not increase generation of odor emissions in the Proposed Project Area. Given the limited and infrequent nature of O&M activities, in the absence of reconstruction and replacement, odors from O&M would not affect a substantial number of individuals.

The Proposed Project would not result in construction or operational emissions leading to odors adversely affecting a substantial number of people. Temporary emissions would be generated during construction; therefore, the Proposed Project Alternative would result in a **less than significant impact**, and no mitigation is required or recommended.

Table 3.4-6. Mitigation Measures for Air Quality Impacts of the Proposed Project

Mitigation Measure	Description of Measure
MM-AQ-1: Implement Fugitive Dust Control Measures	<p>During construction, the District would implement the following BAAQMD basic BMPs for construction-related fugitive dust emissions:</p> <ul style="list-style-type: none"> • B-1: All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. • B-2: All haul trucks transporting soil, sand, or other loose material off-site shall be covered. • B-3: All visible mud or dirt trackout onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. • B-4: All vehicle speeds on unpaved roads shall be limited to 15 miles per hour. • B-5: All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. • B-6: All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 miles per hour. • B-7: All trucks and equipment, including tires, shall be washed off prior to leaving the site. • B-8: Unpaved roads providing access to sites located 100 feet or further from a paved road shall be treated with a 6- to 12-inch layer of compacted layer of wood chips, mulch, or gravel. • B-9: Publicly visible signs shall be posted with the telephone number and name of the person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. BAAQMD's General Air Pollution Complaints number shall also be visible to ensure compliance with applicable regulations.
MM-AQ-2: Implement Enhanced Fugitive Dust Control Measures	<p>During construction, the District would implement the following BAAQMD enhanced BMPs for construction-related fugitive dust emissions:</p> <ul style="list-style-type: none"> • E-1: Limit the simultaneous occurrence of excavation, grading, and ground-disturbing construction activities. • E-2: Install wind breaks (e.g., trees, fences) on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity. • E-3: Plant vegetative ground cover (e.g., fast-germinating native grass seed) in disturbed areas as soon as possible and watered appropriately until vegetation is established. • E-4: Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent. • E-5: Minimize the amount of excavated material or waste materials stored at the site. • E-6: Hydroseed or apply non-toxic soil stabilizers to construction areas, including previously graded areas, that are inactive for at least 10 calendar days.

3.5 Cultural Resources

3.5.1 Existing Conditions

This section presents an overview of information on the local prehistory and history of the Proposed Project Area and vicinity. Understanding local cultural history is critical in defining important local, state, and/or regional events, trends, or patterns in prehistory and history by which eligible historic properties and/or cultural resources, and the Area of Potential Effects, if any, may be identified, and the significance of prehistoric and historical cultural resources may be evaluated and their significance may be established.

Precontact Archaeological Context

The archaeological chronology discussed here has been developed through the synthesis of the precontact archaeological record throughout the Bay Area as a whole.

The earliest well-documented entry and spread of native peoples into the San Francisco region occurred at the beginning of the Paleo-Indian Period (12,000–8,000 years before present (BP)). Social units are thought to have been small and highly mobile. Known sites have been identified in the contexts of ancient pluvial lakeshores and coastlines, as evidenced by such characteristic hunting implements as fluted projectile points and flaked stone crescent forms. Prehistoric adaptations over the ensuing centuries have been identified in the archaeological record by numerous researchers working in the Bay Area since the early 1900s, as summarized by Moratto (1984).

Few archaeological sites dating to the Paleo-Indian Period before the subsequent Lower Archaic Period (8,000–5,000 BP) have been found in the Bay Area, likely because of high sedimentation rates and sea level changes. Archaeologists have, however, recovered a great deal of information from sites dating to the Middle Archaic Period (5,000–2,500 BP). By this time, broad regional subsistence patterns gave way to more-intensive procurement practices. Economies became more diversified; most notably, acorn-processing technology was introduced during this period. As populations increased and groups occupied more-diverse settings, permanent, year-round villages were established primarily around major waterways. During the Upper Archaic Period (2,500–1,300 BP), status distinctions and other indicators of sociopolitical complexity developed. Complex exchange systems were formalized, and regular, sustained trade between groups began to appear.

The Emergent Period (1,300–200 BP) is marked by both technological and social changes. Territorial boundaries between groups become more defined, and it was increasingly common for an individual's social status to be linked with acquired, personal wealth. During the latter portion of the period (500–200 BP), sophisticated exchange relations were regularized, with specialists governing the various aspects of production and exchange. The use of the clamshell disk bead as a monetary unit developed during the late Emergent Period.

The Lower Archaic, Middle Archaic, Upper Archaic, and Emergent Periods can be further divided according to the following cultural manifestations observed from well-documented archaeological assemblages throughout the Bay Area. These patterns are described further in **Table 3.5-1**.

Table 3.5-1. Historic Patterns relevant to the Proposed Project Area

Pattern	Description of Pattern
Windmill Pattern (5,000-1,500 BP)	People placed an increased emphasis on acorn use and continued reliance on hunting and fishing activities during this period. Ground and polished charmstones, twisted basketry, baked clay, and worked shell and bone are artifacts typical of this pattern. Widely distributed trade patterns brought in goods from both the Coast Ranges and trans Sierran sources. Trade networks with local partners were likely active as well.
The Berkeley Pattern (2,200–1,300 BP)	This period was marked by a still-increasing use of acorns as a food source. Distinctive stone and shell artifacts differ from earlier cultural manifestations, and burials were placed primarily in flexed positions and often included red ochre. The occurrence of the Berkeley Pattern in Napa County has been interpreted as a movement of Utian speakers into the region.
The Augustine Pattern (1,300–200 BP)	This period reflected intensive food procurement strategies and the resultant population increase. Intergroup trade activities gained in importance. Intensive fishing and hunting practices and complex, regular exchange systems are hallmarks of this period. A wide variety of mortuary practices have also been noted.

Historic Period Context

Spanish dominion over the Bay Area was not exerted until the late 1700s, when Franciscan missions were established. This does not mean that the Native American communities of Napa Valley were untouched by the mission system. Jackson (1978) notes that by 1809, the first baptism of a member of the Napa, the Native American community for which the City of Napa takes its name, was recorded at Mission San Francisco de Asis. A Spanish missionary is recorded as visiting the Napa Rancheria in 1812 (Jackson 1978). In fact, over 90% of the obsidian tools excavated from Mission San Jose in Fremont, California, were sourced from Napa Valley (Panich et al. 2018).

After more than a decade of intermittent rebellion and warfare, New Spain (Mexico) won independence from Spain in 1821. Extensive land grants were established in the interior during the Mexican Period, in part to increase the population inland from the more settled coastal areas where the Spanish had first concentrated its colonization efforts. With the passage of the secularization act by the Mexican Congress, the mission lands of California were privatized and sold in the form of large ranchos.

By 1835, Mariano Vallejo was made director of colonization with the power to grant land in the North San Francisco Bay (Tays 1937). As a result, Native American communities in Napa Valley came into direct and persistent contact with Mexican and American settlers. The area encompassing the City of Napa was granted to Nicholas Higuera in 1836 by the Mexican Governor as Entre Napa Rancho (Wallace and Kanaga 1901). The “Napa” in the rancho’s name, much like the surrounding ranchos, was taken from the local Native American community.

The first non-Native American to settle within the current boundaries of the City of Napa was Cayetano Juarez, who built an Adobe on Tulucay Rancho in 1840 followed by Nicolas Higuera, who built a house along Napa Creek prior to 1841 (Palmer 1881). Around this same time, Americans

John Rose and John Davis started operating a schooner on the Napa River, docking their schooner at a location which is now near First Street in the City of Napa (ibid, 58).

In 1845, the Congress of the United States of America declared war on Mexico. Within days following the declaration of war, the U.S. Secretary of the Navy began to communicate in secret with Commodore Sloat, commander of the U.S. Pacific Squadron, to capture the Port of San Francisco and other coastal ports, which were known to be little defended (Bancroft 1884).

In Sonoma, Mariano Vallejo was detained by the Bear Flaggers and confined in squalid conditions for months (Haas 1997). Despite mistreatment at the hands of the Bear Flag rebels, Vallejo embraced the annexation of California by the United States and further settlement of the north San Francisco Bay by American citizens. The Mexican-American War ended with the Treaty of Guadalupe Hidalgo in 1848, ushering California into its American Period. The new state of California recognized the ownership of lands in the state distributed under the Mexican Land Grants of the previous decades.

By 1848, Nathan Coombs, who arrived in the north San Francisco Bay in 1845, laid out the town site of the City of Napa (Palmer 1881). The following year, Mariano Vallejo in partnership with John Frisbie, opened a store in Napa (Palmer 1881). Napa quickly grew and developed a diverse community of Euro-Americans, African Americans, Australian immigrants, Chinese immigrants, and Native Americans (Menefee 1873). Up to the 1850s, the primary industry in Napa Valley was cattle herding for the tallow and hide trade (Menefee 1873).

Napa County was formed in 1851, and a telegraph line was built connecting the City of Napa to Vallejo in 1858 (Menefee 1873). During the latter half of the 19th century, Napa grew with the development of agricultural associations and the construction of a railroad (Kanaga and Wallace 1901). The rail line connecting Suscol to Napa began construction in 1864 and was extended to Calistoga in 1867, which dramatically increased property values in the northern half of the county (Menefee 1873). The City of Napa was formally incorporated in the early 1870s (Menefee 1873).

Throughout the latter half of the 19th century to the present, agricultural activities have been the primary driver of the economy of Napa County, and to this end, viticulture predominates. The first wine grapes were planted in by George Yount in the late 1830s (Mohan 2014). Yount was followed by Charels Krug and Jacob Berringer who are credited with establishing Napa's wine industry (Mohan 2014). By the late 19th century, wealthy investors like Gustav Niebaum and Alfred Tubbs constructed palatial wine estates while Napa's wines received international recognition. However, by the early 20th century, a phylloxera blight and prohibition had devastated the wine industry which would not regain its reputation and production levels until the 1960s (Mohan 2014).

3.5.2 Impact Analysis

Method of Analysis

This section describes the methods used to identify and analyze cultural resources, including but not limited to historic properties within the Proposed Project Area. The potential impacts from construction, operation, and maintenance of the Proposed Project on cultural resources were evaluated qualitatively using known historical records search data, pedestrian survey, and subsurface investigation; and quantitatively using regulations that would be applicable to the Proposed Project.

The Proposed Project is subject to Overall Flood Protection Project's Programmatic Agreement (PA). The PA as formulated between USACE, California State Historic Preservation Officer (SHPO), Federal Highway Administration (FHWA), the District, the City of Napa, and the California Department of Transportation (Caltrans) and executed on December 6, 1999. A PA was determined necessary at the time because the identification and NRHP evaluation of all properties that may be affected by the (1998 SGDM) undertaking, as well as the nature of any such effects, could not be fully determined prior to approval of the undertaking. USACE elected to comply with Section 106 of the NHPA through execution and implementation of a PA pursuant to 36 CFR §§ 800.14(b)(1) and 800.14(b)(3). The PA states that USACE will have lead agency status regarding implementation of the PA's stipulations. No consultation has occurred between the signatories to terminate the PA. Accordingly, per Stipulation XI (Duration of the Agreement) the PA is still in effect throughout USACE implementation of the Overall Flood Protection Project. The PA also specifies under Stipulation IV.D. (Treatment of Historic Properties) that a treatment plan is to be developed for the "River Glen archaeological site" (CA-NAP-261 – discussed further below).

A research design consisting of an archival/record research, pedestrian survey, and auger testing was developed to identify the location of archaeological, ethnographic, and built environment resources within the Proposed Project Area. The location and eligibility status of previously recorded archaeological, ethnographic, and built environment resources were identified using:

- Records search data of previously conducted cultural resource studies and previously recorded cultural resources on file with the California Historical Resources Information System housed at the Northwest Information Center of at Sonoma State University and the Northeast Information Center at California State University, Sacramento – database searches conducted in August 2018 and April 2021.
- Listings of the National Register of Historic Places (NRHP).
- Listings of the California Register of Historical Resources (CRHR).
- Listings of the California Office of Historic Preservation's (OHP) Built Environment Resources Directory.
- California Points of Historical Interest (1992).
- California State Landmarks (1996).
- California Inventory of Historic Resources (1976).
- Regional geological maps compiled by the California Division of Mines and Geology and the United States Geological Survey for Napa County.
- Caltrans Historic Bridge Survey.
- The Web Soil Survey online mapping tool available from the United States Department of Agriculture, Natural Resources Conservation Service (<https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>) (2023).
- Historic aerials and topographic maps available at (www.historicaerials.com).

Efforts to identify previously unrecorded cultural resources included intensive pedestrian survey of the floodwall alignment component of the Proposed Project Area and a reconnaissance/windshield survey of paved roadways and parking lots within the Proposed Project Area in October 2023. The

field survey and recording of cultural resources followed the Secretary of the Interior’s Standards and Guidelines for Archaeology and Historic Preservation (NPS 1983) and the State of California OHP publication Instructions for Recording Historical Resources (OHP 1995). A subsurface investigation of a previously recorded archaeological resource (P-28-000218/CA-NAP-261) within the Proposed Project Area was also conducted in December 2023.

Identification Results

Four previously recorded resources were identified within the Proposed Project Area as a result of the records search and resource survey: the Napa Valley/Southern Pacific Railroad grade and line (P-28-00966), the historic district encompassing the Napa Valley Railroad line from the City of Napa to St. Helena (P-28-001547), the Lincoln Avenue Bridge, and the precontact “River Glen Site” archaeological resource (P-28-000218/CA-NAP-261). No previously unrecorded resources were identified as a result of the survey. These resources and the results of the records search for the Proposed Project Area are included in **Table 3.5-2**.

Table 3.5-2. Cultural Resources in the Proposed Project Area

Resource	Description
P-28-001547	The resource is a previously recorded resource composed of the historic-era Napa Valley/Southern Pacific railroad and is a historic district composed of the railroad and associated structures and facilities. It is listed in the Office of Historic Preservation’s BERD as determined ineligible for NRHP listing by consensus through the Section 106 process and is therefore ineligible for CRHR listing.
P-28-000966	The resource is a previously recorded resource composed of the historic-era Napa Valley/Southern Pacific railroad and consists of the railroad itself. It is listed in the Office of Historic Preservation’s BERD as determined ineligible for NRHP listing by consensus through the Section 106 process and is therefore ineligible for CRHR listing.
P-28-000218/ CA-NAP-261	The “River Glen Site” is a precontact residential site containing midden soils and human burials. The site may be one of the earliest precontact sites in Napa with a large Upper Archaic cultural horizon. The archaeological resource has previously been determined eligible for NRHP listing and is, therefore, eligible for CRHR listing.
Lincoln Avenue Bridge	The resource is a concrete bridge constructed in the 1950s that spans the Napa River. The bridge is listed on both the Caltrans Bridge Inventory (2019) and the National Bridge Inventory (2024). The historical significance of the bridge is listed as code 5, not NRHP eligible and is therefore ineligible for CRHR listing.

CEQA Significance Criteria

For the purposes of this SEIR, the Proposed Project would result in a significant impact on cultural resources if it would:

- Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5.
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.
- Disturb any human remains, including those interred outside of dedicated cemeteries.

Summary of Cultural Resources Impacts

The No Project Alternative and Proposed Project Alternative impacts are summarized in **Table 3.5-3**.

Table 3.5-3. Summary of Cultural Resources Impacts

Impact Number	Impact Statement	CEQA Significance Determination
<i>No Project Alternative</i>		
CUL-1	Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5.	No impact
CUL-2	Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5	Less than significant impact
CUL-3	Disturb any human remains, including those interred outside of dedicated cemeteries.	Less than significant impact
<i>Proposed Project Alternative</i>		
CUL-1	Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5.	Less than significant impact
CUL-2	Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5	Significant and unavoidable impact with mitigation incorporated ¹
CUL-3	Disturb any human remains, including those interred outside of dedicated cemeteries.	Less than significant impact with mitigation incorporated

¹ This finding was previously disclosed in the 1999 Final SEIS/EIR and remains the same. Effects of the Proposed Project would not be greater in scope or intensity than previously disclosed.

Impact CUL-1: Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5.

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, no direct disturbance would occur. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a larger flood, there would be the potential for the Napa River to rise and floodwaters to encroach on adjacent properties in the Proposed Project Area. However, these conditions would be temporary and would not be expected to cause a substantial adverse change in the significance of an historical resource pursuant to §15064.5. Therefore, **no impact** would occur, and no mitigation is required or recommended.

Proposed Project Alternative

As described above, the Napa Valley/Southern Pacific Railroad grade and line (P-28-00966), the historic district encompassing the Napa Valley Railroad line from the city of Napa to St. Helena (P-28-001547), the Lincoln Avenue Bridge are located within the Proposed Project Area. P-28-00966 and P-28-001547 were evaluated together and determined NRHP ineligible with concurrence from SHPO in a letter dated November 22, 2006. Accordingly, neither resource is considered a historical resource for the purposes of CEQA. The Lincoln Avenue Bridge is listed on both the Caltrans Bridge

Inventory (2019) and the National Bridge Inventory (2024) as Category 5 (“Bridge not eligible for NRHP”) and is therefore not considered a historical resource for the purposes of CEQA.

P-28-001547, P-28-000966, and the Lincoln Avenue Bridge would not be altered by the Proposed Action. Impacts to these cultural resources also would be avoided during construction and long-term operations and maintenance. Rock scour protection would be placed below the Lincoln Avenue Bridge, but this would not impact the bridge structure. The Proposed Project would not cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5. Therefore, the Proposed Project Alternative would have a **less than significant impact**, and no mitigation is required or recommended.

Impact CUL-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, no direct disturbance would occur within site P-28-000218. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a larger flood event, there would be the potential for the Napa River to rise and floodwaters to encroach on adjacent properties in the Proposed Project Area, including site P-28-000218. Potential flood fighting activities could result in effects to site P-28-000218 that would likely be less than analyzed under the Proposed Project. Since these conditions would be short term, the No Project Alternative is not expected to cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5. Therefore, the No Project Alternative would result in a **less than significant impact**, and no mitigation is required or recommended.

Proposed Project Alternative

As described above, an archaeological resource (P-28-000218) was identified in the Proposed Project Area and was also evaluated in the 1999 Final SEIS/EIR. The archaeological resource, a precontact village site, had been previously evaluated and found eligible as a historical resource per the CRHR eligibility criteria and as a historic property per the NRHP eligibility criteria. As described in Section 2.2, *Proposed Project Alternative*, the construction activities of the Proposed Project north of Lincoln Avenue entail the replacement of a 36-inch-diameter steel water line and the construction of a sheet pile “I” wall up to 30 feet deep. These components of the Proposed Project Alternative intersect P-28-000218. As such, construction activities would result in a substantial adverse change in the significance of the in situ archaeological deposits of P-28-000218. Due to the sensitive nature of P-28-000218, the O&M activities of the Proposed Project could also result in the damage or destruction of in situ archaeological deposits. Therefore, the Proposed Project would cause a substantial adverse change in the significance of site P-28-000218 pursuant to §15064.5 and an adverse effect in accordance with 36 CFR § 800.5(d)(2).

With the implementation of mitigation measures **MM-CUL-1**, **MM-CUL-2**, and **MM-CUL-3**, and **MM-CUL-4**, construction, operations, and maintenance impacts to archaeological resources would be minimized but would not be fully reduced to a less than significant level for site P-28-000218, shown in Table 3.5-4. Per the requirements of the PA, the significant impact to P-28-000218/CA-NAP-261 will be mitigated to the extent possible via the development and implementation of the treatment plan

developed per Stipulation IV.D and required by **MM-CUL-1**. For the rest of the Proposed Project Area, implementation of mitigation measures **MM-CUL-2**, **MM-CUL-3**, and **MM-CUL-4** would sufficiently reduce construction impacts to archaeological resources to a less than significant level. Nonetheless, as determined in the 1999 Final SEIS/EIR, the Proposed Project Alternative would still result in a **significant and unavoidable impact with mitigation incorporated** for site P-28-000218.

This is not a new impact as a result of the Proposed Project, and the impact to site P-028-000218 is not greater in scope or intensity than was already determined in the 1999 Final SEIS/EIR. Thus, the impact still remains as identified and analyzed in the 1999 Final SEIS/EIR, since effects of the Overall Flood Protection Project were not fully realized because construction of the entirety of the Overall Flood Protection Project has not occurred. Mitigation that was prescribed previously would be implemented as stated above, as well as additional mitigation to minimize adverse effects to site P-028-000218 to the extent feasible.

Impact CUL-3: Disturb any human remains, including those interred outside of dedicated cemeteries.

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, no direct disturbance would occur within site P-28-000218. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a larger flood event, there would be the potential for the Napa River to rise and floodwaters to encroach on adjacent properties in the Proposed Project Area, including site P-28-000218. Potential flood fighting activities could result in effects to site P-28-000218 that would likely be less than analyzed under the Proposed Project. Since these conditions would be short term, the No Project Alternative is not expected to disturb human remains, including those interred outside of dedicated cemeteries. Therefore, the No Project Alternative would result in a **less than significant impact**, and no mitigation is required or recommended.

Proposed Project Alternative

Human remains are likely to be encountered and disturbed at site P-28-000218 according to past documentation. California law recognizes the need to protect historic-era and Native American human burials, skeletal remains, and items associated with Native American interments from vandalism and inadvertent destruction during construction, operation, or maintenance of a project. Historic properties must be protected under Federal law. It is possible that previously unknown buried human remains could be unearthed and damaged or destroyed during excavation activities associated with the Proposed Project Alternative. Damage to or destruction of human remains during construction of the Proposed Project would be considered a significant impact. If human remains are exposed during construction of the Proposed Project, mitigation would be required to minimize impacts.

Mitigation Measure **MM-CUL-1** per Stipulation IV.D. of the PA must be implemented prior to construction; therefore, the probability of encountering human remains at site P-28-000218 would be minimized. Nonetheless, there is still the possibility of an inadvertent discovery of human remains within the Proposed Project Area. It is not a certainty that human remains will be encountered during construction. If they are encountered, protocol will be followed by implementing **MM-CUL-5**. With the

implementation of mitigation measure **MM-CUL-5**, the Proposed Project is not anticipated to disturb human remains. Therefore, the Proposed Project Alternative would result in a **less than significant impact with mitigation incorporated**.

Table 3.5-4. Mitigation Measures for Cultural Resources Impacts of the Proposed Project

Mitigation Measure	Description of Measure
MM-CUL-1: Implement 1999 Programmatic Agreement	<p>Aligning with Mitigation Measure Cultural-7 from the 1999 Final SEIS/EIR (Napa County Flood Control and Water Conservation District and U.S. Army Corps of Engineers [USACE] 1999) and the 1999 Programmatic Agreement (PA), a Historic Property Treatment Plan shall be developed for P-28-000218. The PA specifies obligations and parameters pertaining to the development of a treatment plan which entail in part the following stipulations:</p> <ul style="list-style-type: none"> USACE would develop a treatment plan for the P-28-000218 and any other archaeological sites determined NRHP eligible, and the treatment plan shall be in conformance with the Secretary of the Interior's Standards and Guidelines for Archeological Documentation (48 FR 44734-37) and take into account the Advisory Council on Historic Preservation's publication, Treatment of Archeological Properties (Advisory Council on Historic Preservation, 1980); USACE and Federal Highway Administration (FHWA) (if participating) shall consult with the Native American community, including but not limited to the Suscol Council, the Wappo Tribe, the Cortina Indian Rancheria of Wintun Indians, and Yocha Dehe Wintun Nation, concerning the River Glen site and any other prehistoric archeological site designated as an historic property located within the APE; all inventory and evaluation reports and treatment plans shall be submitted to USACE for review and comment and then submitted by USACE to SHPO for review comment; if extending into multiple years, annual reports shall be produced summarizing activities over the previous year, and these reports shall be submitted to all signatories and interested parties of the PA. <p>Additional measures included in Mitigation Measure Cultural-7 of the 1999 Final SEIS/EIR state:</p> <ul style="list-style-type: none"> Measures to be taken prior to construction include excavation, remote sensing, recovery of prehistoric and historic resources, and monitoring by archeological personnel. Standards of significance for additional resources which may be uncovered during project excavation and the exact consultation procedure to be followed if there is a discovery would be developed during this period. During project excavation, the site would be monitored for prehistoric and historic resources by a qualified archaeologist(s) with substantial previous professional experience in accordance with the standards of significance and procedure for discovery described above. A final report would be prepared, following the Secretary's Standards, with all evaluation of the site and treatment activities, as well as recommendations for placement of the archeological specimens retrieved. The final data report would be given to the City of Napa Cultural Heritage Commission and the Napa Historical Society. In addition, if any human remains are discovered, an appropriate representative of Native American Indian groups such as the Soscol Council, the Wappo Tribe and the County Coroner would both be informed and consulted to determine appropriate disposition, consistent with California law.

Mitigation Measure	Description of Measure
MM-CUL-2: Cultural Resources Awareness Training	Before any ground-disturbing work (including vegetation clearing, grading, and equipment staging) commences, a qualified archaeologist would conduct a mandatory cultural resources awareness training for all construction personnel. The training would cover the cultural history of the area, characteristics of archaeological sites, applicable laws, and the avoidance and minimization measures to be implemented. Proof of personnel attendance would be provided to overseeing agencies as appropriate. If new construction personnel are added to the Proposed Project, the contractor would ensure that the new personnel receive the mandatory training before starting work.
MM-CUL-3: Unrecorded Cultural Resources Discovery	<p>If unrecorded cultural resources are encountered during Proposed Project-related ground-disturbing activities, even in the absence of an onsite archaeological monitor, a qualified cultural resources specialist shall be contacted to assess the potential significance of the find. If an inadvertent discovery of cultural materials (e.g., unusual amounts of shell, animal bone, bottle glass, ceramics, structure/building remains) is made during Proposed Project-related construction activities, ground disturbances in the area of the find would be halted, and a qualified professional archaeologist would be notified regarding the discovery. The archaeologist would determine whether the resource is potentially significant per federal law and the CRHR and, in consultation with the District, USACE and Native American Tribes as appropriate, develop appropriate additional mitigation measures, such as avoidance and protection measures or data recovery.</p> <p>If the find is determined to be an important cultural resource, USACE and the District would make available contingency funding and a time allotment sufficient to allow recovery of an archaeological sample or to implement an avoidance measure. Construction work can continue in other parts of the Proposed Project Area while archaeological mitigation takes place.</p>
MM-CUL-4: Inadvertent Discovery Plan	Prior to implementation of the Proposed Project, a formalized Archaeological and Tribal Monitoring and Inadvertent Discovery Plan would be prepared which details the Proposed Project's inadvertent discovery protocol, archaeological site definitions, archaeological and tribal monitoring procedures and responsibilities, including the payment of costs, provisions for additional identification efforts if deemed necessary, and requirements for dealing with the inadvertent discovery of human remains including coordination with the Napa County Coroner and the designation of a Most Likely Descendant (detailed further in MM-CUL-5). The Plan would be developed in consultation with the County and participating Native American Tribes, particularly the Mishewal-Wappo Tribe of Alexander Valley and the Yocha Dehe Wintun Nation, would be afforded an opportunity to review and comment on the Plan prior to implementation. The Plan may include provisions for Native American Tribes to conduct additional analyses, if requested.

Mitigation Measure	Description of Measure
MM-CUL-5: Inadvertent Discovery of Human Remains	<p>In accordance with the California Health and Safety Code Sections 7050.5 and 7052, Public Resources Code Section 5097.98, and CEQA Guidelines Section 15064.5; if human remains are uncovered during ground-disturbing activities, all such activities in the vicinity of the find would be halted immediately, and the designated representatives of the District and USACE would be notified. The District's representative would immediately notify the Napa County Coroner and a qualified professional archaeologist. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or State lands (Health and Safety Code Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, he or she must contact the Native American Heritage Commission (NAHC) by phone within 24 hours of making that determination (Health and Safety Code Section 7050[c]). The District's responsibilities for acting upon notification of a discovery of Native American human remains are identified in detail in the California Public Resources Code Section 5097.9. The District or its appointed representative and the professional archaeologist would contact the Most Likely Descendent (MLD), as determined by the NAHC (presumably a representative from the Mishewal-Wappo Tribe of Alexander Valley and the Yocha Dehe Wintun Nation), regarding the remains. The MLD, in cooperation with the District, USACE, and the landowner, would determine the ultimate disposition of the remains at District cost.</p>

3.6 Fisheries and Aquatic Biological Resources

3.6.1 Existing Conditions

Aquatic biological resources discussed in this chapter are state and federal special-status species and their critical habitats, as well as other special-status species and their aquatic habitats. For details on terrestrial biological resources, such as amphibians, birds, invertebrates, mammals, and plants, please see Section 3.13 *Terrestrial Biological Resources*. Appendix G, *Biological Resources*, contains the Reinitiation of Consultation with USFWS and the Informal Consultation/No Formal Consultation required with NMFS for the Proposed Project.

The Napa River watershed is surrounded by Mt. St. Helena to the north, the Mayacamas Mountains to the west, Howell Mountain, Atlas Peak, and Mt. George to the east, and the Napa-Sonoma Marsh to the south and covers approximately 426 miles with a northwest-southeast trending topography (Koehler 2002 and Napa County 2008). The headwaters of the Napa River originate at Mt. St. Helena and flow 55 miles along the valley floor to San Pablo Bay (Koehler 2002). Downstream of the city of Napa, the Napa River turns into the Napa marsh, a complex of approximately 47,000 acres of existing and historic salt marshes (City of Napa 2022).

Within the city of Napa, the Napa River is surrounded by highly urbanized areas, but there are tracts of Valley foothill riparian, saline emergent wetland, and riverine habitat types (City of Napa 2022). The average annual flow of the Napa River is approximately 1,300 cubic feet per second through the populated center of the city of Napa (California Department of Water Resources California Data Exchange Center 2023). Along the lower third of the river, the city banks are hardened with expanses of riprap and do not support substantial vegetation (City of Napa 2022).

Streamflow in the Napa River varies widely seasonally and annually; flows are higher from December through March and are reduced in the summer and early fall. Yearly variations are significant, and consecutive dry years with reduced flows are not uncommon.

Within the Proposed Project Area there are three main habitat types, intertidal mudflats, shaded riverine aquatic (SRA), and riverine. Each habitat is described in greater detail in Appendix G, *Biological Resources*.

The Napa River contains a wide variety of native and non-native resident and anadromous fish species. Species composition within the mixohaline, tidally influenced waters of the Napa River ranges widely from saltwater fish such as Pacific herring (*Clupea pallasii*) to freshwater fish such as common carp (*Cyprinus carpio*). Salinity changes strongly influence what species occur in the Proposed Project Area at any given time. Fish and invertebrate surveys have been conducted on the Napa River. Details from these surveys, including identified species and important habitat features are described in detail in Appendix G, *Biological Resources*.

Special Status Species

For the purposes of this document, special-status species refers to those species that meet one or more of the criteria specified in Appendix G, *Biological Resources*. These criteria generally include any species listed under the Federal and/or California Endangered Species Acts (ESA/CESA) or other special lists maintained by federal and state agencies.

To assess aquatic biological resources with the potential to occur within the Proposed Project Area, nine United States Geological Survey quadrants (USGS quads) were queried in the California

Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB) (CDFW 2024). These USGS quads included Mt. George, Cordelia, Capell Valley, Sonoma, Yountville, Rutherford, Napa, Cuttings Wharf, and Sears Point. Information on federal special-status species was obtained from a query of the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consulting (IPaC) database (USFWS 2023a) (Appendix G - *Biological Resources*). In addition, the Napa County RCD conducts annual surveys of the fish species in Napa River north of the city of Napa and these results were used to identify other potential species that may occur within the Proposed Project Area (Napa County RCD 2023) (Appendix G - *Biological Resources*).

Table 3.6-1 lists each of the eight special-status species with potential to occur in the Proposed Project Area. The life history characteristics and habitat requirements of the listed special-status species are detailed in Appendix G, *Biological Resources*.

Table 3.6-1. Special-status species with potential to occur within or near the Proposed Project Area.

Species and ESU/DPS ¹	Common Name	Federal Status ²	State Status ³	Critical Habitat
<i>Acipenser medirostris</i> southern DPS	Green Sturgeon	FT	None	Outside Proposed Project Area
<i>Acipenser transmontanus</i>	White Sturgeon	None	Candidate	No
<i>Entosphenus tridentatus</i>	Pacific Lamprey	BLM-S USFWS-S	SSC	No
<i>Hypomesus transpacificus</i>	Delta Smelt	FT	SE	Outside Proposed Project Area
<i>Lampetra ayresi</i>	Western River Lamprey	None	SSC	No
<i>Oncorhynchus mykiss irideus</i> central California coast DPS	Central California Coast (CCC) Steelhead	FT	None	Yes, San Pablo Hydrologic Unit 2206; includes Napa River and Proposed Project Area
<i>Pogonichthys macrolepidotus</i>	Sacramento Splittail	None	SSC	No
<i>Spirinchus thaleichthys</i> San Francisco Bay-Delta DPS	Longfin Smelt	FE	ST	No

¹ Evolutionarily Significant Unit (ESU); Distinct Population Segment (DPS)

² Federally Endangered (FE); Federally Threatened (FT), Federal Candidate for Listing (FC), Bureau of Land Management – Sensitive (BLM-S), U.S. Forest Service – Sensitive (USFWS-S)

³ State Endangered (SE); State Threatened (ST); State Species of Special Concern (SSC)

Source: Species and Listing Status (CDFW 2024; CNDDDB 2024), Critical Habitat (USFWS 2023b).

Critical Habitat

Delta smelt, southern DPS green sturgeon, and CCC steelhead have listed critical habitat designations. CCC steelhead's critical habitat is the only one that overlaps with the Proposed Project Area (USFWS 2023b). Critical habitat area for CCC steelhead includes approximately 1,465 mi of stream habitat and 386 mi² of estuarine habitat, the majority of which resides in the San Francisco Bay-San Pablo Bay area (70 FR 52488). Of interest is critical habitat located within the San Pablo

Hydrologic Unit 2206, which includes the city of Napa, the Napa River, and the Proposed Project Area.

Essential Fish Habitat

Section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA), as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), requires federal agencies to consult with the National Marine Fisheries Service (NMFS) on activities that may adversely affect Essential Fish Habitat (EFH) for species that are managed under federal fishery management plans for U.S. waters. Section 3 of the MSA defines EFH as “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity” (16 United States Code [U.S.C.] Section 1802). These waters include aquatic areas, and their associated physical, chemical, and biological habitat features necessary to support the entire life cycle of the species in question and may include areas historically used by these species. The Proposed Project Area addressed within this document falls within the Pacific Groundfish EFH and Pacific Salmon EFH (NOAA 2023). This is described further in Appendix G, *Biological Resources*.

The MSA also requires that NMFS designate Habitat Areas of Particular Concern (HAPCs) for each federally managed fish species. The Napa River constitutes an estuary HAPC. The inland extent of the estuary HAPC is the high-water tidal level along the shoreline or the upriver extent of saltwater intrusion, defined as upstream and landward to where ocean-derived salts measure less than 0.5 part per thousand (ppt) during the period of average annual low flow (Pacific Fishery Management Council 2023). The Proposed Project Area is upstream of the HAPC, as described by National Oceanic and Atmospheric Administration’s (NOAA) EFH Mapper (NOAA 2023).

Other species that fall under EFH within the Proposed Project Area include Pacific sanddab, starry flounder, and Chinook salmon, which are not covered under ESA or CESA. The life history and habitat requirements of these three species are discussed Appendix G, *Biological Resources*.

3.6.2 Impact Analysis

Method of Analysis

This section describes the methods used to analyze aquatic biological resources within the Proposed Project Area. The potential impacts from construction, operations, and maintenance of the Proposed Project on aquatic biological resources were evaluated qualitatively and quantitatively using field survey data, desktop analysis, and available data and literature reviewed materials as well as reviewing the regulations that apply to the Proposed Project.

The USACE determined that reinitiation of formal or informal consultation with the NMFS would not be necessary for the Proposed Project, since the 1999 biological opinion and 2000 supplemental biological opinion for the Overall Flood Protection Project are still valid and the Proposed Project effects to central California coast steelhead and the southern distinct population segment of green sturgeon would be less than what was originally determined in both of those respective biological opinions. The NMFS confirmed that reinitiation of consultation was not necessary on October 16, 2024.

CEQA Significance Criteria

For the purposes of this SEIR, the Proposed Project would result in a significant impact on aquatic biological resources if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW, NMFS, or USFWS;
- Have a substantial adverse effect on any riparian (SRA) habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW, NMFS, or USFWS;
- Interfere substantially with the movement of any native resident or migratory fish species; and
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Summary of Fisheries and Aquatic Biological Resources Impacts

The No Project Alternative and Proposed Project Alternative impacts are summarized in **Table 3.6-2** Table 3.6-2.

Table 3.6-2. Summary of Fisheries and Aquatic Biological Resources Impacts

Impact Number	Impact Statement	CEQA Significance Determination
<i>No Project Alternative</i>		
BIO-A-1	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by or by the CDFW, NMFS, or USFWS	No impact
BIO-A-2	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW, NMFS, or USFWS	Less than significant impact
BIO-A-3	Interfere substantially with the movement of any native resident or migratory fish	No impact
BIO-A-4	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance	Less than significant impact
<i>Proposed Project Alternative</i>		
BIO-A-1	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by or by the CDFW, NMFS, or USFWS	Less than significant impact with mitigation incorporated
BIO-A-2	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW, NMFS, or USFWS	Less than significant impact
BIO-A-3	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 wildlife nursery sites	Less than significant impact with mitigation incorporated

Impact Number	Impact Statement	CEQA Significance Determination
<i>No Project Alternative</i>		
BIO-A-4	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance	Less than significant impact

Best Management Practices

The following BMPs would be incorporated as part of the Proposed Project Alternative to avoid and minimize potential impacts on aquatic biological resources.

Table 3.6-3. Best Management Practices

BMP	Description of BMP
BMP-1: Minimize Footprint	Minimize project-related ground disturbance to the extent practicable. All project-related parking, storage areas, laydown and staging sites, and any other surface-disturbing activities shall be limited to previously disturbed areas when possible.
BMP-2: Worker Environmental Awareness Training	Prior to the onset of construction, a qualified biologist shall conduct mandatory contractor/worker environmental awareness training for construction personnel to inform them on the locations of sensitive biological resources and site-specific protective measures required during construction activities. If new construction personnel are added to the project, the contractor shall require them to receive mandatory training prior to starting work. Training shall discuss special-status species, including species identification, a description of life history, habitat requirements during various life stages, and the species' protected status. Education shall include clear instructions that if any workers encounter special-status species within or near the disturbance footprint, work shall halt until the species has left the area of its own volition, and the biologist and District should be informed immediately.
BMP-3: Restoration of Temporarily Disturbed Areas	All exposed and/or disturbed areas resulting from construction activities shall be returned to their original contour and grade and shall be restored using locally native grass and forb seeds, plugs, or a mix of the two, as appropriate. Areas shall be seeded with species appropriate to their topographical and hydrological character. Plastic monofilament netting shall not be used.

BMP	Description of BMP
BMP-4: Construction BMPs	<p>No fueling of construction equipment shall occur below top of bank of any stream courses or within 50 feet of other aquatic resources. If maintenance or refueling of vehicles or equipment must occur on-site, use a designated area and/or a secondary containment, located away from drainage courses to prevent the runoff of spills and stormwater. Equipment shall be stored in areas that any possible contamination from the equipment would not flow or be washed back into the channel. Daily inspection and cleaning of equipment entering the water shall be conducted such that fuel, oil, grease, and deleterious amounts of soil are removed from the portion of equipment to be submerged. If an equipment leak occurs in the work area, proper BMPs shall be installed immediately, and the equipment shall be removed from the area.</p> <p>BMPs shall be employed on site to prevent degradation to on- and off-site aquatic resources. Methods would include the use of appropriate measures to intercept and capture sediment prior to entering aquatic resources, as well as erosion control measures along the perimeter of all work areas to prevent the displacement of fill material (i.e. fencing). All BMPs shall be in place prior to initiation of any construction activities and shall remain until construction activities are completed. All erosion control methods shall be maintained until all on-site soils are stabilized. The use of monofilament netting or other erosion control materials that could be harmful to species shall be prohibited. Mitigation, measures, or conditions as required in regulatory permits issued through USACE and/or Regional Water Quality Control Board (RWQCB) may be applied to satisfy this BMP.</p>
BMP-5: Clean Construction Area	<p>All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the Proposed Project Area. On completion of construction activities, all temporary fill and construction refuse, including, but not limited to, broken equipment parts, wrapping material, cords, cables, wire, rope, strapping, twine, buckets, metal or plastic containers, and boxes, shall be removed and appropriately disposed.</p>

Impact BIO-A-1: Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW, NMFS, or USFWS?

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, no special-status species would be directly impacted. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a larger flood event, there would be the potential for the Napa River to rise and flood flows to be turbulent and contain debris in the Proposed Project Area. However, these conditions would be temporary and would not be expected to have a substantial adverse long-term effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW, NMFS, or USFWS. Therefore, **no impact** would occur, and no mitigation is required or recommended.

Proposed Project Alternative

Construction of the Proposed Project Alternative would result in direct and indirect effects to the eight special-status species that may have habitat within the Proposed Project Area listed in **Table 3.6-1**.

Both adults and juvenile fish could be affected, directly or indirectly, during sediment excavation, rock scour protection placement, and working platform construction and removal if they are present within or adjacent to the Proposed Project Area during construction. The potential Proposed Project effects for the aforementioned species would be similar in the Proposed Project Area.

Underwater noise would be generated during construction of the Proposed Project by a variety of construction activities, including potential pile driving (vibratory hammer)¹, dredging in the river, in-water platform construction, and rock scour protection placement. The effects of vibratory pile driving on fish may include behavioral responses. Factors that may influence the magnitude of effects include: (1) species, life stage, and size of fish (smaller fish are more susceptible to injury); (2) type and size of pile and hammer (larger piles and bigger hammers result in more noise); (3) frequency and duration of pile driving (more strikes per day means greater accumulated energy); (4) site characteristics (e.g., water depth, channel bends [sound attenuates faster in shallow water and around bends]); and (5) distance of fish from the source (fish closer to the source of the noise are at greater risk of injury than fish farther away). These temporary impacts would include physiological effects or negative behavioral responses (such as changes in feeding behavior), changes in migratory patterns, and increased stress.

The proposed June 1 through October 31 in-water work restrictions, from the previous Biological Opinion (BO) and Supplemental BO issued for the Proposed Project (NMFS 1998 and 2000), and localized effect of pile driving and other in-water construction activities would limit adverse noise-generated effects to a small proportion of special-status fish species present within the Proposed Project Area. Pile driving and other in-water construction activities would be timed (June 1–October 31) for periods when life stages of some fish species are not present (e.g., CCC steelhead) or their abundance in the affected reach of the Napa River is relatively low (e.g., adult green and white sturgeon). Any fish present would be expected to pass through the affected area relatively quickly in response to general construction noise and physical disturbance, thereby limiting their exposure.

The aforementioned BMPs in **Table 3.6-3** shall be implemented during project design and construction to avoid and minimize potential effects on sensitive biological resources along with the following mitigation measures.

Special-status fish species habitat may be temporarily, indirectly impacted because of increased siltation and impaired water quality within and downstream of the Proposed Project Area. At the Lincoln Avenue Bridge, construction of the access ramps, installation of work platform, excavation,

¹ Impact pile driving uses a hydraulic hammer mounted on a piling rig with a ram mass to dynamically drive piles into the ground, while vibratory pile driving uses a low impact method of creating vertical vibrations that puts soil particles into motion thereby loosening the soil and allowing the pile to penetrate the soil. Impact pile driving results in high intensity impulsive sounds that can potentially cause injury in fish. Vibratory hammers generally produce less sound than impact hammers and are often employed as a mitigation measure to reduce the potential for adverse effects on fish that can result from impact pile driving (California Department of Transportation 2015:2-17). In addition, there are no established injury criteria for vibratory pile driving (California Department of Transportation 2015:2-17); therefore, effects on fish from vibratory pile driving are typically behavioral.

and placement of materials, such as rock scour protection, may release suspended particles and other material into the water column. Increased turbidity may directly impact fish species by impairing gill function, reducing dissolved oxygen, increasing stress, and altering behavior if they are present in the Proposed Project Area. Excavation, fill placement, and movement of construction equipment may also release toxins into the water column. These toxins could have an immediate or delayed effect on the special-status species, SRA habitat, and aquatic vegetation. These effects could be lethal or sublethal, directly and/or indirectly affecting mortality, behavior and/or migratory and reproductive success. Aquatic vegetation and foraging habitat could also be affected by either direct loss or impaired or inhibited growth. As a result, effects of sediment disturbance and reduced water quality would be potentially significant and would adversely affect special-status species without avoidance, minimization, and mitigation measures. Mitigation measures to reduce potentially significant impacts are described below.

In-water construction may result in direct physical injury or mortality to fish from activities that include pile driving, temporary platform installation, and placement of rock scour protection. Installation of access ramps, flood walls, or placement of rock scour protection could involve fish being crushed, although that risk would be expected to be low based on the limited spatial extent of the work, the timing of construction activities, and the high probability of fish avoiding such activities. Displacement of fish away from habitat near construction activities seems the most likely adverse effect. Fish that are rescued from stream segments prior to or during work could be injured and killed during rescue activities or as a result of handling. As a result, effects of the Proposed Project would be potentially significant and would adversely affect special-status species without avoidance, minimization, and mitigation measures.

Implementation of **BMP-1** through **BMP-5** would require erosion control measures and BMPs for construction activities to reduce potential impacts to special-status species and their habitat resulting from sedimentation, turbidity and decreased water quality during construction. These would include, but not be limited to:

- Silt fencing would be installed in all upland areas where construction occurs within 100 feet of the water;
- Straw wattles and silt fencing on the temporary access ramp to prevent sediment from eroding into the Napa River;
- Turbidity curtains to limit the movement of turbidity and potential decrease water quality from excavation would be installed prior to in-water work commencement;
- Spoil sites and other debris areas would be located so they do not drain directly into any body of water. Spoil sites would be graded to reduce the potential for erosion; and
- All equipment refueling and maintenance during construction would occur more than 200 feet from the main channel. Any spill within the floodplain and active channel of the Napa River and Napa Creek would be reported to NMFS within 48 hours.

Water and water quality management during construction in the Napa River would also be conducted in accordance with the WDR Order #99-074 from the California RWQCB, as well as with any additional permitting requirements imposed on the Proposed Project to limit any potential water quality impacts.

Implementation of the aforementioned measures, combined with seasonal in-water work restrictions and compliance with WDR Order #99-074, would provide multiple mechanisms of avoidance and minimization of potential water quality effects to special-status species. As a result, effects from sedimentation and decreased water quality would be reduced to less than significant and would not have an adverse effect on these special-status species.

Direct and indirect effects to special-status fish would be avoided and minimized through the implementation of the Conservation Recommendations (CR), Reasonable and Prudent Measures (RPM), and Terms and Conditions (TC) from the previous 1998 BO, 2000 Supplemental BO, and 1999 Final SEIS/EIR. The CRs, RPMs, and TCs listed below in **Table 3.6-4** are still required for the Proposed Project:

Table 3.6-4. Implementation Measures for Special-Status Fish

Implementation Measure	Effects Avoided/Minimized
RMP-1:	District would actively manage the Overall Flood Protection Project along with other resource agencies, and the citizens of Napa, to minimize impacts to special-status species and their habitat, and to maximize habitat enhancement and restoration.
RMP-2:	District shall annually report to NMFS the status of project activities and any take of special-status species resulting from construction or operation of the Project.
RPM-3:	All bank stabilization designs shall be reviewed and approved by NMFS.
RPM-4:	The habitat creation goals shall all be achieved by the Project.
RPM-6:	District shall minimize the adverse effects associated with fisheries monitoring in the Napa River and Napa Creek.
TC-1:	Adhere to all impact mitigation and seasonal construction windows which limit construction activities below ordinary high water to June 1 through October 31.
CR-1:	The use of biotechnical bank stabilization methods on an aggressive, adaptive management basis.
CR-3:	Development and implement a fish and wildlife population monitoring plan.

Implementation of **MM BIO-A-1**, shown in **Table 3.6-6**, in combination with seasonal restrictions and limiting pile driving to daylight hours would provide fish a 12-hour period to recover between exposures or migrate through the area unexposed during nighttime hours, further limiting the proportion of any given fish run exposed to underwater noise. Thus, noise generated by pile driving and other in-water construction activities would be expected to affect only a small proportion of these fish populations in the Napa River and impacts would be reduced to less-than-significant and would not have an adverse effect on special-status species.

In addition, as part of the previous state and federal permitting required for the Overall Flood Protection Project habitat mitigation for effects to special-status species and their habitats has been required and implemented by the District. The mitigation provided to date is detailed in Appendix G, *Biological Resources*.

No new or continued in-water or bridge work is proposed for the O&M phase of the Proposed Project. All O&M work would occur along the floodwall in the upland area and would have no impact on the special-status fish species, or their habitats, listed in this section.

To further reduce potential direct effects to special-status species, **MM BIO-A-2** would be implemented. Implementation of **MM BIO-A-1** and **MM BIO-A-2** in combination with seasonal restrictions, the above-identified CRs, RPMs, and TCs and implementation of **BMPs** would provide multiple mechanisms of avoidance and minimization of effects through limiting and isolation of potential impacts to special-status species and their habitats. It would also provide mitigation via the creation of special-status fish species' habitats within the Napa River and estuary as identified in Appendix G, *Biological Resources*. Therefore, the Proposed Project Alternative's effects on special-status fish would be reduced to a **less than significant impact with mitigation incorporated**.

Impact BIO-A-2: Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW, NMFS, or USFWS?

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, no SRA or other aquatic-based sensitive natural community would be directly impacted. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a larger flood event, there would be the potential for the Napa River to rise and encroach on adjacent riparian habitat and for flood flows to be turbulent and contain debris in the Proposed Project Area. Potential flood fighting activities could result in effects to adjacent habitat and SRA that would likely be less than analyzed under the Proposed Project. Since these conditions would be short term, the No Project Alternative is not expected to have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW, NMFS, or USFWS. Therefore, the No Project Alternative would result in a **less than significant impact**. No mitigation is required or recommended.

Proposed Project Alternative

With respect to sensitive natural communities associated with fish and aquatic species, construction of the Proposed Project would result in permanent loss of riverine habitat and temporary loss of SRA habitat. For effects to wetlands and other terrestrial-based sensitive natural communities please see **Impact BIO-T-3** in Section 3.13, *Terrestrial Biological Resources*, of this document.

Placement of rock scour protection and construction associated with the Proposed Project such as floodwalls would result in temporary and permanent effects to riverine habitat and temporary loss of SRA habitat. **Table 3.6-5** below provides a breakout by acreage of potential temporary and permanent impacts to riverine and SRA habitat types that would result from the Proposed Project Alternative.

Although temporary impacts would be restored to pre-construction condition, permanent removal of riverine habitat would be a potentially significant impact, and would adversely affect these habitats without avoidance, minimization, and mitigation measures.

Table 3.6-5. Fish and Aquatic Species-Related Sensitive Natural Communities

Land Cover Type	Temporary Impacts (acres)	Permanent Impacts (acres)	Total Impacts (acres)
Riverine	0.89	0.04	0.96
Shaded Riverine Aquatic	0.16	0.00	0.16

As discussed above in **Impact BIO-A-1** direct and indirect effects to SRA and fish and aquatic related sensitive natural communities would be avoided and minimized through the implementation of the CRs and RPMs from the previous 1998 BO and 1999 Final SEIS/EIR, which are still required for the Proposed Project. These are cited above and include, but are not limited to: RMP-1, RPM-3, RPM-4, CR-1.

BMP-1 would be implemented to ensure that the area of potential impact on SRA habitat is as small as possible. Implementation of **BMP-1** would restore areas of temporary loss of SRA and riverine habitats that would result from the Proposed Project. Additionally, the previously required state and federal habitat mitigation for the Overall Flood Protection Project (RPM-4) has already been implemented by the District (Rincon 2022). The mitigation implemented to date is detailed in Appendix G – *Biological Resources* and encompasses the mitigation needs for the Proposed Project Alternative. There is no new or continued in-water or bridge work proposed for the O&M phase of the Proposed Project. All O&M work would occur along the floodwall in the upland area and would have no effect on SRA or other aquatic-based sensitive natural community. Therefore, the Proposed Project Alternative would result in a **less than significant impact** to SRA and fish and aquatic related sensitive natural communities.

Impact BIO-A-3: Would the project interfere substantially with the movement of any native resident or migratory fish?

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same and no construction would occur; therefore, no native or migratory fish species would be directly impacted. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a larger flood event, there would be the potential for the Napa River to rise and flood flows to be turbulent and contain debris in the Proposed Project Area. However, these conditions would be temporary and would not be expected to interfere with the movement of any native resident or migratory fish. Therefore, **no impact** would occur, and no mitigation is required or recommended.

Proposed Project Alternative

The Proposed Project Area is a migratory corridor for CCC steelhead, green and white sturgeon, and likely provides localized movement among habitats for other special-status species. Installation of rock scour protection, work platform construction, and sediment excavation has the potential to alter the hydrology of the aquatic habitats in the Proposed Project Area and/or downstream if they are present. This could alter behavior and migratory patterns of special-status fish and would be a potentially significant impact and have an adverse effect without avoidance, minimization, and mitigation measures.

An in-water work construction window of June 1 to October 31 (as described in **Impact BIO-A-1**) would avoid the migration and spawning periods of special-status aquatic species. In addition, a fish salvage plan, as described in **MM BIO-A-2**, would reduce potential impacts to native fish present in the Proposed Project Area during construction. No continued in-water or bridge work is proposed for the O&M phase of the Proposed Project. All O&M work would occur along the flood wall in the upland area and would have no effect on migratory corridors. With the implementation of the aforementioned CRs, RPMs, and **MM BIO-A-2**, the Proposed Project Alternative would not result in a significant or adverse effect on the movement of any native resident or migratory fish. Therefore, the Proposed Project Alternative would result in a **less than significant impact with mitigation incorporated**.

Impact BIO-A-4: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, no riparian habitat would be directly impacted. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a larger flood event, there would be the potential for the Napa River to rise and encroach on adjacent riparian habitat and for flood flows to be turbulent and contain debris in the Proposed Project Area. Potential flood fighting activities could result in effects to adjacent habitat and SRA that would likely be less than analyzed under the Proposed Project. Since these conditions would be short term, the No Project Alternative is not expected to conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance or riparian habitat policy. Therefore, the No Project Alternative would result in a **less than significant impact**. No mitigation is required or recommended.

Proposed Project Alternative

Local policies concerning wetland impacts, Policy CON-30 of the Napa County General Plan, and native tree removal, the City of Napa Protected Native Tree Program, were discussed in Section 3.13, *Terrestrial Biological Resources*, by **Impact BIO-T-5**.

Policies CON-14 and CON-26 of the Napa County General Plan require Actions to avoid, or mitigate for, impacts to riparian (SRA) habitat. For areas where impacts cannot be avoided, appropriate measures would be taken to ensure no net loss of aquatic habitat functions and values within the county's watersheds. **BMP-1** would be implemented to ensure that the area of potential impact on SRA habitat is as small as possible. As described in **Impact BIO-A-1**, the Proposed Project would temporarily impact 0.16 acres of SRA habitat (**Table 3.6-5**). Temporary loss of SRA habitat would be restored on site after project completion. In addition, offsite mitigation of 2.6 acres of SRA habitat to meet the requirements of the 1999 Final SEIS/EIR, see Appendix G – *Biological Resources*, have been implemented. Moreover, biotechnical, "fish-friendly" bank stabilization design measures would also be used (CR-1), which would help mitigate for the removal of SRA habitat.

No continued in-water or bridge work is proposed for the O&M phase of the Proposed Project. All O&M work would occur along the flood wall in the upland area and would have no effect on local policies or ordinances protecting biological resources.

The Proposed Project Alternative would comply with all relevant local plans and policies, no

additional mitigation measures would be required. Therefore, the Proposed Project Alternative would result in a **less than significant impact**. No mitigation is required or recommended.

Table 3.6-6. Mitigation Measures for Fisheries and Aquatic Biological Resources Impacts of the Proposed Project

Mitigation Measure	Description of Measure
MM BIO-A-1: Implement Measures to Avoid and Minimize Effects from Acoustic Disturbance	<p>The applicant's contractor would use vibrational pile driving or padded hammer techniques where possible to prevent acoustic impacts to special-status fish species. Where the use of these techniques is not possible, an approved pile driving plan would be submitted to NMFS for approval prior to start of construction. All pile driving would comply with the Interim Criteria for Injury of Fish to Pile Driving Operations (FHWG 2008), which describes the level of sound exposure acceptable for different sizes of fish, and neither the sound exposure level nor the peak sound pressure level would be exceeded. Specifically:</p> <ul style="list-style-type: none"> • The Sound Exposure Level would not exceed 183 decibels for fish under 2 grams and 187 decibels for fish over 2 grams, in any single strike, measured at a distance of 32.8 feet from the source; and • The peak sound pressure level would not exceed 206 decibels in any single strike, measured at a distance of 32.8 feet from the source. • Pile driving would only occur during daylight hours. Restricted working hours would allow for relaxation periods and movement windows for special status fish present in the Proposed Project Area; • The number and size of piles would be developed as part of the final design and would be limited to the minimum necessary to meet the engineering and design requirements of the Proposed Project. • The use of other sound attenuation devices and methods, such as bubble curtains, may be utilized if needed to maintain Sound Exposure Levels below the NMFS Interim Criteria (NMFS 2008).

Mitigation Measure	Description of Measure
MM BIO-A-2: Implement Fisheries Salvage Plan	<p>A qualified fisheries biologist would design and conduct a fish rescue and salvage effort for fish and aquatic species in the temporary isolation area, which would involve the capture and relocation of those species to suitable habitat in the Napa River. In addition, a fisheries biologist would provide observation during construction. The Fish Rescue and Salvage Plan would be prepared and submitted to NMFS for approval a minimum of 30 days prior to isolation of the temporary in-water work area.</p> <p>At a minimum the Fish Rescue and Salvage Plan would include:</p> <ul style="list-style-type: none"> • During rescue, special-status species shall be identified, measured, and counted immediately upon capture; and the time that special-status species are held in buckets, and handling stress during processing and release, shall be minimized; • Special-status species shall be processed before other fish species and released as soon as possible during rescue operations. Species name and length data shall be recorded on data sheets, as well as time, date, location, gear type, water temperature, salinity and any other pertinent observations of the special-status species; • Because of the potential for mortality during rescue, if any special-status species are killed, the individuals shall be preserved via freezing or placing in a container with 10 percent formalin solution. Information on time and exact location of any incidental take, method of take, length of time from death to preservation, water temperature, and any other relevant information shall be recorded in writing; • If any dead fish cannot be positively identified in the field, the specimen shall be bagged, labeled, and delivered to a CDFW or USFWS laboratory for positive identification. Frozen fish shall be kept as cold as possible. If identification does not occur on the same day as capture, the fish shall be placed in a freezer. Each bag shall have a waterproof paper tag with date, time, and location caught; • No one may remove any special-status species, dead or alive, from the site for personal use; and • After completing the fish rescue, the Designated Biologist shall prepare a brief documentation report. The report shall contain the species name and length data, as well as time, date, location, gear type, water temperature, salinity and any other pertinent observations, and information on the personnel conducting the rescue, methods used, number of each species collected and relocated, and an estimate of the survival rate of special-status species immediately after release. Photographs of the site and rescue operations shall be included. The report shall be provided by the District to NMFS within 30 days of completing the fish rescue.

3.7 Geology and Soils

3.7.1 Existing Conditions

Table 3.7-1 details regional geology; fault rupture; seismicity and ground shaking; soils; subsidence and liquefaction; landslide, slope failure, and lateral spreading; expansive soils; and paleontological resources and unique geological features as they pertain to the Proposed Project Area.

Table 3.7-1. Regional Geological Conditions

Geologic Category	Discussion
Regional Geology	Napa County is located in the Coast Ranges Geomorphic Province, which is bounded on the west by the Pacific Ocean and on the east by the Great Valley Geomorphic Province (County of Napa 2008). The Coast Ranges Geomorphic Province has low mountains and intervening valleys, with Mount St. Helena being the highest topographic feature within the County at 4,343 feet. Rocks in the Coast Range are comprised of Quaternary aged surficial deposits largely characterized by unstratified, geologically young materials (clay, silt, sand, rock fragments and gravel, and organic material) lying on bedrock (or older deposits or other sedimentary materials) at or near the Earth's surface (County of Napa 2008). Quaternary alluvium deposits, including marine and nonmarine sedimentary rocks underlie the Proposed Project Area (California Department of Conservation (DOC) 2015). Minor pyroclastic deposits, including Tertiary volcanic flow rocks, underlie a portion of the Project staging area on the east bank of the Napa River.
Fault Rupture	Surface rupture occurs when the ground surface is broken due to fault movement during an earthquake. According to Figure 4.10-2, Napa County Fault Features, in the Napa County General Plan, the Proposed Project is located outside of a Alquist Priolo Fault Zone (County of Napa 2007).
Seismicity and Ground Shaking	<p>Ground shaking (or seismic shaking) is a general term referring to all aspects of motions of the earth's surface resulting from an earthquake. Seismically induced ground shaking can cause substantial damage to roadways, bridges, and other infrastructure. The breadth of the damage is determined by multiple interconnecting factors including: the magnitude, focal depth, distance from the causative fault, source mechanism, duration of shaking, high rock accelerations, type of surficial deposits or bedrock, degree of consolidation of surficial deposits, presence of high ground water, topography, and design, type, and quality of building construction (County of Napa 2008).</p> <p>Fault areas considered to be of greatest risk in California are identified as Alquist-Priolo fault zones. Soda Creek Fault is a quaternary fault that borders sections of the Proposed Project Area to the east (DOC 2015). However, Soda Creek Fault is not active (County of Napa 2008).</p> <p>There are four known faults that are of concern to Napa. These include West Napa, Hunting Creek, Green Valley, and Cordelia, located approximately 2 miles, 31 miles, 7 miles, and 9 miles east of the Proposed Project Area, respectively. According to The Association of Bay Area Governments' "Earthquake Hazard Map for the Entire Bay Area Scenario: West Napa Fault," the southern portion of Napa County could be subject to Violent (Modified Mercalli IX) and Very Strong (Modified Mercalli VIII) movement as a result of a 6.5 magnitude event from the West Napa Fault. Based on data presented in the Napa County General Plan EIR, there is a 67% chance for a 6.7 or larger magnitude earthquake to occur in the Bay Area by the year 2032 (County of Napa 2008).</p>

Geologic Category	Discussion
Soils	<p>The principal soil series in the Napa Valley is Bale-Cole-Yolo, which have formed on the nearly level, gently sloping, deep alluvium of the Valley. The soils range from well drained to somewhat poorly drained loams, silt loams, and clay loams on flood plains, alluvial fans and terraces. Soil in areas that border major waterways are susceptible to sporadic flooding events (County of Napa 2007).</p>
Subsidence and Liquefaction	<p>The term subsidence describes the compression of soils after groundwater withdrawal or oxidation of buried organic material. Areas consisting of fine-grained sediments are more susceptible to ground subsidence. As ground levels are lowered from subsidence, flooding is more likely to occur. In addition, subsidence can result in damage to structures, utilities, and roadways from differential settlement. As the population of Napa increases, the development of urban, rural, agricultural, and public facilities could expose people, structures, and development to damage from subsidence and settling (County of Napa 2007).</p> <p>Liquefaction is the temporary transformation of granular sediments from a solid state to a liquefied state as a result of seismic ground shaking. Areas with loose, well-draining, granular soil types have a higher liquefaction potential, especially in soil layers where the groundwater table is closer to the surface. According to Figure 4.10-3, Liquefaction Susceptibility, in the Napa County General Plan, the Proposed Project Area is in areas designated as high and very high for liquefaction susceptibility (County of Napa 2008).</p>
Landslide, Slope Failure and Lateral Spreading	<p>Areas with unstable slopes, where the underlying geology is predominantly weaker, are prone to landslides and mudslides. Landslides commonly occur after bouts of unusually high rainfall, which can result in increased soil saturation, by earthquakes, or a combination of these conditions. However, due to volcanic base rock, the nearly vertical slopes in the east side of the City of Napa are stable. According to regional liquefaction hazard mapping from USGS, cited in the City of Napa General Plan, areas along Napa River, Napa Creek, and Tulocay Creek are categorized as moderate-to-high, high, or very high and have increased susceptibility to liquefaction (City of Napa 2022).</p> <p>Lateral spreading is horizontal displacement that can occur on gently sloping ground (areas with a slope of 5 percent or less) along riverbanks or exposed embankments. Most of the County is not susceptible to lateral spreading; however, in alluvial areas adjacent to open stream channels (where a bank or terrace face exists) there is a potential risk of limited lateral spreading. Slopes along the Napa River in the vicinity of the Proposed Project Area are steeper and unlikely to be susceptible to lateral spreading (Napa County 2007).</p>
Expansive Soils	<p>Certain clay-rich soils can shrink and swell in response to seasonal changes in their moisture content and are referred to as expansive soils. Expansive soils exist at a number of locations in Napa County, and such conditions are typical in much of the Bay Area (County of Napa 2008). In the event of a large earthquake, the risk of damage within the County ranges from moderate to low in the unconsolidated deposits of colluvium, alluvium, and marsh/bay mud (hill-front, valley, and near bay front areas, respectively) to minimal in areas underlain by bedrock (primarily hill-slopes) (County of Napa 2007). The County of Napa requires site-specific geotechnical investigations on new development projects to prevent negative impacts caused by expansive soils. (County of Napa 2007).</p>

Geologic Category	Discussion
Paleontological Resources and Unique Geological Features	<p>A paleontological resource is defined as the fossilized remains of vertebrate and invertebrate organisms, fossil tracks, and plant fossils. In California, paleontological resources are generally observed in sedimentary and metasedimentary deposits.</p> <p>For the purposes of this analysis, a unique geological feature is defined as one that:</p> <ul style="list-style-type: none"> • Is the best local example or “type locality” of a geological feature; • Embodies the distinctive characteristics of a geologic principle that is exclusive locally or regionally; • Provides a key piece of geologic information important in geology or geologic history; • Is a geologic formation that is exclusive locally or regionally; • Contains a mineral that is not known to occur elsewhere in the County; or • Is used repeatedly as a teaching tool. <p>The Proposed Project location is adjacent to the Napa River on its western bank. As mentioned previously, the rocks within the Proposed Project Area are comprised of Quaternary aged surficial deposits, therefore the potential for fossils and other paleontological resources to be encountered during subsurface work exists. A search of the University of California Berkeley Museum of Paleontology collections database identified eight paleontological sites within Napa County and 65, primarily plant, paleontological specimens (County of Napa 2007).</p>

3.7.2 Impact Analysis

Method of Analysis

This section describes the methods used to analyze geology, soils and paleontological resources characteristics within the Proposed Project Area. The potential impacts from construction, operations, and maintenance of the Proposed Project on geologic, seismic, and soil-related hazards as well as paleontological resources were evaluated qualitatively and quantitatively using known geologic, seismic, soils, and paleontological data and regulations that would be applicable to the Proposed Project.

The methods used for analyzing impacts on geology, soils and paleontological resources included a review of information from published maps, and Napa County publications and reports pertaining to the Proposed Project Area. The primary data sources for impact analysis include the following:

- Napa County Code of Ordinances (Napa County 2023)
- Napa County General Plan (Napa County 2008)
- Napa County General Plan Update – Final Environmental Impact Report (2007)
- City of Napa 2040 General Plan (City of Napa 2022)
- U.S. Geological Survey geologic maps (USGS 2002)
- Potential Fossil Yield Classification System for Paleontological Resources on Public Lands (Bureau of Land Management 2016)
- Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources (Society of Vertebrate Paleontology 2010)

CEQA Significance Criteria

For the purposes of this SEIR, the Proposed Project would result in a significant impact on geology, soils and paleontological resources if it would:

- Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault;
 - Strong seismic ground shaking;
 - Seismic-related ground failure, including liquefaction; and/or
 - Landslides.
- Result in substantial soil erosion or the loss of topsoil.
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.
- Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect risk to life or property.
 - The Proposed Project does not bring additional people into the area and the direct or indirect risk to life or property would be low and would exist with or without the Proposed Project. Geotechnical evaluations would also guide and provide sound design for all Proposed Project structures, which would meet USACE standards. Therefore, no impact would occur, and this criterion is not evaluated further in the impact analysis section below.
- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.
 - The Proposed Project Alternative would not have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater. Therefore, no impact would occur, and this criterion is not evaluated further in the impact analysis section below.
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Summary of Geology and Soils Impacts

The No Project Alternative and Proposed Project Alternative impacts are summarized in **Table 3.7-2**.

Table 3.7-2. Summary of Geology and Soils Impacts

Impact Number	Impact Statement	CEQA Significance Determination
<i>No Project Alternative</i>		
GEO-1	Cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking, or seismic-related ground failure, including liquefaction or inducing landslides	No impact
GEO-2	Result in substantial soil erosion or the loss of topsoil	Less than significant impact
GEO-3	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse	No impact
GEO-4	Destroy a unique paleontological resource or site or unique geologic feature	No impact
<i>Proposed Project Alternative</i>		
GEO-1	Cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking, or seismic-related ground failure, including liquefaction or inducing landslides	Less than significant impact
GEO-2	Result in substantial soil erosion or the loss of topsoil	Less than significant impact
GEO-3	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse	Less than significant impact
GEO-4	Destroy a unique paleontological resource or site or unique geologic feature	Less than significant impact with mitigation incorporated

Impact GEO-1: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault; strong seismic ground shaking; or seismic-related ground failure, including liquefaction or landslides?

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same and no construction would occur; therefore, there would be no direct risk involving rupture of a known earthquake fault, to exacerbate ground shaking, or seismic-related ground failure including liquefaction or landslides. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a large flood, there would be the

potential for the Napa River to rise and floodwaters to encroach on adjacent properties in the Proposed Project Area. However, these conditions would be temporary and would not be expected to cause adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault. Therefore, **no impact** would occur, and no mitigation is required or recommended.

Proposed Project

The Proposed Project is located outside of the Alquist Priolo Fault Zone (County of Napa 2007). The Soda Creek Fault borders the Proposed Project Area to the east; however, it is not considered active. Active faults, including West Napa, Hunting Creek, Green Valley, and Cordelia, are located approximately 2 miles, 31 miles, 7 miles, and 9 miles east of the Proposed Project Area, respectively. Geotechnical evaluations would guide sound seismic design for all Proposed Project structures and facilities. The proposed floodwalls would also be designed to meet USACE standards and seismic criteria.

Table 3.7-3. Risk Based on Known Fault

Category	Discussion
Ground Shaking	Ground shaking is a general term referring to the motion of the earth's surface resulting from an earthquake. The closest mapped active fault is the West Napa Fault, which is located approximately 2 miles away from the Proposed Project Area. According to the Association of Bay Area Governments' "Earthquake Hazard Map for the Entire Bay Area Scenario: West Napa Fault," the southern portion of Napa County could be subject to Violent (Modified Mercalli IX) and Very Strong (Modified Mercalli VIII) movement as a result of a 6.5 magnitude event from the West Napa Fault. Based on data presented in the Napa County General Plan EIR, there is a 67% chance for a 6.7 or larger magnitude earthquake to occur in the Bay Area by the year 2032. (County of Napa 2008). The Proposed Project has the potential to experience strong seismic ground shaking from nearby faults in the County; however, geotechnical evaluations would guide sound seismic design for all Proposed Project structures.
Liquefaction	Liquefaction is a process in which uniform, clean, loose, fine sandy, and silty sediments below the water table temporarily lose strength during an earthquake and behave as a viscous liquid rather than a solid. According to Figure 4.10-3, Liquefaction Susceptibility, in the Napa County General Plan, the Proposed Project Area is in areas designated as high and very high for liquefaction susceptibility (County of Napa 2007). According to regional liquefaction hazard mapping from USGS, cited in the City of Napa General Plan, areas along Napa River, Napa Creek, and Tulocay Creek are categorized as moderate-to-high, high, or very high and have increased susceptibility to liquefaction (City of Napa 2022). Therefore, the Proposed Project Area could experience liquefaction in the event of a large earthquake. However, the proposed floodwalls and rock scour protection, would be designed to meet USACE standards and would be composed of approved materials and structures. Further, geotechnical evaluations would provide data on soils that would inform the design in areas with potential liquefaction concerns.
Landslides	Landslides refer to a wide variety of processes that result in the perceptible downward and outward movement of soil, rock, and vegetation under gravitational influence. There are no zones of required investigation for landslides identified in the Proposed Project Area and the topography in the Proposed Project Area is generally flat, with the exception of the banks of the Napa River. The Proposed Project Area is not located in an area designated for high landslide hazard potential (USGS 2023). Further, geotechnical evaluations would guide and provide sound design for all Proposed Project structures, which would meet USACE standards.
O&M	Operation and maintenance activities would mostly occur in previously disturbed areas, resulting in no potential for the risk of loss, injury, or death involving rupture of a known earthquake fault, to exacerbate ground shaking, or seismic-related ground failure including liquefaction or landslides.

The Proposed Project Alternative would not directly or indirectly cause potential substantial adverse effects for the risk of loss, injury, or death involving rupture of a known earthquake fault, to exacerbate ground shaking, or seismic-related ground failure including liquefaction or landslides. Therefore, the Proposed Project Alternative would result in a **less than significant impact**. No mitigation is required or recommended.

Impact GEO-2: Result in substantial soil erosion or the loss of topsoil?

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same and no construction would occur; therefore, there would be no direct increase of soil erosion potential. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a large flood, there would be the potential for the Napa River to rise and floodwaters to overtop the banks and encroach on adjacent properties in the Proposed Project Area. Along the west bank of the Napa River there are current areas of erosion and undercutting, which could be exacerbated during a large flood event. Since these conditions would be short term and would not be expected to occur frequently or on a regular basis each year, the No Project Alternative is not expected to result in substantial soil erosion or the loss of topsoil. Therefore, the No Project Alternative would result in a **less than significant impact**. No mitigation is required or recommended.

Proposed Project

Ground disturbance, excavation, and other construction activities associated with the Proposed Project would remove ground cover and expose and disturb soils. Exposed and disturbed soils are vulnerable to erosion. As part of the Proposed Project, coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit would be obtained from the RWQCB. The NPDES General Permit requires preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) for projects with greater than one acre of disturbance to control stormwater runoff within the construction and staging areas, thus minimizing soil erosion and impacts to surface waters to the extent possible. SWPPP BMPs include measures to reduce erosion from disturbed areas, prevent sediment from migrating off site, provide dust and tracking control, and prescribe good housekeeping practices for material storage and stockpile management. Additionally, once constructed, the proposed floodwalls and rock scour protection would minimize long-term erosion conditions in the Proposed Project Area.

O&M activities would not include ground disturbing activities that could expose or disturb soil.

The Proposed Project Alternative would not result in substantial soil erosion or topsoil loss. As a result, the Proposed Project Alternative would result in a **less than significant impact**. No mitigation is required or recommended.

Impact GEO-3: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same and no construction would occur; therefore, there would be no direct effects to cause geologic units or soil to become

unstable, or that would become unstable. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a large flood event, there would be the potential for the Napa River to rise and floodwaters to overtop the banks and encroach on adjacent properties in the Proposed Project Area. However, these conditions would be temporary and would not be expected to result in on or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse due to unstable geologic units or soil, or soil that would become unstable. Therefore, **no impact** would occur, and no mitigation is required or recommended.

Proposed Project

Land subsidence results in a slow-to-rapid downward movement of the ground surface as a result of the vertical displacement of the ground surface, usually resulting from groundwater withdrawal. Soils in the Proposed Project Area are well drained to somewhat poorly drained loams, silt loams, and clay loams on flood plains, alluvial fans and terraces. The Proposed Project Area is not located in an area designated for high landslide hazard potential (USGS 2023). However, expansive soils exist at several locations in Napa County, and the Proposed Project Area is in areas designated as high and very high for liquefaction susceptibility (County of Napa 2007). Therefore, the Proposed Project Area could experience liquefaction in the event of a large earthquake. The proposed floodwalls and rock scour protection would be designed to meet USACE standards and would be composed of approved materials and structures. Although the Proposed Project may be located on a geologic unit or soil that has a marginal potential for liquefaction and subsidence, due to the nature of the proposed improvements, this risk would be low and would exist with or without construction of the Proposed Project.

O&M activities would not include extensive ground disturbing activities that could expose or disturb soil.

The Proposed Project Alternative would not result be located on a geologic unit or soil that is unstable, or that would become unstable, as a result of the project and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. As a result, the Proposed Project Alternative would result in a **less than significant impact**, and no mitigation is required or recommended.

Impact GEO-4: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same and no construction would occur; therefore, there would be no direct effect on paleontological resources, sites, or unique geologic features. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a large flood event, there would be the potential for the Napa River to rise and floodwaters to encroach on adjacent properties in the Proposed Project Area. However, these conditions would be temporary and would not be expected to destroy a unique paleontological resource or site or unique geologic feature. Therefore, **no impact** would occur, and no mitigation is required or recommended.

Proposed Project

The Proposed Project Area is located on the west bank of the Napa River. As mentioned previously, the subsurface within the Proposed Project Area is comprised of Quaternary aged surficial deposits, therefore the potential for fossils and other paleontological resources to be encountered during subsurface work exists. A search of the University of California Berkeley Museum of Paleontology collections database identified eight paleontological sites within Napa County along with 65 paleontological specimens, primarily plants. (County of Napa 2007).

Although much of the Proposed Project Area has been previously disturbed, unique paleontological or geologic features could be discovered during subsurface work, which would be considered a significant impact. Therefore, mitigation measure **MM-GEO-1** (described below in **Table 3.7-4**) would be implemented to minimize impacts resulting from the potential for discovery of buried paleontological resources during construction. O&M activities within the Proposed Project Area would involve minor ground disturbing activities on previously disturbed land and would not generally involve subsurface ground disturbance. Therefore, O&M of the Proposed Project would not have the potential to encounter unique paleontological or geologic resources.

With implementation of mitigation measure **MM-GEO-1**, the Proposed Project Alternative would not destroy a unique paleontological resource or site or unique geologic feature. Therefore, the Proposed Project Alternative would result in a **less than significant impact with mitigation incorporated**.

Table 3.7-4. Mitigation Measures for Geology and Soils Impacts of the Proposed Project

Mitigation Measure	Description of Measure
MM-GEO-1: Paleontological Resources	Before the start of construction activities, construction personnel involved with earth-moving activities would be informed of the proper notification procedures if fossils are encountered. If paleontological resources are encountered during earth-moving activities, the construction crew would immediately stop work, and a qualified paleontologist would evaluate the resource and prepare a proposed mitigation plan based on the discovery.

3.8 Greenhouse Gas Emissions and Climate Change

3.8.1 Existing Conditions

Climate Change

When sunlight reaches Earth's surface, it can either be reflected into space or absorbed by Earth. Once absorbed, the planet releases some of the energy back into the atmosphere as heat (also called infrared radiation). Greenhouse gases (GHGs) are gases that absorb energy, slowing or preventing the loss of heat to space. In this way, GHGs act like a blanket, making the Earth warmer than it would otherwise be. This phenomenon is commonly known as the "greenhouse effect."

Human activities that generate GHGs increase the amount of infrared radiation absorbed by the atmosphere, thus enhancing the greenhouse effect, and amplifying the warming of Earth. Increases in fossil fuel combustion and deforestation have exponentially increased concentrations of GHGs in the atmosphere since the Industrial Revolution. Rising atmospheric concentrations of GHGs in excess of natural levels result in increasing global surface temperatures, which is commonly referred to as global warming. Global warming leads to the multiple impacts of climate change. Climate change refers to a change in the average global climate that may affect wind patterns, storms, precipitation, and temperature.

The Intergovernmental Panel on Climate Change (IPCC) was established in 1988 by the World Meteorological Organization of the United Nations for assessing the science related to climate change. IPCC is an international body that provides scientific, technical, and socioeconomic assessment of climate change, its impacts and future risks, and options for adaptation and mitigation. The IPCC finds that GHG emissions from human activities are responsible for approximately 1.1 degrees Celsius of warming since 1900 (IPCC 2021). The IPCC predicts that global temperature over the next 20 years will reach or exceed 1.5 degrees Celsius of warming (IPCC 2021).

Changes of one or two degrees in the average temperature of the planet can cause potentially dangerous shifts in climate and weather. Potential risks from a warming climate include rising sea levels, intense drought and flooding conditions, changing precipitation patterns, expanding desertification, increased wildfire risks, and significant temperature swings (City of Napa 2022).

Even though climate change is a worldwide phenomenon, impacts are felt locally. Sea-level rise can impact tides and lead to rising water levels in the Napa River, potentially causing more severe flooding impacts to areas that have not previously been impacted. Rising temperatures, more intense drought conditions, an increase in soil temperatures, and other changes in climate can result in increased wildfire risk and have a negative effect on viticulture throughout Napa Valley (City of Napa 2022).

Greenhouse Gases

The major GHGs directly emitted by humans include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and fluorinated gases. Different GHGs can have different effects on the Earth's warming. The Global Warming Potential (GWP) was developed to allow comparisons of the global warming impacts of different gases. Specifically, it is a measure of how much energy the emissions of 1 ton of a gas will absorb over a given period of time, typically a 100-year time horizon, relative to the emissions of 1 ton of CO₂ (USEPA 2023a). Gases with a higher GWP absorb more energy, per

ton emitted, than gases with a lower GWP, and thus contribute more to warming the Earth.

The major GHGs are described in **Table 3.8-1** below.

Table 3.8-1. Descriptions of Greenhouse Gases

Greenhouse Gas	Description
Carbon Dioxide	The main human activity that emits CO ₂ is the combustion of fossil fuels (coal, natural gas, and oil) for energy and transportation. Certain industrial processes (e.g., manufacture of cement) and land-use changes also emit CO ₂ . CO ₂ is removed from the atmosphere (or "sequestered") when it is absorbed by natural sinks, like forests and soils, as part of the biological carbon cycle. The GWP of CO ₂ , by definition, is 1 (USEPA 2023a).
Methane	CH ₄ is emitted during the production, processing, storage, and transport of coal, natural gas, and oil. CH ₄ emissions also result from agricultural practices such as raising livestock and storage of manure in holding tanks. CH ₄ is also generated in landfills as municipal waste decomposes and in the treatment of wastewater. The GWP of CH ₄ is 28 (USEPA 2023a).
Nitrous Oxide	N ₂ O is emitted during agricultural activities such as application of synthetic and organic fertilizers and other cropping practices, the management of manure, or burning of agricultural residues. N ₂ O is also emitted during combustion of fuels and during treatment of domestic wastewater. The GWP of N ₂ O is 265 (USEPA 2023a).
Fluorinated Gases	Fluorinated gases are synthetic, powerful GHGs that are emitted through their use as substitutes for O ₃ -depleting substances (e.g., as refrigerants) and through a variety of industrial processes such as aluminum and semiconductor manufacturing. Fluorinated gases are typically emitted in smaller quantities than other GHGs, but they are the most potent and longest lasting type of GHGs emitted by human activities. There are four main categories of fluorinated gases: hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF ₆), and nitrogen trifluoride (NF ₃). The GWP of HFCs is up to 12,400, PFCs is up to 11,100, NF ₃ is 16,100, and SF ₆ is 23,500 (USEPA 2023a).

Greenhouse Gas Emission Inventories

An emissions inventory that identifies and quantifies the primary human generated sources and sinks of GHGs is a well-recognized and useful tool for addressing climate change. This section summarizes the latest information on global, federal, state, and regional/local GHG emissions inventories.

Global GHG Emissions

In 2020, global GHG emissions were estimated at 46.12 million metric tons (MMT) of carbon dioxide equivalent (CO₂e) (World Bank 2023). GHG emissions in 2020 were lower than 2019 levels by approximately 2 MMT CO₂e (World Bank 2023). The decrease in GHG emissions in 2020 is likely due to the COVID-19 pandemic.

Federal GHG Emissions

In 2021, GHG emissions in the U.S. totaled 6,340 MMT CO₂e (USEPA 2023b). Net GHG emissions in 2021 were 5,586 MMT CO₂e. GHG emissions increased in 2021 by 6 percent relative to the previous year. The increase in total GHG emissions was driven largely by an increase in CO₂ emissions from fossil fuel combustion. In 2021, CO₂ emissions from fossil fuel combustion increased by 7 percent relative to the previous year.

This increase in fossil fuel consumption emissions was due primarily to economic activity rebounding after the height of the COVID-19 pandemic. Transportation activities accounted for 28 percent of the total U.S. GHG emissions in 2021 (USEPA 2023b). Emissions from electric power accounted for 25 percent, while emissions from industry accounted for 23 percent of the total U.S. GHG emissions in 2021. Residential and commercial accounted for 13 percent, while agriculture accounted for 10 percent of the total U.S. GHG emissions in 2021 (USEPA 2023b).

California GHG Emissions

In 2020, total statewide GHG emissions were 369.2 MMT CO₂e (CARB 2022). GHG emissions in 2020 were 35.3 MMT CO₂e lower than 2019 levels. The 2019 to 2020 decrease in emissions is likely due in large part to the impacts of the COVID-19 pandemic. The GHG emissions in 2020 were 61.8 MMT CO₂e below the 2020 GHG limit of 431 MMT CO₂e established by AB 32. Refer to Appendix D, *Regulatory Framework*, for a discussion of AB 32.

Since the peak level in 2004, California's GHG emissions have generally followed a decreasing trend. In 2014, statewide GHG emissions dropped below the 2020 GHG limit and have remained below the limit since that time. Transportation accounted for 38 percent, industrial accounted for 23 percent, in-state electricity accounted for 11 percent, agriculture and forestry accounted for 9 percent, residential accounted for 8 percent, commercial accounted for 6 percent, and electricity imports accounted for 5 percent of California's total GHG emissions in 2020 (CARB 2022).

Regional/Local GHG Emissions

In 2005, communitywide GHG emissions in Napa totaled 455,062 metric tons (MT) CO₂e (City of Napa 2022). Transportation accounted for 49 percent, residential buildings accounted for 23 percent, commercial and industrial buildings accounted for 16 percent, solid waste accounted for 6 percent, construction and industrial/commercial equipment accounted for 5 percent, lawn and garden equipment accounted for less than 1 percent, and agriculture/farming accounted for less than 1 percent of the City's 2005 community GHG emissions (City of Napa 2022).

3.8.2 Impact Analysis

Method of Analysis

This section describes the methods used to analyze GHG emissions characteristics within the Proposed Project Area. The potential impacts from construction of the Proposed Project on GHG emissions were evaluated quantitatively and qualitatively using industry accepted software tools.

Construction of the Proposed Project would generate GHG emissions from equipment and vehicle exhaust during site preparation, excavation, material delivery, construction of proposed improvements, and site cleanup. GHG emissions from construction of the Proposed Project were estimated using the CalEEMod version 2020.4.0. CalEEMod is a statewide land use emissions computer model that, along with air pollutant emissions (see Section 3.4, Air Quality), is designed to quantify potential GHG emissions associated with both construction and operation from a variety of land use projects. Construction GHG emissions were estimated in CalEEMod using a combination of Project-specific information presented in Chapter 2, *Project Description*, CalEEMod defaults, and standard assumptions.

CalEEMod used as inputs the Proposed Project construction details presented in Appendix C, *Project Construction Details*, such as schedule, equipment quantities, area of disturbance, and

number of workers. The concrete truck presented in Table C-2 was counted as an on-road vendor truck. Each worker is assumed to commute to the Proposed Project Area in a separate vehicle. Refer to Appendix F, *Air Quality and Greenhouse Gas Emissions Modeling* for details regarding modeling inputs and assumptions. The significance of GHG impacts during construction was determined based on BAAQMD's guidance regarding construction GHG impacts.

Upon completion of construction, the District would undertake all O&M activities indefinitely as part of their areawide O&M activities. Minimal quantities of equipment and vehicles would be required for routine inspections and minor vegetation trimming and would be similar to existing maintenance activities. Given their limited and infrequent nature, the GHG impacts of O&M activities are evaluated qualitatively.

CEQA Significance Criteria

For the purposes of this SEIR, the Proposed Project would result in a significant impact on GHG emissions if it would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gas emissions.

Summary of Greenhouse Gas and Climate Change Impacts

The No Project Alternative and Proposed Project Alternative impacts are summarized in **Table 3.8-2**.

Table 3.8-2. Summary of GHG and Climate Change Impacts

Impact Number	Impact Statement	CEQA Significance Determination
<i>No Project Alternative</i>		
GHG-1	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	Less than significant impact
GHG-2	Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gas emissions	No impact
<i>Proposed Project Alternative</i>		
GHG-1	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	Less than significant impact
GHG-2	Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gas emissions	Less than significant impact

Impact GHG-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same. No construction would

occur; therefore, no GHG emissions would be directly generated from use of construction vehicles and equipment. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a large flood, there would be the potential for the Napa River to rise and floodwaters to encroach on adjacent properties in the Proposed Project Area. Potential flood fighting activities would result in temporary effects to air quality that would likely be less than analyzed under the Proposed Project. Since these conditions would be short term and would not be expected to occur frequently or on a regular basis each year, the No Project Alternative is not expected to generate GHG emissions that have a significant impact on the environment. Therefore, the No Project Alternative would result in a **less than significant impact**. No mitigation is required or recommended.

Proposed Project

The Proposed Project would generate GHG emissions during site preparation, excavation, material delivery, construction of proposed improvements, and site cleanup. GHG emissions generated during construction were estimated using CalEEMod. The unmitigated construction GHG emissions are summarized in **Table 3.8-3**. Total GHG emissions from construction of the Proposed Project are presented in metric tons (MT) CO₂e. Refer to Appendix F, *Air Quality and Greenhouse Gas Emissions Modeling* for the CalEEMod assumptions and output.

Table 3.8-3. Construction GHG Emissions

Year	GHG Emissions MT CO ₂ e ¹
2025	303
2026	382
Total Emissions	685

Source: Appendix F

Notes: GHG = greenhouse gas; MT = metric tons; CO₂e = carbon dioxide equivalent

¹ Numbers have been rounded up.

As shown in **Table 3.8-2**, the total GHG emissions associated with Proposed Project construction would be approximately 685 MT CO₂e. Neither the City nor BAAQMD have adopted thresholds of significance for construction-related GHG emissions, though BAAQMD recommends quantifying emissions and disclosing that GHG emissions would occur during project construction. GHG emissions during construction of the Proposed Project would be temporary in nature and would represent a small portion of the Proposed Project's lifetime GHG emissions. Therefore, construction of the Proposed Project Alternative would not generate GHG emissions that have a significant impact on the environment.

O&M activities would generate limited GHG emissions from the use of minimal amounts of equipment and vehicles. Given the limited and infrequent nature of O&M activities, GHG emissions from O&M would be substantially less than those generated during construction. Further, GHG emissions from O&M activities would be similar to existing O&M activities and would not significantly increase emissions over existing conditions.

The Proposed Project Alternative would not generate GHG emissions, either directly or indirectly, that have a significant impact on the environment. Temporary emissions would be generated during construction; therefore, the Proposed Project Alternative would result in a **less than significant impact**. No mitigation is required or recommended.

Impact GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gas emissions.

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, no GHG emissions would be directly generated, and no changes in current emissions would occur that could conflict with any goals or plans. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a large flood, there would be the potential for the Napa River to rise and floodwaters to encroach on adjacent properties in the Proposed Project Area. However, these conditions would be temporary and would not be expected to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gas emissions. Therefore, **no impact** would occur, and no mitigation is required or recommended.

Proposed Project

The City has not adopted a qualified GHG reduction strategy (i.e., a climate action plan). Current and applicable plans, policies, and regulations adopted to reduce GHG emissions include SB 32, 2022 Scoping Plan, and Plan Bay Area 2050. Refer to Appendix D, *Regulatory Framework*, for more information on SB 32, 2022 Scoping Plan, and Plan Bay Area 2050.

As discussed under Impact GHG-1, GHG emissions generated during construction of the Proposed Project would be temporary and would represent a small portion of the Proposed Project's lifetime GHG emissions. As stated under Impact GHG-1, GHG emissions from O&M would be similar to existing O&M activities and would be substantially less than those generated during Proposed Project construction. The Proposed Project would not generate significant GHG emissions, and therefore, would not conflict with or otherwise interfere with the statewide GHG reduction targets identified in SB 32 and the 2022 Scoping Plan. Further, the Proposed Project is consistent with the Plan Bay Area 2050 strategy EN1: Adapt to Sea Level Rise, because it would provide a 100-year level of flood protection to portions of the City vulnerable to flooding of the Napa River.

The Proposed Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gas emissions. Temporary emissions would be generated during construction that would not conflict with any state or regional GHG emission reduction goals; therefore, the Proposed Project Alternative would result in a **less than significant impact**. No mitigation is required or recommended.

3.9 Hazards and Hazardous Materials

3.9.1 Existing Conditions

This section describes the existing hazards and hazardous materials resources in the Proposed Project Area, including a description of the Proposed Project's proximity to existing schools, hazardous materials database listings, airports in the Proposed Project Area, emergency response plans and evacuation routes, and fire hazards.

Setting

A description of the Proposed Project's proximity to existing schools, airports in the Proposed Project Area, emergency response plans and evacuation routes, and fire hazards is presented in **Table 3.9-1** below.

Table 3.9-1. Hazards Setting and Proximity

Category	Description
Schools	<p>Schools near the Proposed Project Area include:</p> <ul style="list-style-type: none"> • Blue Oak Middle School, located approximately 0.33 miles west of the southern end of Proposed Project Area; • New Technology High School, located approximately 0.40 miles west of the southern end of the Proposed Project Area; • Mayacamas Countywide Middle School, located approximately 0.25 mile west of the Proposed Project Area; • McPherson Elementary School, located approximately 0.70 mile west of the Proposed Project Area; and, • Alta Heights Elementary School, located approximately 0.50 mile east of the southern end of the Proposed Project Area.
Airports	<p>There are no public use airports within two miles of the Proposed Project Area. The nearest airport is the Napa County Airport, located approximately 7 miles south of the Proposed Project Area. The Proposed Project is not located within an airport land use plan.</p>
Fire Hazards	<p>According to the California Department of Forestry and Fire Protection (CAL FIRE), the Proposed Project Area is located in a local responsibility area, outside of a Very High Fire Hazard Severity Zone (CAL FIRE 2022).</p>
Emergency Response and Emergency Evacuation	<p>Napa County is located in the Governor's Office of Emergency Services Coastal Region and Mutual Aid Region II. There are approximately 55 evacuation zones in the City of Napa, which are roughly drawn along major streets and are based on an algorithm that considers fire history and population density. The Proposed Project Area is located within evacuation zones NAP-EO32 and NAP-EO26 for various hazardous events (Napa County 2023). There are no designated evacuation routes in the City; however, major roads such as SR 29 and SR 221 are critical corridors for circulation in the event of an emergency (City of Napa 2022).</p>
Hazardous Materials Database Listings	<p>According to the Department of Toxic Substances Control (DTSC) EnviroStor Database (DTSC 2023), hazardous material database listings near the Proposed Project Area include the following listed in Table 3.9-2.</p>

In addition to the sites above, a Phase I Environmental Site Assessment (ESA) was completed for Silverado Towing located at 501 North Bay Drive (Terracon 2023). The Accessor Parcel Number (APN) for this site is 044-220-017. This site adjoins the Napa River, Napa River Pet Hospital, and

Ace & Vine. According to the Phase I ESA, the site is listed on the California Hazardous Material Incident Report System (CHMIRS), Emergency Response Notification System (ERNS), Facility Registry Service/Facility Index, Hazardous Waste Manifest Data, Generators from Hazardous Waste Manifest Data, Historical Hazardous Waste Manifest Data, Historical Hazardous Substance Storage Container Information - Facility Summary (HIST TANK), Napa County – Local Oversight Program List, Leaking Underground Storage Tank (LUST), and Underground Storage Tank Statewide Environmental Evaluation and Planning System (UST SWEEPS) databases (Terracon 2023).

According to the HIST TANK, LUST, and UST SWEEPS databases, one 2,500-gallon unleaded regular fuel UST was installed for the site, formerly Patterson Bus Company, in July 1985, and a LUST case was opened in April 1993 due to unauthorized release of diesel. The site underwent various site investigation and remediation activities associated with the removal of the 2,500-gallon diesel UST. In 1995, 200 cubic yards of soil were over-excavated and stockpiled on-site. Contaminated soil was still present on the east wall of the excavation; however, a power pole prevented further soil removal in this area. Groundwater samples were also collected at the site from 1997 to 2000.

In September 2001, a Case Closure was issued by Napa County Division of Environmental Management (NCDEM); however, a note was attached to the closure indicating that NCDEM should be contacted prior to any well installation on-site or on adjoining properties. Based on the residual diesel impact in the soil on the eastern area of the site and case closure by the NCDEM, this represents a Controlled Recognized Environmental Condition (CREC) (Terracon 2023).

The CHMIRS, ERNS, and ERNS PFAS listings are related to the following incidents: illegal dumping such as dumped waste oil into the soil and dumped oil product into Napa River; pushing of trash and dirt into the river; a car catching fire in the tow yard; and use of firefighting foam on site. Based on site observations and history of spills onsite, and the lack of documentation cleanup, the above referenced spills represent a Recognized Environmental Condition (REC) to the site. Additionally, roof shingles, concrete, and building debris at the site potentially contain Asbestos Containing Materials (ACM), which represents a business environmental risk (BER) (Terracon 2023).

Power lines are also located within the Proposed Project Area and may require relocation for construction of the Proposed Project. These power lines may include old transformers that may contain polychlorinated biphenyls (PCBs) or PCB-contaminated material.

3.9.2 Impact Analysis

Method of Analysis

This section describes the methods used to analyze hazards and hazardous materials characteristics within the Proposed Project Area. The potential impacts from construction, operations, and maintenance of the Proposed Project on hazards and hazardous materials were evaluated qualitatively using known hazards and hazardous materials data and regulations that would be applicable to the Proposed Project.

A desktop analysis was completed to collect and analyze data related to hazards and hazardous materials in the Proposed Project Area. Information was collected on known hazardous material sites within the Proposed Project Area and geographic information system (GIS) data and aerial imagery were used to identify the hazardous sites within the Proposed Project Area. Additionally, the following resources were used for data collection:

- Envirostor Database (Envirostor 2023)
- GeoTracker Database (SWRCB 2023)
- CAL FIRE Fire Hazard Severity Zone Maps (CAL FIRE 2022)

A Phase I ESA was also completed for the Proposed Project Area by Terracon for the Silverado Towing property located at 501 North Bay Drive (see Section 3.9.1 above). The Phase I ESA recommends the preparation of a Soil Management Plan prior to future development and earthwork to address potential encounters with hydrocarbon and per- and polyfluoroalkyl substances (PFAS) impacted soil and unknown subsurface conditions associated with the reported historical tow yard and storage located at 501 North Bay Drive. The Phase I ESA also recommends that suspected ACM be sampled for asbestos and transported off-site per regulatory guidelines (Terracon 2023).

CEQA Significance Criteria

For the purposes of this SEIR, the Proposed Project would result in a significant impact on hazards and hazardous materials if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment.
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the Proposed Project Area.
 - The Proposed Project is not located within an airport land use plan or within two miles of a public airport. Therefore, no impact would occur, and this criterion is not evaluated further in the impact analysis section below.
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.
 - The Proposed Project is located in a local responsibility area, outside of a VHSZ. Therefore, no impact would occur, and this criterion is not evaluated further in the impact analysis section below.

Summary of Hazards and Hazardous Materials Impacts

The No Project Alternative and Proposed Project Alternative impacts are summarized in **Table 3.9-2**.

Table 3.9-2. Summary of Hazards and Hazardous Materials Impacts

Impact Number	Impact Statement	CEQA Significance Determination
<i>No Project Alternative</i>		
HAZ-1	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	No impact
HAZ-2	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment.	Less than significant impact
HAZ-3	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	No impact
HAZ-4	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.	No impact
HAZ-5	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	No impact
<i>Proposed Project Alternative</i>		
HAZ-1	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	Less than significant impact
HAZ-2	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment.	Less than significant impact
HAZ-3	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	Less than significant impact with mitigation incorporated
HAZ-4	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.	Less than significant impact with mitigation incorporated

Impact Number	Impact Statement	CEQA Significance Determination
HAZ-5	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	Less than significant impact

Impact HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, there would be no direct transport, use or disposal of hazardous materials. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a large flood, there would be the potential for the Napa River to rise and floodwaters to encroach on adjacent properties in the Proposed Project Area. However, these conditions would be temporary and would not be expected to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Therefore, **no impact** would occur. No mitigation is required or recommended.

Proposed Project Alternative

The Proposed Project would involve the transport and use of common construction materials such as vehicle fuels, grease, lubricants, and drilling fluids which could pose a threat as hazardous materials. The use of these materials, including their routine transport and disposal, carries the potential for an accidental release into the local environment, including near the Napa River. During clearing, grubbing excavation, utility replacement, use of large earthmoving construction equipment, vehicle and equipment fueling, and other construction activities for the Proposed Project, it is anticipated that limited quantities of miscellaneous hazardous substances would be used in the Proposed Project Area and staging areas. These would include petroleum-based products/fluids, solvents, oils, and potentially asbestos bearing materials from old structures onsite.

Organics, trash, and demolished material would be off-hauled, and the Proposed Project would not discharge liquid construction wastes to surface or groundwaters in the area. Construction disturbance, including disturbance near surface waters, has the potential to result in the accidental release of fuel and other construction material to the environment. However, with the implementation of a SWPPP for the Proposed Project, BMPs would be employed to control erosion and sedimentation into surface waters and prescribe good housekeeping practices to reduce the extent of potential spills or release of hazardous materials into the environment. Water management in the Napa River would be required during construction for placement of rock scour protection under Lincoln Avenue Bridge to control turbidity. Water and water quality management during construction in the Napa River would be conducted in accordance with WDR Order #99-074 as well as any additional permitting requirements imposed on the Proposed Project and to limit any potential water quality impacts.

The Proposed Project would comply with all relevant federal, state, and local statutes and regulations related to transport, use (including material storage procedures), or disposal, of

hazardous materials. The SWPPP and BMPs (as required by federal state and local regulations), would minimize hazards resulting from routine transport, use, or disposal of hazardous materials. Additionally, the Proposed Project would be regulated by the Napa County Division of Environmental Health as the CUPA for Napa County and would be subject to the *Napa County Area Plan*. The *Napa County Area Plan* identifies the hazardous materials which pose a threat to the community; develops procedures and protocols for emergency response; provides for notification and coordination of emergency response personnel; and provides for public safety including notification and evacuation.

O&M activities would include routine inspections and minor vegetation trimming. Activities would be performed in conformance with relevant federal, state, and local statutes and regulations related to transport, use, or disposal, of hazardous materials.

The Proposed Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Temporary construction activities would occur as described above and would involve the transport, use and disposal of hazardous materials. However, all construction activities would be carried out according to local, state, and federal regulations. Construction BMPs and the Project SWPPP would also be implemented. Therefore, the Proposed Project Alternative would result in a **less than significant impact**. No mitigation is required or recommended.

Impact HAZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment.

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, there would be no direct release of hazardous materials into the environment. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a large flood, there would be the potential for the Napa River to rise and floodwaters to encroach on adjacent properties in the Proposed Project Area. Potential flooding could result in the accidental release of hazardous materials into the environment. However, flood conditions would be short term, and would not be expected to occur frequently or on a regular basis each year, hence the No Project Alternative is not expected to create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment. Therefore, the No Project Alternative would result in a **less than significant impact**. No mitigation is required or recommended.

Proposed Project Alternative

As discussed above, the Proposed Project would involve the use of common construction materials, such as vehicle fuels, grease, lubricants, and drilling fluids, that would be hazardous if they were to be released accidentally into the environment. Water management in the Napa River would be required during construction for placement of rock scour protection under Lincoln Avenue Bridge to control turbidity. Water and water quality management during construction in the Napa River would be conducted in accordance with WDR Order #99-074, as well as any additional permitting requirements imposed on the Project to limit any potential water quality impacts. Additionally, spill

prevention measures would be included in the construction plans and monitored by the SWPPP for the proposed improvements to address the accidental or inadvertent release of oil, grease, or fuel into adjacent waterways.

Such measures would include rules requiring the storage of reserve fuel and the refueling of construction equipment within designated secondary containment in construction areas and staging areas, and inspection of vehicles for oil and fuel leaks. Any contaminated soils or groundwater encountered by the project would be managed, stored, and disposed of in accordance with requirements of the SWPPP and NPDES construction general permit and DTSC requirements reducing impacts to a less-than-significant level.

Additionally, with the implementation of a SWPPP for the Proposed Project, BMPs would be employed to control erosion and sedimentation into surface waters. In the event of an emergency, potential impacts would be minimized through the application of procedures outlined in the *Napa County Area Plan*.

As discussed above, O&M of the Proposed Project may include routine inspections and minor vegetation trimming. These activities would be infrequent, and activities would be performed in conformance with relevant federal, state, and local statutes and regulations related to hazardous materials releases.

The Proposed Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Temporary construction activities would occur as described above and hazardous materials would be stored and maintained in designated areas with secondary containment and all construction activities would be carried out according to local, state, and federal regulations. Construction BMPs and the Project SWPPP would also be implemented to reduce risk of inadvertent release of hazardous materials into the environment. Therefore, the Proposed Project Alternative would result in a **less than significant impact**. No mitigation is required or recommended.

Impact HAZ-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, hazardous emissions would not be directly emitted near schools, nor would hazardous materials or substances be handled near schools. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. For O&M activities, no machinery or vehicles would be operated with the potential to emit hazardous emissions or handle hazardous substances near schools. In the event of a large flood, there would be the potential for the Napa River to rise and floodwaters to encroach on adjacent properties in the Proposed Project Area. However, these conditions would be temporary and would not be expected to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school or expose sensitive receptors to substantial pollutant concentrations. Therefore, **no impact** would occur, and no mitigation is required or recommended.

Proposed Project Alternative

Five schools are located within one mile of the Proposed Project Area. Only one school, Mayacamas Countywide Middle School, is located within one-quarter mile of the Proposed Project Area. The Proposed Project would require construction vehicles to be operated within the Proposed Project Area over the construction duration, which could result in emissions of air quality pollutants within one-quarter mile of an existing school. Fuel combustion results in the release of air quality pollutants that can be considered hazardous.

As discussed in Section 3.4, *Air Quality*, construction activities would be temporary and short-term. The floodwall would be constructed in several-hundred-foot segments at a time as it progresses along the alignment, and only portions of the Proposed Project Area would be disturbed at a time throughout the construction period, with operation of construction equipment occurring intermittently throughout the course of a day rather than continuously at any one location in the Proposed Project Area. Periodic operation of construction equipment would allow for the dispersal of DPM by avoiding continuous construction activity in the portions of the Proposed Project Area closest to existing sensitive receptors. Furthermore, compliance with the ARB airborne toxic control measures anti-idling measure, which limits idling to no more than 5 minutes at any location for diesel-fueled commercial vehicles, would further minimize DPM emissions in the Proposed Project Area.

The Proposed Project would involve implementation of a Project SWPPP, compliance with the ARB airborne toxic control measures anti-idling measure, and consistency with hazardous materials handling and air quality district requirements. As discussed in Section 3.4, *Air Quality*, when schools, residential areas, or other sensitive land uses are located near the construction site, BAAQMD recommends that projects implement enhanced BMPs, in addition to the basic BMPs, to control fugitive dust emissions (BAAQMD 2023). Therefore, to reduce impacts related to fugitive dust emissions during construction, mitigation measures **MM-AQ-1** and **MM-AQ-2** (described in Section 3.4) would be implemented.

As discussed above, O&M of the Proposed Project would require routine inspections and minor vegetation trimming. This would involve the use of a small number of trucks and equipment that would use and emit potentially hazardous materials. However, these vehicles would not be operated in areas near schools and these inspections would be performed infrequently; therefore, the inspections would not increase the potential for emissions significantly over existing levels. Additionally, no long-term generators or stationary sources are included as part of the Proposed Project. The Proposed Project would not generate significant quantities of operational DPM because O&M activities would be infrequent and require minimal diesel-powered equipment.

With the implementation of mitigation measures **MM-AQ-1** and **MM-AQ-2**, the Proposed Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school or expose sensitive receptors to substantial pollutant concentrations. Therefore, the Proposed Project Alternative would result in a **less than significant impact with mitigation incorporated**.

Impact HAZ-4: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, no significant, direct hazards to the public or the environment would be created related to a known hazardous materials site. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a large flood, there would be the potential for the Napa River to rise and floodwaters to encroach on adjacent properties in the Proposed Project Area. However, these conditions would be temporary and would not be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 since there are no such sites in the immediate Proposed Project Area and, thus, would not create a significant hazard to the public or the environment. Therefore, **no impact** would occur, and no mitigation is required or recommended.

Proposed Project Alternative

According to the DTSC EnviroStor Database (DTSC 2023), hazardous material database listings near the Proposed Project Area include 3011 Soscol Avenue and 750 Randean Way. 3011 Soscol Ave, located 0.25 northwest of the Proposed Project Area, is not a concern to the Proposed Project given its distance from the Proposed Project Area. Contaminated soils at the 750 Randean Way property were excavated and disposed off-site, resulting in a determination of no further action by the RWQCB. Therefore, 750 Randean is also not a concern to the Proposed Project.

In addition to the sites above, a Phase I ESA was completed for Silverado Towing, located at 501 North Bay Drive (Terracon 2023). This site adjoins the Napa River, Napa River Pet Hospital, and Ace & Vine. As discussed, impacts from residual diesel in the soil in the eastern area of the site represent a CREC. The CHIRMS, ERNS, and ERNS PFAS listings related to illegal dumping and spills represent a REC to the site. Additionally, roof shingles, concrete, and building debris at the site potentially contain ACM and represent a BER (Terracon 2023). Based on the Phase I ESA, it is recommended that a Soil Management Plan be prepared prior to future development and earthwork to address potential encounters with hydrocarbon and PFAS-impacted soil and unknown subsurface conditions associated with the reported historical tow yard and storage located at 501 North Bay Drive. It is also recommended that suspected ACM be sampled for asbestos and transported off-site per regulatory guidelines (Terracon 2023).

Potentially contaminated soils or groundwater encountered during ground disturbing activities would be managed, stored, and disposed of in accordance with requirements of the SWPPP and NPDES construction general permit thus reducing impacts. Additionally, any hazardous materials encountered, including contaminated soils and groundwater, would be managed and disposed of in accordance with DTSC regulations. However, given that there is potential contamination in the Proposed Project Area that represents a CREC, REC, and BER, impacts during construction would be potentially significant. To minimize impacts mitigation measures **MM-HAZ-1** and **MM-HAZ-2** would be implemented, shown in Table 3.9-3. The contractor would implement these measures prior to construction and would abide by these measures during construction.

Once the proposed floodwalls are constructed and any potential soil contamination is dealt with accordingly prior to and if encountered during construction, it is not anticipated that O&M activities would encounter hazardous properties or contamination. O&M activities would include routine inspections and minor vegetation trimming. Activities would be performed in conformance with

relevant federal, state, and local statutes and regulations related to transport, use, or disposal, of hazardous materials.

Therefore, with the implementation of mitigation measures **MM-HAZ-1** and **MM-HAZ-2**, the Proposed Project would not be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment. Therefore, the Proposed Project Alternative would result in a **less than significant impact with mitigation incorporated**.

Impact HAZ-5: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, there would be no direct use of vehicles or construction equipment that could interfere with emergency response. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a large flood, there would be the potential for the Napa River to rise and floodwaters to encroach on adjacent properties in the Proposed Project Area. However, these conditions would be temporary and would not be expected to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Therefore, **no impact** would occur. No mitigation is required or recommended.

Proposed Project Alternative

The Proposed Project Area is located within evacuation zones NAP-EO32 and NAP-EO26 for various hazardous events (Napa County 2023). There are no designated evacuation routes in the City; however, major roads such as SR 29 and SR 221 are critical corridors for circulation in the event of an emergency (City of Napa 2022). SR 29 and SR 221 do not intersect the Proposed Project Area, and construction of the Proposed Project would not interfere with the use of these routes. In the event of a large flood event, the District would be responsible for closing existing floodgates near the Proposed Project Area.

The proposed floodwall would be constructed in several-hundred-foot segments at a time as it progresses along the alignment. The proposed floodwall alignment runs along the west bank of the Napa River and for the majority does not interfere with local roadways. As stated in Chapter 2, *Project Description*, a mid-block crossing for the proposed trail would be constructed across Lincoln Avenue, and utility work would be required in Lincoln Avenue to relocate utility conflicts with the proposed floodwall. Nighttime work with partial lane closures is proposed for these construction activities to limit traffic and circulation impacts along Lincoln Avenue. Traffic flow on access routes would be coordinated by the contractor as construction work progresses along the alignment. It is anticipated that roads used to access the site are wide enough to accommodate all truck and equipment traffic for the Proposed Project. No road widening would be required.

Three parcels would have emergency access impacts, including Escalante Towing, located at 501 N Bay Drive; Ace & Vine, located at 505 Lincoln Avenue; and Napa River Pet Hospital, located at 510 Lincoln Avenue. These businesses would have temporary access detours implemented based on the phasing of the construction and access would be coordinated with the contractor when performing utility and roadway improvements during construction. Furthermore, a traffic

management plan would be prepared for the Proposed Project and would be implemented by the contractor. Based on these factors, construction of the Proposed Project would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan, and impacts would be less than significant.

O&M activities would occur periodically and would require relatively few vehicles that would utilize the 15-foot-wide O&M corridor, which is not accessible by the public. No other O&M activities would impact emergency response plans or emergency evacuation routes.

The Proposed Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Temporary construction activities would occur as described above and a traffic management plan would be carried out to minimize traffic and circulation impacts. Therefore, the Proposed Project Alternative would result in a **less than significant impact**. No mitigation is required or recommended.

Table 3.9-3. Mitigation Measures for Hazards and Hazardous Materials Impacts of the Proposed Project

Mitigation Measure	Description of Measure
MM-HAZ-1: Soil Management Plan	The contractor shall prepare a Soil Management Plan prior to future development and earthwork to address potential encounters with hydrocarbon and PFAS impacted soil and unknown subsurface conditions associated with the reported historical tow yard and storage located at 501 North Bay Drive.
MM-HAZ-2: Asbestos Containing Materials	Suspected ACM located at 501 North Bay Drive shall be sampled by the contractor for asbestos and transported off-site per regulatory guidelines.

3.10 Hydrology and Water Quality

3.10.1 Existing Conditions

Surface Water

The Proposed Project is located within the San Francisco Bay Hydrologic Region (Region), which occupies parts of nine counties: Napa, Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma. The Region is 4,603 square miles and extends from coastal portions of Marin and San Mateo counties, from Tomales Bay in the north to Pescadero and Butano creeks in the south. Surface waters in the Region consist of non-tidal wetlands, rivers, streams, and lakes, estuarine wetlands known as Baylands, estuarine waters, and coastal waters. In this Region, estuarine waters consist of the Bay system, including intertidal, tidal, and subtidal habitats from the Golden Gate to the Region's boundary near Pittsburg, and the lower portions of streams that are affected by tidal hydrology, such as the Napa and Petaluma rivers in the north and Coyote and San Francisquito creeks in the south. The climate varies dramatically within the Region when going west to east. Coastal areas are typically cool and foggy, while inland valleys are warmer and characteristic of a more Mediterranean climate (SWRCB 2023).

The Proposed Project is located along the Napa River in the Napa River Watershed in the Napa Valley. The Napa River Watershed is approximately 430 square miles and located in the portion of western Napa County within the San Francisco Bay RWQCB Board's jurisdiction. Napa River is a significant freshwater tributary to San Francisco Bay and runs 55 miles from Calistoga to San Pablo Bay, with the lower 17 miles being estuarine. Numerous tributaries enter the main stem from the mountains that rise abruptly on both sides of the valley (San Francisco Bay RWQCB 2011). The Napa River forms the trunk of a simple dendritic ("treelike") river system with its tributaries and varies erratically in width, depth, and capacity throughout its length. Upstream from the City of Napa, the channel varies in width from 50 to 300 feet and in depth from 10 to 20 feet. In many stretches, the streambed of the river is composed of erosion-resistant materials, such as heavy clay formations, which result in well-stabilized channel gradients (Napa County Flood Control and Water Conservation District and U.S. Army Corps of Engineers [USACE]1999). The channel slope decreases as the lower reaches are approached.

Streamflow in the Napa River changes enormously from season to season; flows are higher from December through March and are reduced in the summer and early fall. Yearly variations are significant, and consecutive dry years with reduced flows are common. During the dry season, much of the river recharges groundwater, which migrates underground through alluvial gravel deposits.

Approximately 85 percent of the county's total water demand is supplied through the Napa River Watershed's surface water and groundwater production. The cities of Napa, Calistoga, American Canyon, and Yountville also receive water from the State Water Project. Wastewater is only discharged to the Napa River during the wet season. During the dry months, 100 percent of wastewater flows are reclaimed (San Francisco Bay RWQCB 2011).

Groundwater

The Proposed Project is located in the North Napa Valley Groundwater Basin, which extends from the City of Napa up the valley floor to the northwestern end of the valley near the City of Calistoga, covering an area of approximately 60 square miles. The North Napa Valley Groundwater Basin has

an estimated usable storage volume of approximately 190,000 acre-feet and a safe yield of 22,500 acre-feet annually. Groundwater in this aquifer occurs under both confined and unconfined conditions approximately 50-300 feet below ground surface. The unconfined portions of the aquifer in alluvial material can produce up to 3,000 gallons per minute (gpm), while portions of the aquifer in tuffaceous material can produce approximately 32 gpm. Recharge to the alluvial aquifers occurs primarily by direct infiltration of precipitation, and to a lesser extent by the application of applied water from irrigation and infiltration through the stream and lake beds. Groundwater flow is generally towards the south to San Pablo Bay (County of Napa 2007).

The Proposed Project is located in the Napa Valley Subbasin. A Groundwater Sustainability Plan (GSP) has been developed by the Napa County Groundwater Sustainability Agency (NCGSA) to fulfill the requirements of the Sustainable Groundwater Management Act (SGMA) for the Napa Valley Groundwater Basin (NCGSA 2022). With the most recent prioritization update, completed in 2019, the Napa Valley Subbasin is designated a high priority subbasin. The Subbasin scored highest in categories accounting for the total number of wells, public supply wells, and irrigated acreage. The Subbasin scored lowest for documented adverse impacts to groundwater and adverse impacts on habitat and streamflow (NCGSA 2022).

Water Quality

The Napa River and its tributaries have been listed under CWA Section 303(d) as having impaired water quality due to pathogens and sedimentation/siltation (County of Napa 2007). The San Francisco Bay RWQCB has adopted Total Maximum Daily Load (TMDL) standards for sediment and pathogens in the Napa River (**Table 3.10-1**) (RWQCB 2023).

The San Francisco Bay RWQCB's Water Quality Control Plan (Basin Plan) covers the San Francisco Bay Estuary and waters flowing into it, which includes the Proposed Project Area. The Basin Plan consists of a designation or establishment for waters of beneficial uses to be protected, water quality objectives to support those protected uses, and a program of implementation needed for achieving the objectives (RWQCB 2023).

The existing beneficial uses assigned to Napa River are listed in the WDR Order #99-074 and are as follows: Agricultural Supply, Cold and Warm Freshwater Habitat, Fish Migration and Spawning, Navigation, Preservation of Rare and Endangered Species, Water Contact Recreation, Noncontact Water Recreation, and Wildlife Habitat (RWQCB 1999). Water quality objectives related to sediment beneficial uses are listed in **Table 3.10-2**. Turbidity of the waters of the State; as measured in Nephelometric Turbidity Units (NTUs), shall not increase above background levels by more than the levels identified below. For in-stream construction activities, this shall apply at any point beyond 1,000 feet downstream of the point of the activity (RWQCB 1999).

Table 3.10-1. Section 303(d)-Listed Pollutants in the Proposed Project Area.

Pollutant	Potential Sources	TMDL Status
Pathogens	Agriculture, Onsite Wastewater Systems	TMDL in place (2006)
Sediment		TMDL in place (2007)

Table 3.10-2. Basin Plan Water Quality Objectives and Beneficial Use Categories.

Beneficial Use Category	Pollutant	Water Quality Objective
Cold and Warm Freshwater Habitat Fish Migration Preservation of Rare and Endangered Species Recreation Wildlife Habitat	Turbidity	Turbidity increase from background <10% where natural turbidity is >50 NTU
	Sediment	Should not cause a nuisance or adversely affect beneficial uses.

Tsunami, Seiche, and Flooding

Flood Hazards

The Proposed Project is located in the Regulatory Floodway/Zone AE subject to the 1 percent annual chance flood (FEMA 2010). Flood hazard conditions exist along the entire length of the Napa River through the City of Napa. The flood hazard area extends well into developed areas and follows the banks of several tributary creeks. The City of Napa regulates development within the flood hazard area in accordance with standards and regulations for flood zones.

Records of damaging floods in the Napa River Basin date back to 1862, but only recently has comprehensive data on the extent of flood damage been obtained. Major flood events were recorded in 1955, 1958, 1963, and 1986. Flood control became a top priority for the City of Napa following the 1987 and 1995 floods. The City of Napa now participates in programs and conducts activities to reduce flood damages and insurance rates, including participation in the NFIP, elevation of homes with Federal Emergency Management Agency (FEMA) Hazard Mitigation Grant Funds, design of the Overall Flood Protection Project, creation of an Emergency Plan, construction of drainage system improvement projects, and monitoring rainfall and stream level gages to provide additional flood preparation time. To support a 100-year level of protection, the Overall Flood Protection Project has completed the following components on the Napa River (County of Napa 2007):

- South Wetlands Opportunity Area (wetlands restoration),
- Terracing and East Side Trail (from Kennedy Park to Hospital Creek),
- Railroad Realignment (Kennedy Park to 8th Street),
- Maxwell Bridge Replacement, Terracing (from Hospital Creek to 3rd Street),
- Third Street Bridge,
- First Street Bridge over Napa Creek and Bypass, and
- Soscol Avenue-Oxbow Bypass Bridge.

Tsunami and Seiche Hazards

According to the California Department of Conservation Tsunami Hazard Area Map, the City of Napa is outside of the Tsunami Hazard Area (DOC 2024). A seiche is a standing wave oscillating in a body of water. Seiches typically occur in large semi- or fully-enclosed bodies of water, such as bays or lakes (NOAA 2024). Because the Proposed Project Area is in an inland area away from oceans or other large waterbodies, a seiche is unlikely to occur.

3.10.2 Impact Analysis

Method of Analysis

The potential impacts from construction, operation, and maintenance of the Proposed Project on hydrology and water quality were evaluated qualitatively using known hydrology and water quality data and quantitatively using regulations that would be applicable to the Proposed Project.

CEQA Significance Criteria

For the purposes of this SEIR, the Proposed Project would result in a significant impact on hydrology and water quality if it would:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.
- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, through the addition of impervious surfaces, in a manner which would:
 - Result in substantial erosion or siltation on or off-site.
 - Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off-site.
 - Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
 - Impede or redirect flood flows.
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.
 - The Proposed Project would be consistent with all water quality control plans and sustainable groundwater management plans for the area. Therefore, no impact would occur, and this criterion is not evaluated further in the impact analysis section below.

Summary of Hydrology and Water Quality Impacts

The No Project Alternative and Proposed Project Alternative impacts are summarized in **Table 3.10-3**.

Table 3.10-3. Summary of Hydrology and Water Quality Impacts

Impact Number	Impact Statement	CEQA Significance Determination
<i>No Project Alternative</i>		
HYD-1	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.	Less than significant impact
HYD-2	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.	No impact
HYD-3	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: result in substantial erosion or siltation on or off-site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows?	Less than significant impact
HYD-4	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	Less than significant impact
<i>Proposed Project Alternative</i>		
HYD-1	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.	Less than significant impact
HYD-2	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.	Less than significant impact

Impact Number	Impact Statement	CEQA Significance Determination
HYD-3	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: result in substantial erosion or siltation on or off-site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows?	Less than significant impact
HYD-4	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	Less than significant impact

Impact HYD-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, no direct effects to water quality in the Napa River would be anticipated. The District would continue current O&M activities and would implement its current flood fighting practices in the area in case of a flood event. In the event of a large flood, there would be the potential for the Napa River to rise and floodwaters to overtop the banks and encroach on adjacent properties in the Proposed Project Area. Potential flooding could result in turbulent water with debris and impaired water quality. However, flood conditions would be short term and would not be expected to occur frequently or on a regular basis each year, hence the No Project Alternative is not expected to violate any water quality or waste discharge requirements or degrade surface and groundwater quality. Therefore, the No Project Alternative would result in a **less than significant impact**. No mitigation is required or recommended.

Proposed Project Alternative

The Proposed Project would involve the construction of floodwalls south of Lincoln Avenue, floodwalls north of Lincoln Avenue, scour protection under the Lincoln Avenue Bridge, and two short floodwall closures at the Dry Bypass. Floodwalls at the Dry Bypass would include a new outfall drainage vault structure, which would require temporary dewatering during installation. Dewatering would consist of installing temporary sheet piles around the excavation area and pumping any remanent water in the work area out into a temporary holding area prior to discharge to the low-flow swale to the river.

Rock scour protection would be placed in the river channel bottom around the central footing of the Lincoln Avenue Bridge and on the abutment aprons beneath the Lincoln Avenue Bridge. This area of

construction would be accessed from a temporary ramp on the northwest side of the Lincoln Avenue Bridge and work pad that would be constructed on the west bank of the Napa River using approximately 300 tons of rock placed 50 feet by 40 feet by 2 feet thick. Additional temporary access to improvement areas would be constructed on the east bank of the Napa River. BMPs would be installed at the temporary access points, including straw wattles on the temporary access ramp to prevent sediment from eroding into the Napa River.

Water management in the Napa River would be required during construction for placement of rock scour protection under Lincoln Avenue Bridge to control turbidity. A combination of methods, including cofferdams, pipes, supersacks, and turbidity curtains, would be used to control and isolate sediment in the work areas and reduce turbidity in the river. Water and water quality management during construction in the Napa River would be conducted in accordance with the WDR Order #99-074 from the California State Water Quality Control Board as well as any additional permitting requirements imposed on the Project and to limit any potential water quality impacts.

With water management measures in place in the Napa River, a work pad would be constructed and approximately 2-5 feet of material would be excavated adjacent to the existing piers (approximately 450 cubic yards of material) and replaced with approximately 1,560 tons of Class V riprap with a D50 of 18-inches on top of a 6-inch thick granular filter to provide pier scour protection beneath the Lincoln Avenue Bridge. The excavated material would be temporarily stockpiled before being hauled off site for disposal.

The rock scour protection would be placed in the Napa River during the dry season (June 1–October 31), in one work window. Initially, the riverbank work area would be prepared utilizing temporary BMPs to prevent erosion and sedimentation, including the installation of a silt fence at the clearing limits following the clearing process. Turbidity curtains would be installed in the Napa River to manage water clarity during construction activities. There are two potential work scenarios, both include a cofferdam with supersacks. After the rock scour protection is placed under either scenario, the access platform and access ramp would be removed. Then permanent BMPs would be applied in place of the temporary BMPs.

The Proposed Project would be consistent with water quality standards and existing WDR Order #99-074, which was issued for the Napa River/Napa Creek Flood Protection Project in September 1999. A SWPPP would be implemented to reduce sedimentation and pollution in surface and ground waters during construction activities. As such, the Proposed Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality and impacts. The Proposed Project Alternative would result in a **less than significant impact**. Therefore, no mitigation is required or recommended.

Impact HYD-2: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, there would be no direct effects on groundwater. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a large flood, there would be the potential for the Napa River to rise and floodwaters to encroach on adjacent properties in the Proposed Project Area. However, these

conditions would be temporary and would not be expected to interfere with groundwater recharge and would not impede sustainable groundwater management of the basin. Therefore, **no impact** would occur, and no mitigation is required or recommended.

Proposed Project Alternative

The floodwalls are intended to increase the freeboard capacity of the Napa River channel and to provide a 100-year level of flood protection for the area. The floodwalls are not designed to prevent water movement under the concrete T-walls or sheet pile I-walls. Deeper portions of the wall are designed for structural stability on steep slopes and would still allow for groundwater to flow under the walls. As discussed, floodwalls at the Dry Bypass would include a new outfall drainage vault structure, which would require dewatering during installation. Dewatering would consist of installing temporary sheet piles around the excavation area and pumping any remanent water in the work area out into a temporary holding area prior to discharge to the low flow swale to the river and would not decrease groundwater supplies. The Proposed Project would not interfere with groundwater recharge or impede groundwater movement. Therefore, the Proposed Project Alternative would result in a **less than significant impact**. Therefore, no mitigation is required or recommended.

Impact HYD-3: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: result in substantial erosion or siltation on or off-site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows?

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, the drainage pattern of the area would not be directly altered, new impervious surfaces would not be constructed, and surface runoff would not directly increase. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a large flood, there would be the potential for the Napa River to rise and floodwaters to overtop banks and encroach on adjacent properties in the Proposed Project Area. Potential flooding could result in localized erosion and increased runoff, and could overwhelm the City's existing stormwater system. However, flood conditions would be short term and would not be expected to occur frequently or on a regular basis each year. Hence, the No Project Alternative is not expected to alter the existing drainage pattern of the area causing substantial erosion; substantially increase the rate or amount of surface runoff causing flooding; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows. Therefore, the No Project Alternative would result in a **less than significant impact**. No mitigation is required or recommended.

Proposed Project Alternative

The proposed floodwalls would vary in height and would be less than 2 feet wide; they would add negligible new impervious surface to the Proposed Project Area. After construction work, previously

paved areas would be re-paved, and previously unpaved areas would be returned to their pre-construction condition. Rock scour protection under the Lincoln Avenue bridge would involve in-water work. Some water diversions may be constructed to place the scour protection; however, any diversions would be within the existing river channel and temporary and would not permanently alter the course of the Napa River. Dewatering associated with the new outfall drainage vault structure would consist of installing temporary sheet piles around the excavation area and pumping any remanent water in the work area out into a temporary holding area prior to discharge to the low flow swale to the river and would not permanently alter the course of the Napa River. A SWPPP would be implemented to reduce pollution, erosion, and sedimentation resulting from construction activities. The Proposed Project Alternative would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite.

Negligible new impervious surfaces would be created by the proposed floodwalls, and no new sources of polluted runoff would be created as a result of the Proposed Project. As discussed in Section 3.7, *Geology and Soils*, as part of the Proposed Project, coverage under the NPDES General Permit would be obtained from the RWQCB. The NPDES General Permit would require preparation and implementation of a SWPPP. SWPPP BMPs include measures to reduce erosion from disturbed areas, prevent sediment from migrating off site, provide dust and tracking control, and prescribe good housekeeping practices for material storage and stockpile management. As such, the Proposed Project would not impact existing drainage patterns that would create or contribute runoff that would exceed the capacity of stormwater drainage systems or provide substantial additional sources of polluted runoff.

Objectives of the Proposed Project are to achieve 100-year level of flood protection and to achieve flood damage reduction benefits. Consequently, flood conditions in the Proposed Project Area would improve as a result of the Proposed Project. and the Proposed Project would redirect flood flows from the Napa River away from existing homes and businesses located in the flood zone. This would be considered a beneficial improvement. As such, the Proposed Project would not impact existing drainage patterns that would impede or redirect flood flows. Therefore, the Proposed Project Alternative would result in a **less than significant impact**. No mitigation is required or recommended.

Impact HYD-4: In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, the risk of flooding would still be present in the area. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a large flood, there would be the potential for the Napa River to rise and floodwaters to overtop banks and to encroach on adjacent properties in the Proposed Project Area. Potential flooding could result in the accidental release of hazardous materials or other pollutants into the environment. However, flood conditions would be short term and would not be expected to occur frequently or on a regular basis each year, hence the No Project Alternative is not expected to significantly or directly increase risk of release of pollutants into the environment due to

inundation. Therefore, the No Project Alternative would result in a **less than significant impact**. No mitigation is required or recommended.

Proposed Project Alternative

The Proposed Project is located in the flood zone along the Napa River and currently risks the release of pollutants from vehicles, businesses, or construction equipment if a flood were to inundate the Proposed Project Area. After construction of the Proposed Project, the risk of the release of pollutants due to inundation in the Proposed Project Area would be remedied by the floodwalls. According to the California Department of Conservation Tsunami Hazard Area Map, the City of Napa is outside of the Tsunami Hazard Area (DOC 2024). Additionally, because the Proposed Project Area is in an inland area away from oceans or other large waterbodies, a seiche is unlikely to occur. Therefore, the Proposed Project Alternative would result in a **less than significant impact**. No mitigation is required or recommended.

3.11 Noise and Vibration

3.11.1 Existing Conditions

Overview of Noise and Sound

Noise is commonly defined as unwanted sound that annoys or disturbs people and potentially causes an adverse psychological or physiological effect on human health, whereas sound is mechanical energy (vibration) transmitted by pressure waves over a medium such as air or water. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level is the most common descriptor used to characterize the loudness of an ambient (existing) sound level.

Most humans with typical or average hearing can perceive sounds ranging from approximately 20 microPascals to 20 million microPascals or more. Noise levels are presented on a logarithmic scale to account for the large pressure response range of the human ear and are expressed in units of decibels (dB). A decibel is defined as the ratio between a measured value and a reference value usually corresponding to the lower threshold of human hearing defined as 20 microPascals. Because the human ear does not perceive every frequency with equal loudness, sounds are often adjusted with a weighting filter. The A-weighted filter is applied to compensate for the frequency response of the human auditory system and is known as an A-weighted decibel (dBA).

With respect to how the human ear perceives changes in sound pressure level relative to changes in “loudness,” scientific research demonstrates the following general relationships between sound level and human perception for two sound levels with the same or very similar frequency characteristics, shown in **Table 3.11-1**.

Table 3.11-1. Sound Level Change and Human Perception

Sound Level Increment Change	Human Perception of An Increase or Decrease per Sound Level
1 dBA	<ul style="list-style-type: none"> • Practical limit of accuracy for sound measurement systems • Corresponds to an approximate 10 percent variation in the sound pressure level • Imperceptible change in sound.
3 dBA	<ul style="list-style-type: none"> • A doubling (or halving) of acoustic pressure level • Corresponds to the threshold of change in loudness perceptible in a laboratory environment • The average person is not able to distinguish a 3 dBA difference in environmental sound outdoors
5 dBA	<ul style="list-style-type: none"> • Perceptible change in sound level • Discernible change in an outdoor environment.
10 dBA	<ul style="list-style-type: none"> • A tenfold increase or decrease in acoustic pressure level • Perceived as a doubling or halving in loudness • The average person would judge a 10 dBA change in sound level to be twice or half as loud

Noise levels can be measured, modeled, and presented in various formats. The noise descriptors used in this analysis are described in **Table 3.11-2** below.

Table 3.11-2. Noise Level Descriptors

Type	Description
Equivalent Sound Level (L_{eq})	L_{eq} is the energy averaged, A-weighted sound level over a specified period. L_{eq} is defined as the steady, continuous sound level over a specified period that has the same acoustic energy as the actual varying sound levels over the specified period. It is a mean average sound level.
Maximum Sound Level (L_{max}):	L_{max} is the maximum A-weighted sound level as determined during a specified measurement period. L_{max} can also be described as the maximum instantaneous sound pressure level generated by a piece of equipment or during a construction activity.
Day-Night Average Sound Level (L_{dn}):	L_{dn} is the average hourly A-weighted L_{eq} over a 24-hour period with a 10 dB penalty added to sound levels occurring during the nighttime hours (7 p.m. to 10 a.m.) to account for people's increased sensitivity to noise levels during nighttime hours.
Community Noise Equivalent Level	The community noise equivalent level is another average A-weighted L_{eq} sound level measured over a 24-hour period; however, this noise scale is adjusted to account for some people's increased sensitivity to noise levels during the evening and nighttime hours. A community noise equivalent level noise measurement is obtained after adding 5 dB to sound levels occurring during evening hours (7 p.m. to 10 p.m.) and 10 dB to noise levels occurring during nighttime hours (10 p.m. to 7 a.m.).

Overview of Groundborne Vibration

Operation of heavy construction equipment, particularly pile driving equipment, and other impact devices (e.g., pavement breakers), create seismic waves that radiate along the surface of and downward into the ground. These waves can be felt as ground vibration. Vibration is an oscillatory motion that can be described in terms of displacement, velocity, or acceleration (Federal Transit Administration [FTA] 2018). Velocity or acceleration is typically used to describe vibration. The vibration descriptors used in this analysis are described in **Table 3.11-3** below.

Table 3.11-3. Vibration Level Descriptors

Type	Description
Peak Particle Velocity (PPV)	The maximum instantaneous positive or negative peak of the vibration signal. The potential for damage to buildings as a result of construction-related vibration is evaluated using PPV. PPV is expressed in inches per second (in/sec).
Root Mean Square (RMS)	The square root of the arithmetic average of the squared amplitude of the vibration signal, typically calculated over a one-second period. The potential for annoyance to humans as a result of construction-related vibration is evaluated using RMS. RMS is expressed in in/sec.
Vibration Velocity Level (L_v)	Ten times the common logarithm of the ratio of the square of the amplitude of the RMS vibration velocity to the square of the amplitude of the reference RMS vibration velocity. The reference velocity in the U.S. is 1 micro-inch per second. L_v is expressed in vibration decibel (VdB).

Groundborne vibrations are generally reduced with distance, depending on the local geological conditions. A receiver is a vibration-sensitive building (for example, residence, hospital, or school)

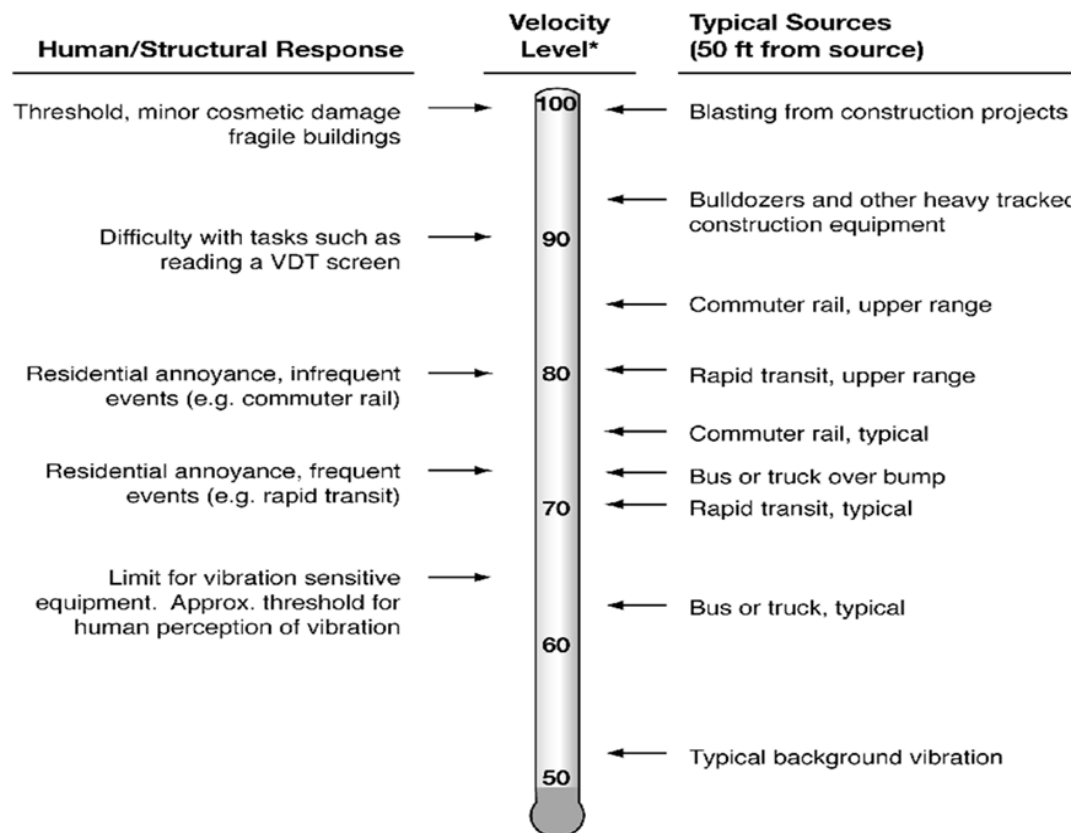
where the vibrations may cause perceptible shaking of the floors, walls, and ceilings and a rumbling sound inside rooms. Not all receivers have the same vibration sensitivity. Consequently, vibration criteria are established for the various types of receivers. Groundborne noise occurs as a perceptible rumble and is caused by the noise radiated from the vibration of room surfaces.

Vibration above certain levels can damage buildings, disrupt sensitive operations, and cause annoyance to humans within buildings. The response of humans, buildings, and equipment to vibration is most accurately described using velocity or acceleration. In this analysis, vibration velocity (VdB) is the primary measure to evaluate the effects of vibration.

Most perceptible indoor vibration is caused by sources within buildings such as operation of mechanical equipment, movement of people, or slamming of doors. Typical outdoor sources of vibration waves that propagate through the ground and create perceptible groundborne vibration in nearby buildings include construction equipment, steel-wheeled trains, and traffic on rough roads.

Figure 3.11-1 illustrates typical groundborne vibration velocity levels for common sources and thresholds for human and structural response to groundborne vibration. As shown, the range of interest is from approximately 50 VdB (below perceptibility) to 100 VdB (threshold of potential damage) in terms of vibration velocity level. The background vibration velocity level in residential areas is usually 50 VdB or lower (FTA 2018). Although the threshold of human perception to vibration is approximately 65 VdB, annoyance in residential areas does not usually occur unless the vibration exceeds 70 VdB.

Figure 3.11-1. Typical Groundborne Vibration Levels



* RMS Vibration Velocity Level in VdB relative to 10^{-6} inches/second

Source: FTA 2018

Existing Noise Environment

Existing noise sources in the City include vehicle traffic, railroad activity, aircraft operations, and typical activities at commercial and industrial facilities (City of Napa 2022). Existing ambient noise levels in the Proposed Project Area are expected to be moderate due to its urban location. Existing sources of noise in the Proposed Project Area include vehicular traffic on surrounding streets, residential uses, and recreationists utilizing the public trail.

Noise Sensitive Receptors

Noise-sensitive land uses are those uses that are most sensitive to high noise levels, including residences, religious facilities, schools, childcare centers, hospitals, long-term health care facilities, convalescent centers, and retirement homes (City of Napa 2022). There are approximately 30 residences in the vicinity of the Proposed Project Area. The nearest sensitive receptors are residences on Shoreline Drive, Pike Drive, and Trout Way, located approximately 25 feet from the limits of the construction area.

3.11.2 Impact Analysis

Method of Analysis

This section describes the methods used to analyze noise characteristics within the Proposed Project Area. The potential impacts from construction, operations, and maintenance of the Proposed Project on noise and vibration were evaluated qualitatively and quantitatively using available data and existing regulations that would be applicable to the Proposed Project.

The Federal Transit Administration (FTA) developed the *Transit Noise and Vibration Impact Assessment Manual* (Noise Manual) in September 2018. The Noise Manual provides technical guidance for conducting noise and vibration analyses for transit projects. While these standards and impact assessment methodologies are not directly applicable to this type of Proposed Project, they are routinely used as guidelines for projects in federal, state and local jurisdictions.

The City of Napa has not adopted standards or thresholds for construction noise in its general plan or municipal code. The City of Napa has adopted noise and land use compatibility guidelines in the Noise Element of the General Plan. Acceptable noise exposures are listed for particular land uses depending upon L_{dn} noise exposure. For residential areas in the City of Napa, the upper limit of "normally acceptable" on-site exterior noise should be a L_{dn} of 60 dB. A noise level above 70 dB is considered to be "normally unacceptable."

The City of Napa has also adopted a noise ordinance in Title 8, Health and Safety, Chapter 8.08 of the Municipal Code to control the noise associated with outdoor sound systems, commercial activity, and construction activities. Construction activities are limited to the weekday hours of 7 a.m. and 7 p.m., and 8 a.m. and 4 p.m. on weekends. Further limitations are placed on start-ups, deliveries, and equipment maintenance or cleaning.

Since the City of Napa does not have noise thresholds for construction noise, anticipated Proposed Project construction equipment noise was assessed quantitatively based on the methodology developed by the FTA. The increase in noise levels during construction of the Proposed Project and the effect on noise-sensitive receptors were estimated using typical noise levels associated with Proposed Project construction equipment, derived from representative data presented in the Noise Manual (FTA 2018). Reference noise levels were used to estimate noise levels at nearby sensitive

receptors based on a standard noise attenuation rate of 6 dB per doubling of distance (line-of-sight method of sound attenuation for point sources of noise). FTA has identified a daytime hourly L_{eq} of 90 dBA as the noise level from onsite construction activities at which an adverse community reaction could occur on residential land uses (FTA 2018). Therefore, for the purposes of this analysis, a significant impact would occur if noise generated during construction of the Proposed Project Alternative exceeds 90 dBA at the nearest sensitive receptors (residences).

The City of Napa does not have specific limits or thresholds for groundborne vibration. Therefore, anticipated Proposed Project groundborne vibration levels during construction were estimated using typical groundborne vibration levels associated with construction equipment obtained from the Noise Manual (FTA 2018).

The Noise Manual provides vibration criteria for structural damage by building/structural category as shown in **Table 3.11-4**.

Table 3.11-4. Groundborne Vibration Structural Damage Criteria

Building Category	PPV (in/sec)	L_v (VdB)
I. Reinforced concrete, steel, or timber (no plaster)	0.5	102
II. Engineered concrete and masonry (no plaster)	0.3	98
III. Non-engineered timber and masonry buildings	0.2	94
IV. Buildings extremely susceptible to vibration damage	0.12	90

Source: FTA 2018

Notes: PPV = peak particle velocity, in/sec = inch per second, L_v = vibration velocity level, VdB = vibration decibel

The Noise Manual also includes criteria for acceptable levels of groundborne vibration by vibration-sensitive land uses as shown in **Table 3.11-5**.

Table 3.11-5. Groundborne Vibration Human Annoyance Criteria

Land Use Category	Maximum L_v (VdB)	Description
Workshop	90	Vibration is distinctly felt. Appropriate for workshops and similar areas not as sensitive to vibration.
Office	84	Vibration can be felt. Appropriate for offices and similar areas not as sensitive to vibration.
Residential – daytime	78	Vibration is barely felt. Adequate for land uses that are sensitive to vibration.
Residential – nighttime	72	Vibration is not felt, but groundborne noise may be audible inside quiet rooms.

Source: FTA 2018

Notes: L_v = vibration velocity level, VdB = vibration decibel

CEQA Significance Criteria

For the purposes of this SEIR, the Proposed Project would result in a significant impact on noise if it would:

- Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- Generation of excessive groundborne vibration or groundborne noise levels.
- For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the Proposed Project Area to excessive noise levels.

Summary of Noise and Vibration Impacts

The No Project Alternative and Proposed Project Alternative impacts are summarized in **Table 3.11-6**.

Table 3.11-6. Summary of Noise and Vibration Impacts

Impact Number	Impact Statement	CEQA Significance Determination
<i>No Project Alternative</i>		
NOISE-1	Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	No impact
NOISE-2	Generation of excessive groundborne vibration or groundborne noise levels.	Less than significant impact
NOISE-3	For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.	No impact
<i>Proposed Project Alternative</i>		
NOISE-1	Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	Significant and unavoidable impact with mitigation incorporated ¹
NOISE-2	Generation of excessive groundborne vibration or groundborne noise levels.	Less than significant impact with mitigation incorporated

Impact Number	Impact Statement	CEQA Significance Determination
NOISE-3	For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.	No impact

¹ This finding was previously disclosed in the 1999 Final SEIS/EIR and remains the same. Effects of the Proposed Project would not be greater in scope or intensity than previously disclosed.

Impact NOISE-1: Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same and no construction would occur; therefore, no direct construction noise would be generated. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event, and O&M activities are not anticipated to generate substantial noise. In the event of a large flood, there would be the potential for the Napa River to rise and floodwaters to encroach on adjacent properties in the Proposed Project Area. Depending on the severity of the flood event, there would be the potential for the flood to cause damage to infrastructure in the Proposed Project Area, leading to the need for reconstruction or repair, which could generate noise. These conditions would be short-term if this event were to occur. However, because the City of Napa does not have established standards the No Project Alternative would not be expected to generate substantial temporary or permanent increases in ambient noise levels in the area in excess of applicable standards of other agencies. Therefore, **no impact** would occur, and no mitigation is required or recommended.

Proposed Project Alternative

Construction of the Proposed Project would introduce new sources of noise in the Proposed Project Area in the form of construction traffic and construction equipment. Construction activities, although temporary, could affect existing noise-sensitive receptors. As presented above in Section 3.11.1, approximately 30 residences are located north of Lincoln Avenue in the vicinity of the Proposed Project Area. The nearest sensitive receptors are residences on Shoreline Drive, Pike Drive, and Trout Way, located approximately 25 feet from the limits of the construction area, north of Lincoln Avenue. Additionally, sensitive receptors at the Napa River Terrace Inn would be temporarily located less than 25 feet from the limits of the construction area, south of Lincoln Avenue.

During construction, the traffic noise on roadways in the Proposed Project Area would increase due to commute of construction crews and the transport of equipment and materials on a short-term basis. Although construction traffic would temporarily increase noise along local roadways, the effect of construction traffic on long-term (i.e., hourly or daily) ambient noise levels is expected to be minimal.

During construction of the proposed floodwalls, construction equipment would be utilized that would

be audible at existing sensitive receptor locations. Construction equipment required for the Proposed Project is presented in Appendix C, *Project Construction Details*. The construction noise level at a given sensitive receiver location would vary depending on the construction activity type, equipment type, and distance between noise source and receiver as construction of the proposed floodwalls progresses. **Table 3.11-7** shows typical noise levels produced by various types of construction equipment required for the Proposed Project.

Table 3.11-7. Construction Equipment Noise Levels

Construction Equipment	Typical Noise Level (dBA) 50 feet from Source
Backhoe	80
Compactor	82
Concrete Truck	85
Crane	83
Dozer	85
Grader	85
Loader	80
Paver	85
Pile Driver (Impact)	101
Pile Driver (Vibratory)	95
Pump	77
Truck	84

Source: FTA 2018

Notes: dBA = A-weighted decibel

As shown in **Table 3.11-7**, construction equipment associated with the Proposed Project Alternative could generate noise levels of up to 101 dBA at 50 feet. However, noise levels from a source decrease at a rate of 6 dB per doubling of distance from the noise source. Thus, at 25 feet, the nearest residences would be exposed to noise levels of up to 107 dBA from construction equipment. The City of Napa has not established quantitative noise standards that are applicable to the Proposed Project. However, construction of the Proposed Project Alternative would generate noise levels in excess of the aforementioned 90 dBA threshold established by FTA, resulting in a potentially significant impact. To minimize noise impacts during construction, mitigation measure **MM-NOISE-1** would be implemented as shown in **Table 3.11-7**. With the implementation of mitigation measure **MM-NOISE-1**, noise impacts from construction of the Proposed Project Alternative would be minimized, but it would not be fully reduced to a less than significant level.

O&M activities would result in a minimal increase in noise levels in the Proposed Project Area from the occasional use of equipment and vehicles. Given the limited and infrequent nature of O&M activities, noise levels from O&M would not significantly increase the ambient noise levels in the Proposed Project Area. Further, noise levels from proposed O&M activities would be similar to

existing O&M activities. Therefore, noise impacts during O&M of the Proposed Project Alternative would not be significant.

The Proposed Project Alternative would generate substantial temporary increases in ambient noise levels in the Proposed Project Area in excess of applicable standards of other agencies, since the City of Napa does not have established standards. Therefore, as determined in the 1999 Final SEIS/EIR, the Proposed Project Alternative would still result in a **significant and unavoidable impact with mitigation incorporated**, although this impact is not greater in scope or intensity than already determined in the 1999 Final SEIS/EIR. This is not a new impact as a result of the Proposed Project, and the generation of substantial, temporary construction noise levels in the Proposed Project Area is not greater in scope or intensity than was already determined in the 1999 Final SEIS/EIR. Thus, the impact still remains, as identified and analyzed in the 1999 Final SEIS/EIR, since effects of the Overall Flood Protection Project were not fully realized because construction of the entirety of the Overall Flood Protection Project has not occurred. Mitigation that was prescribed previously would be implemented as stated above, as well as additional mitigation to minimize adverse effects due to construction noise to the extent feasible.

Impact NOISE-2: Generation of excessive groundborne vibration or groundborne noise levels.

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same and no construction would occur; therefore, no direct groundborne vibration would be generated. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event, and O&M activities are not anticipated to generate substantial groundborne vibration. In the event of a large flood, there would be the potential for the Napa River to rise and floodwaters to encroach on adjacent properties in the Proposed Project Area. Depending on the severity of the flood event, there would be the potential for the flood to cause damage to infrastructure in the Proposed Project Area, leading to the need for reconstruction or repair, which could generate groundborne vibration or noise. However, since these conditions would be short-term and would not be expected to occur frequently or on a regular basis each year, the No Project Alternative is not expected to generate excessive groundborne vibration or groundborne noise levels. Therefore, the No Project Alternative would result in a **less than significant impact**. No mitigation is required or recommended.

Proposed Project Alternative

Construction of the Proposed Project would involve the use of construction equipment such as excavators, dozers, backhoes, trucks, pile drivers, and vibratory compactors, which would generate groundborne vibration. Vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance.

As presented in Section 3.11.1 above, approximately 30 residences are located north of Lincoln Avenue in the vicinity of the Proposed Project Area. The nearest sensitive receptors are residences on Shoreline Drive, Pike Drive, and Trout Way, located approximately 25 feet from the limits of the construction area. Additional, temporary sensitive receptors are located at the River Terrace Inn, south of Lincoln Avenue.

Typical vibration levels associated with Proposed Project construction equipment at a reference distance of 25 feet are shown in **Table 3.11-8**.

Table 3.11-8. Construction Equipment Vibration Levels

Construction Equipment	Lv at 25 feet (VdB)	PPV at 25 feet (in/sec)
Pile Driver (Impact)	104	0.64
Pile Driver (Vibratory)	93	0.17
Vibratory Roller	94	0.21
Hoe Ram	87	0.089
Large Bulldozer	87	0.089
Loaded Trucks	86	0.076
Small Bulldozer	58	0.003

Source: FTA 2018

Notes: Lv = vibration velocity level; VdB = vibration decibel; PPV = peak particle velocity

Due to the proximity of these residences and the type of construction equipment anticipated to be used, the Proposed Project has the potential to result in construction vibration impacts. As mentioned above, construction of the Proposed Project would use a variety of equipment, including a pile driver. As shown in **Table 3.11-7**, the highest PPV at 25 feet from the anticipated construction sources for the pile driver, would be 0.64 in/sec. Therefore, at 25 feet the nearest residences would be exposed to construction vibration levels of up to 0.64 in/sec PPV. The City of Napa does not have established limits or thresholds for groundborne vibration that are applicable to the Proposed Project. However, 0.64 in/sec PPV exceeds the aforementioned 0.2 in/sec PPV threshold for vibration-related structural damage established by FTA. High vibration levels during construction could lead to cosmetic damage in nearby residences, such as cracks in foundations or pools.

Therefore, groundborne vibration impacts during construction of the Proposed Project would be considered potentially significant. To minimize groundborne vibration impacts during construction, mitigation measures **MM-NOISE-1** (described under Impact NOISE-1 above) and **MM-NOISE-2** (described below) would be implemented.

O&M activities would result in a minimal increase in groundborne vibration levels in the Proposed Project Area from the occasional use of equipment and vehicles. Further, groundborne vibration levels from proposed O&M activities would be similar to existing O&M activities. As such, groundborne vibration impacts during O&M of the Proposed Project would not be significant.

With the implementation of mitigation measures **MM-NOISE-1** and **MM-NOISE-2**, the Proposed Project Alternative would not generate excessive groundborne vibration or groundborne noise levels. Therefore, the Proposed Project Alternative would result in a **less than significant impact with mitigation**.

Impact NOISE-3: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same and no construction would occur; therefore, no direct noise would be generated. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event, and O&M activities are not anticipated to generate noise levels. In the event of a large flood, there would be the potential for the Napa River to rise and floodwaters to encroach on adjacent properties in the Proposed Project Area. However, these conditions would be temporary and would not be expected to expose people residing or working in the area to excessive noise levels, especially since there is no public or private airstrip located in the vicinity. Therefore, **no impact** would occur, and no mitigation is required or recommended.

Proposed Project Alternative

There are no private airstrips or public airports within two miles of the Proposed Project Area. The nearest public airport to the Proposed Project Area is the Napa County Airport, which is located approximately 7 miles south of the Proposed Project Area. Therefore, the Proposed Project Alternative would not expose people residing or working in the area of an airport to excessive noise levels. Therefore, there would be **no impact**, and no mitigation is required or recommended.

Table 3.11-9. Mitigation Measures for Noise and Vibration Impacts of the Proposed Project

Mitigation Measure	Description of Measure
MM-NOISE-1: Construction Noise Reduction	<p>The District and USACE would incorporate the following measures into all construction plans and agreements to reduce noise levels during construction:</p> <ul style="list-style-type: none"> Construction activities shall be limited to the hours of 7:00 a.m. to 7:00 p.m., Monday through Friday. There shall be no start-up of machines and equipment prior to 8:00 a.m., Monday through Friday; no delivery of materials and equipment prior to 7:30 a.m. and past 5:00 p.m., Monday through Friday; no cleaning of machines and equipment past 6:00 p.m., Monday through Friday; no servicing of equipment past 6:45 p.m., Monday through Friday; and no construction on weekends or legal holidays outside the hours of 8:00 a.m. to 4:00 p.m., unless a permit is secured from the City Manager pursuant to Section 8.08.025 of the City of Napa Municipal Code. All muffler systems on construction equipment shall be properly maintained. All construction equipment shall not be placed adjacent to developed areas unless said equipment is provided with acoustical shielding. All construction and grading equipment shall be shut down when not actively in use. When pile driving is required, the construction contractor shall use a vibratory pile driver (sonic) instead of an impact pile driver. Pile driving would only occur during normal work hours and would not be done at night. The construction contractor shall deploy moveable temporary construction noise barriers (e.g. blankets, noise shields, and enclosures) as-needed to minimize, to the maximum extent practical, noise from construction equipment and activities at the nearest residences. This could include putting temporary construction noise barriers close to loud construction equipment and moving those barriers as needed to shield noise from loud equipment, and or installing temporary construction noise barriers close to the nearest homes. The construction contractor shall limit any unnecessary noise such as the use of public address systems and clanking of construction materials. The construction contractor shall notify adjacent residents about the type, duration, and frequency of construction activities before the start of construction. The construction contractor shall also provide the residents

Mitigation Measure	Description of Measure
	with the name and phone number of a designated District representative to be contacted for noise-related concerns during construction.
MM-NOISE-2: Vibration Screening Assessment	<p>Prior to the start of construction, the District would implement the following measures to reduce groundborne vibration during construction:</p> <ul style="list-style-type: none"> • Conduct a vibration screening assessment to estimate potential groundborne vibration levels during construction. • If the results of the screening assessment suggest potential for structural damage, the District would perform a pre-construction assessment, which involves controlled hammer drops and measurements of resulting groundborne vibration at different locations in the vicinity, to determine efficiency of vibration propagation through soils in the construction area. The measurement results would be used to refine the estimate of potential groundborne vibration levels at each location of concern. • Install real-time groundborne vibration monitoring at the nearest residences and at two locations in the ground between the residence and the construction area. The monitoring system would send text message notifications when measured levels approach a threshold (a warning), and when they equal or exceed a threshold (stop work). • Conduct voluntary pre- and post-construction inspections, with photos and videos and crack gauges. If post-construction structural damage from vibration is detected, the District and affected landowners would engage in mediation to remedy this situation.

3.12 Recreation

3.12.1 Existing Conditions

The Proposed Project is located in and near the downtown portion of the City of Napa. The Proposed Project Area mainly consists of residential and commercial properties, some open space, and the public trail along the west bank of the Napa River. There are some recreational opportunities in and around the Proposed Project Area. The closest public park to the Proposed Project Area is the Oxbow Commons, located on McKinstry Street. The park was created in 2015 as part of the Overall Flood Protection Project and has a dual purpose to serve as a wet/dry bypass channel. Oxbow Commons is intended to flood with high flows of the Napa River during winter months to prevent high river flows that would normally backup and cause flooding in Downtown Napa. The area is designed to be multi-purpose public space with park and open spaces, an amphitheater, and connections to trails and the Napa River (City of Napa 2022).

The Napa River Trail, a multi-use recreational trail, runs along the west bank of the Napa River and is located within the Proposed Project Area. In addition to the paved Napa River Trail north of Lincoln Avenue, through the dry bypass, and along the west bank of the Napa River from McKinstry Street to the River Terrace Inn, unimproved dirt trails also allow access along the Napa River. These trails are used by walkers and bikers, and as access for fishing and boating in the Napa River.

Lake Park is located off Lakepark Drive approximately 0.15 miles west of the Proposed Project Area. Lake Park is a neighborhood park that has baseball and softball fields, basketball courts, picnic tables, and a playground.

3.12.2 Impact Analysis

Method of Analysis

This section describes the methods used to analyze recreation characteristics within the Proposed Project Area. The potential impacts from construction, operation, and maintenance of the Proposed Project on recreational facilities were evaluated qualitatively using known recreational facilities data and regulations that would be applicable to the Proposed Project. Aerial imagery from Google Earth and collection of GIS data from the Napa County GIS Viewer and any applicable GIS open database were utilized to identify parks and recreational facilities within the Proposed Project Area. Imagery was also utilized to measure distance of parks and recreational facilities to Proposed Project construction limits.

CEQA Significance Criteria

For the purposes of this SEIR, the Proposed Project would result in a significant impact on recreation if it would:

- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.
- Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment.

Summary of Recreation Impacts

The No Project Alternative and Proposed Project Alternative impacts are summarized in **Table 3.12-1**.

Table 3.12-1. Summary of Recreation Impacts

Impact Number	Impact Statement	CEQA Significance Determination
<i>No Project Alternative</i>		
REC-1	Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.	Less than significant impact
REC-2	Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment.	No impact
<i>Proposed Project Alternative</i>		
REC-1	Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.	Less than significant impact
REC-2	Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment.	Less than significant impact

Impact REC-1: Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, there would be no direct change in use of existing recreational facilities. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a large flood, there would be the potential for the Napa River to rise and floodwaters to encroach on adjacent properties and the existing Napa River Trail in the Proposed Project Area. Potential flood fighting activities could result in effects and the possible closure of the Napa River Trail temporarily. Since these conditions would be short term, the No Project Alternative is not expected to change the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. Therefore, the No Project Alternative would result in a **less than significant impact**. No mitigation is required or recommended.

Proposed Project Alternative

The Proposed Project would not create new recreational facilities or attract more recreational users to the area. The Oxbow Commons, which is the closest public park within the vicinity of the

Proposed Project Area, would be avoided during construction, and access to the park would remain open. The Proposed Project would also not generate an increase in population, either directly or indirectly, that would affect Oxbow Commons.

A new 10- to 12-foot-wide multi-use recreational trail would be constructed on the water side of the floodwall starting at the high ground at River Terrace Inn and running north to Wall Street, where the trail would then cross the wall through a 15-foot-wide stop log pedestrian gate. Continuing north, the floodwall would jog to the land side of the Ace & Vine and Napa River Pet Hospital businesses along Lincoln Avenue. The 10- to 12-foot-wide recreational trail would tie into the sidewalk along Lincoln Avenue and then cross Lincoln Avenue with a new, with a mid-block crossing crosswalk with activatable yellow lights. The trail would then run east along the north side of Lincoln Avenue until it ties into a reconstructed waterside 10-foot-wide recreation trail on the waterside of the floodwall by crossing the wall through a new 15-foot-wide stop log pedestrian and emergency access gate.

Within the northern section of the Proposed Project Area the existing Napa River Trail along the west bank of the Napa River would be closed to the public and a trail detour would be coordinated with the City of Napa along Soscol Avenue for recreational trail users during construction. A 15- to 25-foot-wide swing gate to provide pedestrian and O&M access would be constructed in the floodwall on the north and south sides of the RiverPointe property to maintain access to the reconstructed Napa River Trail.

After construction, the realigned trail would serve as a maintenance corridor and would be repaved in areas that were previously paved. Any damage to the existing Napa River Trail because of construction would be repaired as necessary. Disturbed areas would be seeded and restored after construction. A combination of native and adaptive drought tolerant plant varieties would be used along the trail network. Disturbed areas would be seeded to minimize erosion from construction impacts, stabilize soil, and maximize usable recreational space along the trail. The concrete floodwall could be covered with aesthetic treatments to improve the appearance and gate closure structures would be installed. Maintenance activities for the Proposed Project include routine inspections and minor vegetation trimming.

The Proposed Project would not expose nearby existing neighborhood and regional parks and other recreational facilities to more users that would cause substantial or accelerated physical deterioration. Construction, operations, and maintenance of the Proposed Project Alternative would not have an effect on the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. Therefore, the Proposed Project Alternative would result in a **less than significant impact**. No mitigation is required or recommended.

Impact REC-2: Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

No Project Alternative

The No Project Alternative would not include recreational facilities, and the proposed connection to the Napa River Trail would not occur. Additionally, there would be no increase in population or damage to existing recreational facilities that would necessitate the expansion of recreational facilities. No construction would occur; therefore, no recreational facilities would be constructed or expanded. The District would continue current O&M activities and would implement its current flood

fighting practices in the area in the case of a flood event. In the event of a flood, there would be the potential for the Napa River to rise and floodwaters to encroach on adjacent properties and the existing recreational trail in the Proposed Project Area. However, these conditions would be temporary and would not be expected to include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment. Therefore, **no impact** would occur, and no mitigation is required or recommended.

Proposed Project Alternative

As discussed above, the Napa River Trail and unimproved recreational trail in the Proposed Project Area would need to be closed and a detour would be provided during construction north of Lincoln Avenue. The floodwalls north of Lincoln Avenue would be constructed in one construction season, so the trail closure and detour would only be in place temporarily. The trail would be re-constructed in its same general location after construction of the floodwalls north of Lincoln Avenue. The trail would also be connected through the mid-block crossing on Lincoln Avenue and south along the proposed floodwall alignment to the River Terrace Inn. Any adverse physical effects on the environment and the biological habitat in the Proposed Project Area because of the trail re-construction would be offset through mitigation measures presented in Section 3.13, *Terrestrial Biological Resources*. Therefore, the Proposed Project Alternative would result in a **less than significant impact**. No mitigation is required or recommended.

3.13 Terrestrial Biological Resources

3.13.1 Existing Conditions

This section identifies special-status plant and terrestrial wildlife species that might be affected by the Proposed Project and proposes mitigation measures to avoid or reduce impacts on these species. For details on aquatic biological resources, such as fish, please see Section 3.6, *Fisheries and Aquatic Biological Resources*. Appendix G, *Biological Resources*, contains the Reinitiation of Consultation with USFWS and the Informal Consultation/No Formal Consultation required with NMFS for the Proposed Project.

The Proposed Project Area used to assess potential biological impacts consists of the Proposed Project alignment, all associated construction work areas including staging areas, and access roads, and a 100-foot buffer around each of these features. The 100-ft buffer was used to identify and protect biological resources that could be affected during construction.

The Proposed Project is located in the city of Napa along the western bank of the Napa River within the California Floristic Province. Napa County has a Mediterranean climate, and the vegetation is a mosaic of oak woodland, annual grasslands, upland scrubs, wetland communities, and riparian forests. Annual grasslands, riparian forest, saline emergent wetlands, freshwater emergent wetlands, ruderal and landscaped plantings characterize the vegetated portions of the Proposed Project Area. For many years, the principal land uses of the region were cattle grazing and dry-land farming. Increased development and introduction of vineyards have fragmented portions of the landscape, restricting once widespread plant and wildlife habitats. Current principal land uses within the Proposed Project Area include residential and commercial development.

As previously stated, the main drainageway in the region is the Napa River. This riverine system is perennial with headwaters originating at Mt. St. Helena. Surface waters then flow 55 miles along the valley floor to San Pablo Bay (Koehler 2002). Downstream near the confluence with the Bay, the Napa River turns into a large marshland, a complex of approximately 47,000 acres of existing and historic salt marshes known as the Napa Marsh (City of Napa 2022). In the Proposed Project Area, the entire river reach is tidally influenced by Bay waters approximately 7 river miles downstream.

To assess terrestrial biological resources with the potential to occur within the Proposed Project Area, nine USGS quads were queried in the CDFW's CNDDDB (CDFW 2023a). These USGS quads included Mt. George, Cordelia, Capell Valley, Sonoma, Yountville, Rutherford, Napa, Cuttings Wharf, and Sears Point. Information on federally listed species was obtained from a query of the USFWS Information for Planning and Consulting (IPaC) database (USFWS 2023a) (Appendix G - Biological Resources). In addition, the following references were reviewed:

- USFWS Critical Habitat Portal (USFWS 2023b);
- USFWS National Wetland Inventory (USFWS 2023c);
- California Native Plant Society (CNPS) species list query for the Proposed Project Area (CNPS 2023)
- (Appendix G - *Biological Resources*);
- California Department of Fish and Wildlife (CDFW), California Natural Diversity Database (CNDDDB) species list query for a 5-mile buffer around the Proposed Project Area (CDFW 2023a) (Appendix G - Biological Resources);
- CDFW Spotted Owl Database (CDFW 2023b);

- CDFW Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2023c);
- CDFW Special Animals List (CDFW 2023d);
- Soil map unit descriptions for the Proposed Project Area (U.S. Department of Agriculture 2023);
- eBird records for the Proposed Project Area (eBird 2023); and
- previous reports and memos addressing biological resources in the Proposed Project Area.

A delineation of aquatic resources was conducted in July 2023 by HDR. For the purposes of the aquatic resources delineation, the “field delineation survey area” was equal to the Proposed Project Area and included the footprint of floodwall components where the Proposed Project would be constructed within and adjacent to the Napa River, including access routes and staging areas plus a 100-foot buffer. A biological reconnaissance survey was also conducted in the Proposed Project Area in July 2023 and April 2024 by HDR to create a baseline biological resources map with vegetation communities, observed special-status species, and special-status species habitat.

Field observations of vegetation communities and special-status species were digitized into a GIS and georeferenced to produce land cover maps shown in Appendix G, *Biological Resources*. Descriptions of all vegetation communities and land cover types found to occur throughout the Proposed Project Area (Sawyer et al. 2009; CDFW 2023e) can also be found in Appendix G - *Biological Resources*.

Some vegetation communities are deemed sensitive communities/habitats and are identified in local or regional plans, policies, or regulations, or by CDFW or USFWS. CDFW's Rarity Ranking follows NatureServe's Heritage Methodology (Faber-Langendoen et al. 2012; CDFW 2023f) in which communities are given a G (global) and S (State) rank ranging from 1 (very rare and threatened) to 5 (demonstrably secure). Natural Communities with ranks of S1-S3 are considered sensitive. Several sensitive communities were identified in the Proposed Project Area including oak woodland, valley foothill riparian, fresh emergent wetland, and saline emergent wetland (**Table 3.13-1**).

Table 3.13-1. Vegetation and Land Cover Types Present in the Proposed Project Area

Land Cover	Total Acreage
Annual Grassland	8.96
Disturbed	1.78
Fresh Emergent Wetland	0.05
Landscaped	2.53
Oak Woodland	0.23
Riverine	9.96
Ruderal	124
Saline Emergent Wetland	0.21
Urban	38.86
Valley Foothill Riparian	13.94
Shaded Riparian Area	0.22
Total	77.98

The term *waters of the United States* is an encompassing term used by the USACE for areas that are subject to federal regulation under CWA Sections 404 and 10, which refer to wetlands and non-wetland features. In addition, the RWQCB regulates, under California’s Porter-Cologne Act, *waters of the state*. Waters of concern in the Proposed Project Area include the Napa River, Napa Creek, and the dry bypass flow channel. Appendix G, *Biological Resources*, provides more detailed information on wetlands and other waters.

Special-Status Species

Special-status plant and wildlife species refers to those species that meet one or more of the criteria specified in Appendix G, *Biological Resources*. Generally, these include species listed or proposed for listing under the federal and/or California Endangered Species Acts or other special lists maintained by federal and state agencies. Special-status species were identified through a search of CNDDDB database, USFWS Critical Habitat Portal, the CNPS database, and other sources as being historically reported to occur within the general project vicinity and Proposed Project area. A list of species with potential to occur, within a 5-mile radius of the project site and Proposed Project Area is provided in Appendix G, *Biological Resources Attachments*.

There are 14 special-status plant and nine special-status wildlife species that may potentially occur within or near the Proposed Project Area. The USFWS and NMFS maintain areas of critical habitat for federally regulated species to safeguard the continued existence of such species. Designated critical habitat in the Proposed Project area exists within the Napa River for the Central California Coast steelhead (70 FR 52487; September 2005). For more information, see Section 3.6, *Fisheries and Aquatic Biological Resources*. Five special-status species with high potential or are known to occur in or near the Proposed Project Area (shown below in **Table 3.13-2**) were identified and include: Delta tule pea (*Lathyrus jepsonii* var. *jepsonii*), monarch butterfly (*Danaus plexippus*), Northwestern pond turtle (*Actinemys marmorata*), Saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*), and pallid bat (*Antrozous pallidus*). These are the only special-status species described below. All other special-status species are discussed in Appendix G.

Table 3.13-2. Special-Status Wildlife Species Potentially Occurring within or near the Proposed Project Area

Species ¹	Common Name	Federal Status ²	State/CRPR Status ³	Critical Habitat Designated?
Invertebrates				
<i>Danaus plexippus</i>	Monarch butterfly	PE	None	No
Amphibians				
<i>Rana boylei</i> (North Coast DPS)	Foothill yellow-legged frog	None	SSC	No
<i>Rana draytonii</i>	California red-legged frog	FT	SSC	Yes, but not present in the Proposed Project Area
Reptiles				
<i>Actinemys marmorata</i>	Northwestern pond turtle	FPT	SSC	No

Species ¹	Common Name	Federal Status ²	State/CRPR Status ³	Critical Habitat Designated?
Birds				
<i>Buteo swainsoni</i>	Swainson's hawk	None	ST	No
<i>Elanus leucurus</i>	White-tailed kite	None	FP	No
<i>Falco peregrinus anatum</i>	American peregrine falcon	None – delisted	FP	No
<i>Geothlypis trichas sinuosa</i>	Saltmarsh common yellowthroat	None	SSC	No
Mammals				
<i>Antrozous pallidus</i>	Pallid bat	None	SSC	No

1 DPS – Distinct Population Segment

2 Federally endangered (FE); Federally Threatened (FT), Federal candidate for listing (FC)

3 State Species of Special Concern (SSC); State Candidate Endangered (CE); State Fully Protected (FP)

Source: Species and Listing Status (CDFW 2023a), Critical Habitat (USFWS 2023b)

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the migration of animals. The Napa River is the primary wildlife corridor in the Proposed Project Area. For more information on existing conditions, please see Appendix G, *Biological Resources*.

3.13.2 Impact Analysis

Method of Analysis

The section describes the methods used to analyze terrestrial biological resources within the Proposed Project Area. The potential impacts from construction, operations, and maintenance of the Proposed Project on terrestrial biological resources were evaluated qualitatively and quantitatively using field survey data, desktop analysis, and available data and literature reviewed materials as well as reviewing the regulations that apply to the Proposed Project.

Pursuant to Section 7 of the Endangered Species Act of 1973, as amended, the USACE reinitiated consultation with the USFWS for the Proposed Project's effects to special status species. The USFWS issued a response to the reinitiation request, on November 26, 2024, that determined the Proposed Project will not jeopardize the continued existence of the federally listed delta smelt and longfin smelt or adversely modify designated critical habitat for these two species. All terms and conditions, conservation measures, and reasonable and prudent alternatives and measures resulting from this reinitiated consultation as well as the previous 1999 biological opinion and 2000 supplemental biological opinion for the Overall Flood Protection Project shall be implemented in order to minimize take of endangered species and avoid jeopardizing the species.

At the time of the Endangered Species Act Section 7 Supplemental Biological Assessment submission, USFWS was not issuing consultations on northwestern pond turtle and Monarch butterfly. Nonetheless, the USFWS concurred with the findings of the Supplemental Biological Assessment that the Proposed Project is not likely to adversely affect the northwestern pond turtle and Monarch butterfly. There is only one milkweed host plant within the Proposed Project Area, so impacts to Monarch butterfly would be negligible.

CEQA Significance Criteria

For the purposes of this SEIR, the Proposed Project would result in a significant impact on terrestrial biological resources if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS;
- Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites; and
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Summary of Terrestrial Biological Resources Impacts

The No Project Alternative and Proposed Project Alternative impacts are summarized in **Table 3.13-3**.

Table 3.13-3. Summary of Terrestrial Biological Resources Impacts

Impact Number	Impact Statement	CEQA Significance Determination
<i>No Project Alternative</i>		
BIO-T-1	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS	Less than significant impact
BIO-T-2	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW, NMFS, or USFWS	Less than significant impact
BIO-T-3	Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means	Less than significant impact
BIO-T-4	Interfere substantially with the movement of any native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites	Less than significant impact

Impact Number	Impact Statement	CEQA Significance Determination
BIO-T-5	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance	Less than significant impact
<i>Proposed Project Alternative</i>		
BIO-T-1	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by or by the CDFW, NMFS, or USFWS	Less than significant impact with mitigation incorporated
BIO-T-2	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW, NMFS, or USFWS	Less than significant impact with mitigation incorporated
BIO-T-3	Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means	Less than significant impact
BIO-T-4	Interfere substantially with the movement of any native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites	Less than significant impact
BIO-T-5	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance	Less than significant impact

Impact BIO-T-1: Would the Proposed Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same and no construction would occur; therefore, no special-status species would be directly impacted. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a large flood, there would be the potential for the Napa River to rise and floodwaters to encroach on and adversely affect habitat in the Proposed Project Area. However, these conditions would be temporary and would not be expected to have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW, NMFS, or USFWS. Therefore, the No Project Alternative would result in a **less than significant impact**. No mitigation is required or recommended.

Proposed Project Alternative

Construction and operation of the Proposed Project could result in permanent habitat loss of suitable habitat for one special-status plant species and four special-status wildlife species with the potential to occur in the Proposed Project Area: Delta tule pea, monarch butterfly, northwestern pond turtle,

saltmarsh common yellowthroat, and pallid bat. Suitable habitat types include riverine, riparian, grasslands, disturbed, freshwater emergent wetlands, and saline emergent wetlands. **Table 3.13-4** shows the breakdown of habitat types that would be affected by the Proposed Project. Figure 3 shows the impacts of the Proposed Project to each habitat type in Appendix G, *Biological Resources*.

Table 3.13-4. Land Cover Permanent and Temporary Impacts Anticipated from the Proposed Project

Land Cover	Temporary Impacts (acres)	Permanent Impacts (acres)
Annual Grassland	6.476	0.188
Disturbed	0.955	0.798
Fresh Emergent Wetland	0.049	0
Landscaped	1.166	0.404
Oak Woodland	0.105	0.046
Riverine	0.891	0.042
Ruderal	0.767	0.124
Saline Emergent Wetland	0.201	0.005
Urban	6.702	0.823
Valley Foothill Riparian	1.998	0.184
Shaded Riverine Aquatic	0.159	0
Total	19.47	2.613

The effects analyses of construction and O&M activities for each species are described below in **Table 3.13-5** with mitigation measures listed at the end of this section.

Table 3.13-5. Species Impact Analysis

Species	Discussion
Monarch Butterfly	<p>Monarch butterflies utilize milkweed plants for feeding and egg deposition. Three host plants for monarch butterflies were observed within the Proposed Project Area, within grassland and landscaped habitats but no individual butterflies were documented. Monarch butterfly is currently a candidate for listing under FESA, so it is not yet formally protected. Under the Proposed Project, one milkweed plant is slated to be removed as it is within the proposed footprint of the floodwall north of the Lincoln Avenue bridge. The removal of this plant would result in the loss of suitable habitat for monarch butterflies. Fugitive dust from construction could create temporary, indirect negative adverse effects for butterflies within the Proposed Project Area. Construction equipment has the potential to directly injure individuals that may be nectaring on plants within or flying through the Proposed Project Area. The loss of one milkweed plant in an area where Monarchs are not overwintering would be a less than significant impact to the species. Mitigation for the loss of one plant would not be required. As there is potential for monarch butterflies to deposit eggs on the milkweed plants, MM BIO-T-1a must be instituted to survey for eggs or individuals prior to the start of construction to avoid and minimize effects to this species, shown in Table 3.13-7). During the O&M phase of the Proposed Project, periodic vegetation clearing around the floodwall would be necessary to ensure any repairs could be made. Milkweed grows well in disturbed soils. If any milkweed plants colonize the maintenance corridor, there would be potential for permanent, direct impacts to monarch butterflies if these plants were removed while eggs are maturing, or larvae are pupating. MM BIO-T-1a listed for the construction phase of the Proposed Project would sufficiently curb any impacts results from ongoing O&M activities. In addition, BMP-1 through BMP-5 would also be implemented to further reduce effects to a less than significant level by reducing the introduction of invasive species and by restricting activities to a small footprint to avoid impacts to suitable habitats. Therefore, the Proposed Project Alternative would result in a less than significant impact with mitigation.</p>
Northwestern Pond Turtle	<p>Northwestern pond turtles are the only native freshwater turtle in California. Napa River is tidally influenced within the Proposed Project Area (USFWS 2023c) and as such is not well suited for Northwestern pond turtle, but the species may migrate through the area. The use of construction equipment to install rock scour protection along the bridge piers within the river may directly injure or kill turtles within the Proposed Project Area. The placement of rock scour protection beneath the bridge also can directly harm or injure Northwestern pond turtles. Sediment release during construction would result in a temporary increase in turbidity within the river, which would indirectly affect any Northwestern pond turtle within the Proposed Project Area. Northwestern pond turtle is very sensitive to human disturbance, so proposed activities could result in interrupted basking through diving or evasion. The banks of the Napa River are very steep within the Proposed Project Area, so it is unlikely that this species would utilize the upland areas where floodwall construction is proposed. There is no new or continued in-water or bridge work proposed for the O&M phase of the proposed alternative. All O&M work would occur along the flood wall in the upland area. The banks of the Napa River within the Proposed Project Area are too steep for Northwestern pond turtle to access upland areas. It is unlikely that Northwestern pond turtle would be near the floodwall during the O&M phase of the project and as such they would not be affected during this phase. By implementing of MM BIO-T-1b, impacts to Northwestern pond turtle would remain less than significant as preconstruction surveys would ensure that no Northwestern pond turtle are present in the work area and exclusion fencing excludes additional individuals from accessing the work area. O&M activities are not expected to occur within or adjacent to potential habitat for Northwestern pond turtle and therefore would have no direct or indirect effects on the species. In addition, BMP-1 through BMP-5 would also be implemented to further reduce effects to a less than significant level by reducing the introduction of invasive species and by restricting activities to a small footprint to avoid impacts to suitable habitats. Therefore, the Proposed Project Alternative would result in a less than significant impact with mitigation.</p>

Species	Discussion
Saltmarsh common yellowthroat	<p>Saltmarsh common yellowthroat nests within fresh and saltwater marshes. Suitable habitat occurs within saline emergent marsh along the Napa River within the Proposed Project Area. Approximately 0.005 acres of saline emergent marsh suitable for saltmarsh common yellowthroat would be permanently impacted, and 0.201 acres would be temporarily impacted by the construction of the Proposed Project. If construction occurs during the nesting season, removal of nesting substrate in the marshes could destroy nests and cause failure. Removal of nesting substrate could cause adverse effects to the species. Construction noise in the vicinity of nests could also lead to nest abandonment. Construction and O&M activities could result in the destruction of nests through the removal of saline emergent wetlands. Pre-construction nesting bird surveys would be required as avoidance and minimization. By adhering to MM BIO-T-1c, loss of nests could be avoided. In addition, BMP-1 through BMP-5 would also be implemented to further reduce effects to a less than significant level by reducing the introduction of invasive species and by restricting activities to a small footprint to avoid impacts to suitable habitats. Therefore, the Proposed Project Alternative would result in a less than significant impact with mitigation.</p>
Delta Tule Pea	<p>The delta tule pea was mapped within the Proposed Project Area along the banks of the dry bypass channel near the Soscol Avenue bridge in the southern portion. The area where the pea is located in the Proposed Project Area would not be impacted during construction. Approximately 0.005 acres of suitable habitat for the Delta tule pea in saline emergent marsh would be permanently impacted, and 0.201 acres would be temporarily impacted by the construction of the Proposed Project. If construction temporary work areas require access to the area where this population was found, direct or indirect effects could destroy plants and introduce invasive species. Removal of suitable substrate could cause adverse effects to the species as well. Dust could also pose a significant indirect effect. O&M activities are expected to occur adjacent to potential habitat for Delta tule pea and therefore may have direct or indirect effects on the species during periodic inspection visits or vegetation trimming. Direct and indirect effects similar to those described for construction, including habitat and species removal, could be significant. Implementation of MM BIO-T-1d, pre-construction plant surveys, shall be implemented to avoid and minimize effects to a less than significant level. In addition, BMP-1 through BMP-5 would also be implemented to further reduce effects to a less than significant level by reducing the introduction of invasive species and by restricting activities to a small footprint to avoid impacts to suitable habitats. Therefore, the Proposed Project Alternative would result in a less than significant impact with mitigation.</p>

Species	Discussion
Pallid Bat	<p>Pallid bat may forage throughout the Napa River corridor and may roost in Valley foothill riparian and existing crevices under existing bridges that cross the river within the Proposed Project Area. Suitable foraging habitat occurs within riverine, riparian, and saline emergent marsh along the Napa River within the Proposed Project Area. Approximately 1.998 acres of temporary impacts and 0.184 acres of permanent impacts are anticipated within Valley foothill riparian, approximately 0.891 acres of temporary and 0.042 acres of permanent impacts are slated for riverine. In addition, 0.201 acres of saline emergent wetland would be temporarily impacted, and 0.005 acres would be permanently impacted by the construction of the Proposed Project. Removal of roosting substrate (e.g. trees) in the riparian areas could destroy roosting habitat and could cause adverse effects to the species. Construction noise in the vicinity of potential existing colonies could also lead to roost abandonment. O&M activities are expected to occur within or adjacent to potential habitat for pallid bat and therefore may have direct or indirect effects on the species during periodic inspection visits or vegetation trimming. Direct and indirect effects similar to those described for construction, including roost habitat removal and roost abandonment, could be significant. Implementation of MM BIO-T-1e through MM BIO-T-1h (described in Table 3.13-7), including pre-construction field assessment, mitigation plan development if bats are detected during field assessments, implementation of buffer areas, and light minimization measures, shall be implemented to avoid and minimize effects to a less than significant level. In addition, BMP-1 through BMP-5 would also be implemented to further reduce effects to a less than significant level by reducing the introduction of invasive species and by restricting activities to a small footprint to avoid impacts to suitable habitats. Therefore, the Proposed Project Alternative would result in a less than significant impact with mitigation.</p>

Therefore, the Proposed Project Alternative would result in a **less than significant impact with mitigation incorporated**.

Impact BIO-T-2: Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same and no construction would occur; therefore, no riparian or other sensitive natural community would be directly impacted. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a large flood, there would be the potential for the Napa River to rise and floodwaters to encroach on riparian habitat or other sensitive natural community in the Proposed Project Area. However, these conditions would be temporary and would not be expected to have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW, NMFS, or USFWS. Therefore, the No Project Alternative would result in a **less than significant impact**. No mitigation is required or recommended.

Proposed Project Alternative

Impacts to the aquatic environment are discussed in Section 3.6, *Fisheries and Aquatic Biological Resources*.

The Proposed Project includes building a floodwall along the western bank of the Napa River and

installing rock scour protection along the Lincoln Avenue bridge abutments and supports. **Table 3.13-3** above shows the amount of land in riparian habitat that the proposed construction would permanently and temporarily impact. Approximately 1.998 acres of temporary impacts and 0.184 acres of permanent impacts are anticipated within Valley foothill riparian. Indirect impacts due to possible erosion or sedimentation could occur within the riparian habitat as a result of construction.

Upon completion of the Proposed Project, the current riparian areas where the floodwall is proposed would be transformed into developed areas. The addition of the maintenance corridor would allow for a swath of developed area around the floodwall for accessibility during repairs. This corridor would need to be periodically mowed to maintain access. It is possible that riparian plants could occupy the corridor during the O&M phase that would need to be removed. Additionally, the maintenance corridor is adjacent to riparian habitats that could be impacted during O&M activities. The same avoidance and minimization measures listed for the construction phase would be relevant for the O&M. **BMP-1** would be implemented to ensure that the area of potential impacts on the riparian environment is as small as possible during construction. **MM BIO-T-2** would require fencing of sensitive habitats to discourage accidental disturbance during construction and O&M activities. Additionally, **BMP-4**, which would include the implementation of a SWPPP, would protect water quality during construction activities, and BMPs would be installed prior to maintenance activities that may cause erosion or sedimentation.

A large mitigation component of the project has already been implemented to compensate for loss of riparian habitat that would result from the Proposed Project. The habitat restoration component has already exceeded the 40-year goal set for riparian habitat restoration. Additional habitat mitigation is not anticipated. Therefore, the Proposed Project Alternative would result in a **less than significant impact with mitigation incorporated**.

Impact BIO-T-3: Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same and no construction would occur; therefore, no state or federally protected wetlands would be directly impacted. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a large flood, there would be the potential for the Napa River to rise and floodwaters to encroach on state or federally protected wetlands in the Proposed Project Area. However, these conditions would be temporary and would not be expected to have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. Therefore, the No Project Alternative would result in a **less than significant impact**. No mitigation is required or recommended.

Proposed Project

The Proposed Project would permanently directly affect 0.005 acres of saline emergent wetland and would temporarily directly affect 0.049 acres of fresh emergent wetland and 0.201 acres of saline emergent wetland. Saline emergent wetland occurs near the floodwall closures at the dry bypass. This area would be filled to complete the remaining floodwall section. The temporarily impacted

areas include the staging and access areas near the dry bypass for the saline emergent wetland. The fresh emergent wetland impacts would occur in a separate staging area in the Lake Park subdivision, north of Lincoln Avenue. The fresh emergent wetland is of low quality and is frequently mowed by the City of Napa.

Construction of the Proposed Project has the potential to indirectly affect adjacent wetlands through erosion and sedimentation. **BMP-1 through BMP-5**, which would include the implementation of a SWPPP, would protect wetland habitats during construction activities, and BMPs would be installed prior to maintenance activities that may cause erosion or sedimentation adjacent to wetland habitats. Additionally, the listed construction BMPs in the project description and those presented in Section 3.6, *Fisheries and Aquatic Biological Resources*, would control the introduction of invasive species which could degrade habitat quality.

O&M activities would only take place within the designated maintenance corridor that would be established during construction. This area would be converted to a developed/disturbed area upon completion of construction. There would not be any wetland areas within the O&M corridor and as such O&M activities are not anticipated to directly impact wetlands. BMPs in **BMP-1 through BMP-5** would be implemented during O&M activities to ensure erosion, sedimentation, or the introduction of invasive species would not affect adjacent wetland communities. A very small area of wetland would be permanently affected by the Proposed Project. This area is smaller than the 0.1-acre threshold that triggers compensatory mitigation. All temporarily affected areas would be revegetated with native wetland vegetation upon completion of construction activities.

Additionally, the previously required state and federal wetland mitigation for the Overall Flood Protection Project has already been implemented by the District and already exceeded the 10-year goal set for wetland habitat restoration (Rincon 2022). The mitigation implemented to date is detailed in Appendix G – *Biological Resources* and encompasses the mitigation needs for the Proposed Project Alternative. Additional habitat mitigation is not anticipated. Therefore, the Proposed Project Alternative would result in a **less than significant impact**. No mitigation is required or recommended.

Impact BIO-T-4: Would the project 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 wildlife nursery sites?

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same and no construction would occur; therefore, no native or migratory wildlife species would be directly impacted. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a flood, there would be the potential for the Napa River to rise and floodwaters to affect aquatic migration pathways in the Proposed Project Area. However, these conditions would be temporary and would not be expected to interfere with the movement of any native resident or migratory wildlife species or with established native resident or migratory wildlife corridors or impede the use of wildlife nursery sites. Therefore, the No Project Alternative would result in a **less than significant impact**. No mitigation is required or recommended.

Proposed Project Alternative

The impacts of the implementation of the Proposed Project on fish species and aquatic migration are discussed in Section 3.6, *Fisheries and Aquatic Biological Resources*. The Napa River is the main migratory route that runs through the Proposed Project Area. The special-status birds discussed above that have the potential to nest within the Proposed Project Area do migrate throughout the region but are not solely reliant on the Napa River corridor.

Northwestern pond turtle has the potential to be affected by the Proposed Project. The Proposed Project Area is at the downstream edge of suitable habitat for the species, but it does have the potential to move throughout the proposed construction area during times of high flows and low salinities. During in-water work, water would pass beneath the temporary work platform allowing pond turtles access through the area. Exclusion fencing would be placed to ensure that Northwestern pond turtle do not enter the work area. This may temporarily impede Northwestern pond turtle's ability to travel through the work area during active construction, but flows would be present and similar to pre-project conditions that if a turtle was present, it could migrate up or down stream during construction. Exclusion fencing and the diversion would be removed following the completion of construction.

No in-water work would be required during the O&M phase of the project. There would be no effect to resident or migratory wildlife corridors during this phase of the project. The Proposed Project has the potential to temporarily disrupt the migration of northwestern pond turtle. However, the Proposed Project Area is at the downstream edge of habitat suitability for this species. It is unlikely that this species would travel downstream through the Proposed Project Area during the proposed work period which is during the dry season. For this reason, impacts to Northwestern pond turtle migration would be less than significant and no additional mitigation measures would be required other than those already described above. Therefore, the Proposed Project Alternative would result in a **less than significant impact**. No mitigation is required or recommended.

Impact BIO-T-5: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same and no construction would occur; therefore, there would be no direct conflict with any local policies or ordinances protecting biological resources. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a large flood, there would be the potential for the Napa River to rise and floodwaters to encroach on habitat in the Proposed Project Area. However, these conditions would be temporary and would not be expected to conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance or riparian habitat policy. Therefore, the No Project Alternative would result in a **less than significant impact**. No mitigation is required or recommended.

Proposed Project Alternative

Policy Con-30 of the Napa County General Plan requires mitigation for impacts to wetlands to ensure that there is no loss of wetland function. The proposed Project would result in permanent loss of 0.005 acres of saline emergent wetland. The original 1999 Final SEIS/EIR provided for the

mitigation of vast quantities of wetlands. Compensatory mitigation for the Overall Flood Protection Project was initiated and implemented in 2000 and included planting trees and creating various habitats for the areas to be disturbed by the Overall Flood Protection Project including future phases such as the Proposed Project.

The Overall Flood Protection Project Mitigation and Monitoring Plan stipulated that 503 acres of brackish emergent marsh and 17.68 acres of riparian forest above the oxbow would need to be created by the end of the 40-year monitoring period that began in 2004 (Jones and Stokes 2001). As of 2022, 341.3 acres of brackish emergent marsh and 29.2 acres of riparian forest have been created (Rincon 2022). At 20 years through the monitoring period, the restoration is on track to exceed the required acreage. The minimal impact on wetlands that would be incurred through the Proposed Project Alternative would not require additional mitigation. Approximately 287 total trees would need to be removed in the Proposed Project Area to allow construction and equipment clearance; 52 of which are located along the west bank of the Napa River and in the riparian corridor. The mitigation measures listed above would ensure that the Proposed Project impacts remain within the limits of the Overall Flood Protection Project Mitigation and Monitoring Plan and as minimal as possible. Therefore, no additional compensatory mitigation is included in the Proposed Project.

The City of Napa Protected Native Tree Program stipulates that a permit must be obtained from the City prior to the removal of any trees that meet the specifications of the program. Specifications of the program are outlined in Appendix D, *Regulatory Setting*. **Table 3.13-6** below shows that at least 101 trees meet the specifications of the Native Tree Program and would require permits prior to removal. These 101 trees would need to be removed in the Proposed Project Area to allow construction and equipment clearance. Trees would be replanted in the Proposed Project Area, where permitted and feasible. The City of Napa-approved trees and hardy and herbaceous perennials would be planted along disturbed roadways to match the planting seen along the southwest side of Lincoln Avenue. Along the riparian corridor, planting would include native trees and shrubs near the top of bank and herbaceous perennials and wattles with live stake plantings near the ordinary high-water line.

Table 3.13-6. City of Napa Native Tree Program Trees to be Removed

Species	Number to Remove
Coast Live Oak	90
California Bay	8
Coast redwood	3

The O&M phase of the project would not conflict with any local policies or ordinances as no impacts to trees or sensitive communities are anticipated. Therefore, O&M activities would have no effects on local policies or ordinances. The Proposed Project would comply with all relevant local plans and policies. By obtaining the necessary permits to remove native trees, no additional mitigation measures would be required. There would be a **less than significant impact** due to the Proposed Project.

Table 3.13-7. Mitigation Measures for Terrestrial Biological Resources Impacts of the Proposed Project

Mitigation Measure	Description of Measure
MM BIO-T-1a: Implement Measures to Avoid and Minimize Effects on Monarch Butterfly	Prior to ground disturbance, a biological monitor shall conduct preconstruction surveys for milkweed (<i>Asclepias</i> spp.). The biologist shall flag all existing milkweed plants or patches and, where feasible, instruct the crew to avoid mowing or removal during the monarch breeding season which occurs from March 15 to October 31. If milkweed plants are identified within the Proposed Project Area, surveys for adult and larval monarchs should be conducted both before and after the Proposed Project. A 2-foot buffer shall be maintained around all milkweed plants during construction and ground disturbing activities to protect breeding habitat. Include USFWS recommended pollinator plants into mitigation site planting plans when possible. No milkweed shall be cut or mowed during the monarch breeding season as specified above. All mower operators shall be trained by a biological monitor to recognize milkweed and other important native nectar plants to reduce accidental mowing.
MM BIO-T-1b: Implement Measures to Avoid and Minimize Effects to northwestern pond turtle	Prior to ground disturbing activities, exclusionary fencing shall be used to ensure northwestern pond turtles are kept out of the construction area. This fencing would be maintained throughout the duration of construction. The integrity of the exclusion fencing would be checked daily by a Biological Monitor. Additionally, a biological monitor would check the work area every morning before construction begins to ensure that no turtles are within the exclusion area. If a Northwestern pond turtle individual or nest is observed in the impact area, construction activities would stop until the biological monitor establishes an appropriate buffer, or the turtle is no longer in the impact area. If work is performed between May-July during Northwestern pond turtle nesting season, surveys for nesting females would be required no more than 48 hours prior to ground disturbance activities. A qualified biologist shall survey the work site and 400 m up and downstream for signs of nesting and occupation. If nests are encountered, an exclusion buffer would be delineated around the nest area where no work shall occur until the end of nesting season. If work must occur within the nesting area, contact USFWS for relocation authority and procedures.

Mitigation Measure	Description of Measure
MM BIO-T-1c: Preconstruction Nesting Bird Surveys	<p>If clearing and/or construction activities would occur during the nesting season (March 1 to August 31), then preconstruction surveys to identify active migratory bird and/or raptor nests shall be conducted by a qualified biologist no more than 7 days prior to construction initiation. Focused surveys shall be performed by a qualified biologist for the purpose of determining the presence or absence of active nest sites within the following distances from the disturbance footprint:</p> <ul style="list-style-type: none"> • Passerines: Disturbance footprint only, or at the biologist's discretion • Raptors: 500 feet, or within sight of the disturbance footprint, whichever is smaller • Special-status Raptors: ½ mile, or within sight of the disturbance footprint, whichever is smaller. <p>If a lapse in project activities of 7 days or greater occurs for any reason during the nesting season, a qualified biologist shall perform another survey for nesting birds and raptors prior to resuming project activities. If feasible, tree and vegetation clearing would be conducted outside the nesting season. If active nest sites are identified within the survey distances defined in the Nesting Bird and Raptor Surveys measure, a no-disturbance buffer shall be established for all active nest sites prior to commencement of any project-related activities to avoid disturbances to nesting activities. A no-disturbance buffer constitutes a zone in which project-related activities such as vegetation removal, earth moving, and construction cannot occur. The size of no-disturbance buffers would be determined by a qualified biologist based on the species, activities in the vicinity of the nest, and topographic and other visual barriers. A qualified biologist shall monitor all active nests during construction activities until the nest(s) is deemed inactive. The amount and duration of monitoring would be determined by the qualified biologist and would depend on the same factors mentioned above when determining the size of the no disturbance buffer. If active special-status raptor nests are detected and an appropriately sized no-disturbance buffer (per current national or CDFW guidelines) is not feasible, the biologist may monitor the nest full time depending on the nest location, or only when noise are above background levels tolerated by raptors. Monitoring shall occur until the nestlings have fledged, or the nest is deemed inactive. If disturbance resulting from project activities is observed, construction may be delayed until the nest is no longer active, as determined by a qualified biologist, or the appropriate agency can be consulted.</p>
MM BIO-T-1d: Preconstruction Rare Plant Surveys	<p>Prior to ground disturbance, a qualified botanist would complete botanical surveys for delta tule pea. If this species is found, the District would avoid all plants by 50 feet. If avoidance is not possible, the District would consult with CDFW to address effects to the species</p>
MM BIO-T-1e: Conduct Preliminary Field Assessment for Bats	<p>An initial daytime field assessment on anthropogenic structures such as bridges, road- and stream-associated culverts, or other transportation structures that are found in or within 100 feet of the Proposed Project Area should be investigated by a qualified biologist for the presence of roosting bats (Caltrans 2021). The preliminary field assessment can be completed at any time of the year, so long as recent or current weather conditions allow the biologist to perform the survey without erasure of signs of bat use (i.e., rain or flooding). The initial survey should provide documentation to the type of roost present (day, night, maternity, or wintering) and the species where possible. If initial surveys either a) document the presence of bats or b) cannot categorically rule out the presence of bats on any structure in or within 100 feet of the Proposed Project Area, a Bat Mitigation Plan should be developed. Initial surveys should be planned to allow appropriate time for follow up surveys, if warranted, prior to proposed activities commencing</p>

Mitigation Measure	Description of Measure
MM BIO-T-1f: Bat Mitigation Plan Development	If it is discovered that bats utilize structures as roosting habitat in or within 100 feet of the Proposed Project Area, or that their presence cannot be categorically ruled out, then a Bat Mitigation Plan shall be developed with guidance from <i>California Bat Mitigation: Techniques, Solutions, and Effectiveness</i> and <i>Caltrans Bat Mitigation: A Guide to Developing Feasible and Effective Solutions</i> along with the best available science by a qualified biologist (Johnston et al. 2004, Caltrans 2021). This plan would address the need for follow up surveys prior to Proposed Project activities commencing, documentation of use, minimization of impacts, temporal and physical buffer zones beyond those established here, and monitoring of activities.
MM BIO-T-1g: Bat Mitigation Plan Development of Temporal and Physical Buffer Areas	In addition to any temporal and physical buffer zones established in a Bat Mitigation Plan, a buffer of 200 feet should be established at any structures that could serve as potential roosting sites for bats. The Bat Mitigation Plan would document buffer zones for night, day, maternity, and wintering roosts and specific species where applicable. These buffers should remain in place unless the Preliminary Field Assessment can categorically rule out any potential for use of an individual structure by roosting bats.
MM BIO-T-1h: Minimization of Light	Temporary lighting within the Proposed Project Area should be directed away from suitable roosting habitat regardless of documented species presence in or within 100 feet of the Proposed Project Area.
MM BIO-T-2: Sensitive Community Fencing	If sensitive communities occur within 100 feet of proposed ground-disturbing activities, including construction access routes and temporary work areas, with no pre-existing barrier between them and the proposed ground disturbance, protective fencing, such as silt fencing, would be installed between habitats that are to be avoided and the construction limits to prevent accidental disturbance and to protect water quality during construction.

3.14 Traffic/Transportation

3.14.1 Existing Conditions

Napa Valley Transportation Authority (NVTa) is the Countywide Transportation Agency that programs state and federal funds for local projects. NVTa, in coordination with the City and other Napa County jurisdictions, has prepared a variety of transportation-related plans, including the Napa Countywide Bicycle Plan, Countywide Transportation Plan, Community Based Transportation Plan, Napa Countywide Pedestrian Plan, Imola Corridor Complete Streets Improvement Plan, and State Route (SR) 29 Comprehensive Multimodal Corridor Plan. These plans are described in greater detail below.

Roadway System

The streets and highways of the City are the primary elements of the transportation system and serve pedestrians, bicycles, transit vehicles, automobiles, and trucks. The street network in the City is connected to the larger region via State Routes, including SR 29, SR 12, SR 221, and SR 121 (City of Napa 2022). Major roadways in the Proposed Project Area and vicinity include 1st Street, Lincoln Avenue, Silverado Trail, and Soscol Avenue; these are described in greater detail in **Table 3.14-1** below.

Table 3.14-1. Major Roadways in Proposed Project Area

Major Roadways	Description of Roadways
Soscol Avenue	The avenue is four-lane arterial street with a posted speed limit of 40 mph. There are two lanes each direction, with raised median islands separating northbound and southbound traffic between 1st and 3rd streets. There are striped bike lanes in both directions on Soscol Avenue. Soscol Avenue has also been designated as a boulevard, a designation that identifies streets that are intended to foster a memorable image by including elements such as a landscaped median, shade trees, and wide sidewalks (City of Napa 2022).
Silverado Trail (SR 121)	The trail bounds the Proposed Project Area to the east. SR 121 is a two-lane arterial street which runs between the cities of Napa and Calistoga. It has one lane in each direction and the posted speed limit is 35 mph.
1st Street	The street is a two-lane arterial street, with one lane each direction east of Main Street and two lanes westbound between Main Street and California Boulevard. Between Jefferson Street and Soscol Avenue, the posted speed limit is 25 mph.
Lincoln Avenue	The avenue is a four-lane arterial street with a posted speed limit of 35 mph. There are two lanes in each direction. The Lincoln Avenue bridge traverses the Napa River and is a continuous reinforced concrete T-girder bridge on big pier walls and a 40-degree skew. The bridge carries two traffic lanes, a bicycle lane, and a sidewalk in each direction.

Level of Service

Level of Service (LOS) is a qualitative measure of roadway operating conditions that relates to a driver's perception of comfort, convenience, and efficiency. A LOS letter grade of A represents free flow conditions, while F reflects severe delay or stop-and-go traffic (City of Napa 2022). **Table 3.14-2** includes a summary of peak hour LOS for intersections near the Proposed Project Area.

Table 3.14-2. Peak Hour LOS for Intersections in the Proposed Project Area

Intersection Locations	AM (observed conditions)	PM (observed conditions)
Trancas St/Soscol Ave	D	D
Lincoln Ave/California Blvd	C	E
Lincoln Ave/Jefferson St	D	D
Lincoln Ave/Soscol Ave	E	D
1st St/Jefferson St	D	E
Soscol Ave/Pearl St	-	-
1st St/Soscol Ave	C	C
1st St/Silverado Trail (SR-121)	B	C
3rd St/Soscol Ave	D	D
3rd St/East Ave/Silverado Trail (SR-121)	B	C
Coombsville/Silverado Trail (SR-121)	-	-
Soscol Ave/Silverado Trail (SR-121)	C	B

Bike and Pedestrian Facilities

As described in the City of Napa 2040 General Plan (City of Napa 2022), bicycle facilities fall into the following four categories:

Table 3.14-3. Bicycle Facility Classes

Major Roadways	Description of Roadways
Class I	Multi-use paths provide a completely separated right-of-way for the exclusive use of bicycles and pedestrians.
Class II	Bike lanes provide an exclusive space for bicyclists in the roadway and are established by striping and markings on the roadway surface.
Class III	Bike routes are designated with pavement markings and/or signage to indicate a shared lane environment between bicyclists and vehicles.
Class IV	Separated bike lanes provide an exclusive space for bicyclists that is physically separated from motor vehicle traffic by a vertical element and that is distinct from the sidewalk.

Based on the City of Napa Bicycle Plan, there are approximately 49 miles of existing bicycle facilities in the City, including 15 miles of Class I paths, 28 miles of Class II bike lanes, and 6 miles of Class III bike lanes (City of Napa 2022). Bicycle traffic within the Proposed Project Area primarily uses the travel lane with vehicular traffic. However, there are marked bike lanes on Soscol Avenue throughout the Proposed Project Area and on 3rd Street between Soscol Avenue and Silverado Trail. Pedestrian facilities within the Proposed Project Area consist predominantly of sidewalks on both sides of the street.

The Napa River Trail is a Class I bicycle and pedestrian trail that runs along the west bank of the Napa River between Lincoln Avenue and Trancas Street in the Proposed Project Area.

Parking

According to the City of Napa 2040 General Plan, the Downtown Napa Parking Management Plan guides City policy and decisions regarding management of the current supply of public parking spaces in Downtown and the Oxbow District (City of Napa 2022). Within the Proposed Project Area, the City of Napa maintains a number of public parking lots, along with some areas where parking is allowed on-street.

Transit and Transit Network

NVTA provides local public transit through the Vine Bus System and operates as an on-demand bus system within the City of Napa. Regional routes that cross the Proposed Project Area are described below (City of Napa 2022).

- Route 10 (Up Valley Connector) – provides service to Calistoga; runs along Soscol Avenue in the Proposed Project Area.
- Route 11 (Napa-Vallejo Express) – provides service to Vallejo; runs along Soscol Avenue in the Proposed Project Area.
- Route E Vintage – provides service within the northern portion of the City of Napa; runs along a portion of Soscol Avenue in the Proposed Project Area.

Rail Transport

The Napa Valley Railroad operates a historic rail line called the Napa Valley Wine Train that serves the Napa Valley. The rail line runs from Vallejo to Calistoga. The train serves mostly tourists and makes multiple round trips per day. The main terminal is located in the City of Napa on McKinstry Street, north of 1st Street (City of Napa 2022).

South of the City and extending to Vallejo, the rail line is owned by California Northern Railroad (CNR), a shortline freight operator. The CNR Schellville subdivision connects to a rail right-of-way that is owned by the Sonoma Marin Rail Transit in American Canyon (City of Napa 2022).

Emergency Evacuation

Napa County is located in the Governor's Office of Emergency Services Coastal Region and Mutual Aid Region II. There are approximately 55 evacuation zones in the City, which are roughly drawn along major streets and are based on an algorithm that takes into account fire history and population density. As described in Section 3.9-1, the Proposed Project Area is located within evacuation zones NAP-EO32 and NAP-EO26 for various hazardous events (Napa County 2023). There are no designated evacuation routes in the City; however, major roads such as SR 29 and SR 221 are critical corridors for circulation in the event of an emergency (City of Napa 2022).

3.14.2 Impact Analysis

Method of Analysis

This section describes the methods used to analyze transportation characteristics within the Proposed Project Area. The potential impacts from construction, operation, and maintenance of the Proposed Project were evaluated quantitatively and qualitatively using known transportation data and quantitatively using regulations that would be applicable to the Proposed Project.

CEQA Significance Criteria

For the purposes of this SEIR, the Proposed Project would result in a significant impact on transportation if it would:

- Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.
- Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- Result in inadequate emergency access.

According to CEQA Guidelines Section 15064.3(b), a significant transportation impact would occur if a land use project results in vehicle miles traveled (VMTs) that exceed an applicable threshold. Additionally, transportation projects that reduce or have no impact on VMT should be presumed to cause a less than significant transportation impact. The Proposed Project is not categorized as either a land use or transportation project and would not modify the existing land uses in the region. Operation of construction vehicles and equipment would be required on a temporary basis over the duration of the construction phase, which would generate temporary or construction-related VMTs. Therefore, the VMT impact analysis presented below focuses just on construction.

Summary of Traffic/Transportation Impacts

The No Project Alternative and Proposed Project Alternative impacts are summarized in **Table 3.14-4**.

Table 3.14-4. Summary of Traffic/Transportation Impacts

Impact Number	Impact Statement	CEQA Significance Determination
<i>No Project Alternative</i>		
TRA-1	Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.	Less than significant impact
TRA-2	Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).	Less than significant impact
TRA-3	Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	No impact
TRA-4	Result in inadequate emergency access	Less than significant impact

Impact Number	Impact Statement	CEQA Significance Determination
<i>Proposed Project Alternative</i>		
TRA-1	Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.	Less than significant impact with mitigation incorporated
TRA-2	Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).	Less than significant impact
TRA-3	Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	Less than significant impact
TRA-4	Result in inadequate emergency access	Less than significant impact

Impact TRA-1: Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

No Project Alternative

Under the No Project Alternative, no construction would occur, and therefore, no construction vehicles or equipment would be required, and no direct effects would occur from construction traffic. The Napa River Trail would not be extended south from Lincoln Avenue to the River Terrace Inn and a pedestrian crossing would not be constructed across Lincoln Avenue. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a large flood, there would be the potential for the Napa River to rise and floodwaters to encroach on roadway, bicycle, and pedestrian facilities in the Proposed Project Area. Since these conditions would be short term, the No Project Alternative would not be expected to conflict with a program plan, ordinance or policy addressing the circulation system. Therefore, the No Project Alternative would result in a **less than significant impact**. No mitigation is required or recommended.

Proposed Project

The Proposed Project includes construction of floodwalls, along with the construction of new circulation system features that include the extension and reconstruction of the Napa River Trail and a new pedestrian crossing for the Napa River Trail across Lincoln Avenue. Construction of the floodwall north of Lincoln Avenue would require the Napa River Trail to be closed from Lincoln Avenue to Trancas Street. A trail detour would be coordinated with the City of Napa along Soscol Avenue for recreational users to minimize impacts to pedestrians and cyclists. After the floodwall is installed in this reach, the waterside Napa River Trail would be installed. Similarly, south of Lincoln Avenue the Napa River Trail would be constructed on the waterside once the floodwall is installed and would connect to the existing trail that ends near the River Terrace Inn.

The northern portion of the paved trail through the Dry Bypass between McKinstry Street and West Street near Napa Creek would also need to be closed during construction of the floodwall closures in

this area. A trail detour would be coordinated with the City of Napa along McKinstry Street and 1st Street for recreational users to minimize impacts to pedestrians and cyclists.

Construction traffic would utilize the Proposed Project Area roadways discussed above, specifically Soscol Avenue and Lincoln Avenue. Traffic flow on access routes would be coordinated by the contractor as construction work progresses along the alignment. It is anticipated that roads used to access the site are wide enough to accommodate all truck and equipment traffic for the Proposed Project. No road widening would be required. Construction along Lincoln Avenue would require traffic control measures and a flagger as well as potential lane closures for the utility relocations in this area. Installation of the pedestrian crossing across Lincoln Avenue would require traffic to be controlled across Lincoln Avenue for a brief period.

Floodwalls would be installed along Lincoln Avenue in front of the Ace & Vine and Napa River Pet Hospital properties, with openings left in the floodwall for access to these properties. Swing gates would be constructed that tuck behind the floodwall when not in use. The sidewalk along the south side of Lincoln Avenue in this area would be relocated away from the floodwall to provide a separation between the floodwall, driveways, and the sidewalk. The floodwall on either side of the Ace & Vine and Napa River Pet Hospital driveways would be lowered to 3 feet and a stop log structure would be constructed on top to improve sight lines for vehicles utilizing the Ace & Vine and Napa River Pet Hospital driveways. The driveway opening would also be enlarged to help improve sight lines.

The District, in coordination with the City of Napa, agreed to an acceptable design for the proposed floodwalls and driveway openings on Lincoln Avenue to meet the local sight lines and standards for ingress and egress onto an arterial roadway. Therefore, the Proposed Project would not conflict with the City's standards, or the General Plan policies related to transportation safety.

Three parcels could have emergency access potentially impeded during construction: Escalante Towing, located at 501 N Bay Drive; Ace & Vine, located at 505 Lincoln Avenue; and the Napa River Pet Hospital, located at 510 Lincoln Avenue. However, these businesses would have temporary access detours implemented during construction based on the phasing of the closure structures, and access would be coordinated with the contractor when performing utility and roadway improvements during construction.

The Proposed Project Area includes a 15-foot-wide future O&M corridor on the land side of the floodwall alignment to allow vehicular access for inspection and maintenance activities. No full or partial road closures would be required for O&M. O&M activities would occur periodically and would require relatively few vehicles so they would not alter the traffic volumes on access roads for the Proposed Project.

With the implementation of mitigation measure **MM-TRA-1** and **MM-TRA-2**, the Proposed Project Alternative would not conflict with a program plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, shown in **Table 3.14-6**. Therefore, the Proposed Project Alternative would result in a **less than significant impact with mitigation incorporated**.

Impact TRA-2: Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).

No Project Alternative

Under the No Project Alternative, there would be no changes in land use, no construction would occur, and therefore, no construction vehicles or equipment would be required, and no direct effects would occur from construction traffic. The Napa River Trail would not be extended south from Lincoln Avenue to the River Terrace Inn and a pedestrian crossing would not be constructed across Lincoln Avenue. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a large flood, there would be the potential for the Napa River to rise and floodwaters to encroach on roadway, bicycle, and pedestrian facilities in the Proposed Project Area. However, since these conditions would be short term, the No Project Alternative would not be expected to affect changes in VMT in the area. The No Project Alternative would not conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). Therefore, **no impact** would occur, and no mitigation is required or recommended.

Proposed Project Alternative

The Proposed Project Alternative would not cause a long-term increase in VMT in the area. The proposed construction activities would cause a temporary increase in local VMT due to the labor force and construction trips. Chapter 2, *Project Description*, provides details regarding the construction activities and the maximum number of workers and haul truck trips per day. The average haul trip length is assumed to be 30-miles roundtrip. The labor force (a maximum of 30 workers/day) is assumed to have an 11-mile average roundtrip and construction trips (a maximum of 38 haul truck trips/day) are assumed to have a 30-mile average roundtrip.

The Metropolitan Transportation Commission (MTC) monitors and reports the VMTs in Napa County. The latest VMT data available for the County is from year 2020 (Metropolitan Transportation Commission 2024). The increase in daily VMTs would be the number of workers and haul trips multiplied by the trip length. **Table 3.14-5** reports the 2020 daily VMT in Napa County from the MTC report and the anticipated increase due to construction activities. The anticipated increase in daily VMT due to construction trips is projected to be approximately 0.1%, which is a nominal increase.

Given this estimate, it is expected that the roadways providing access to the proposed construction and staging areas would be minimally affected over the course of the Proposed Project. Traffic levels on roadways would temporarily increase during the Proposed Project construction, particularly before activities start and after they end each day when crews are traveling to and from locations, resulting in an occasional potential increase in traffic congestion on some area roads.

The *Technical Advisory on Evaluating Transportation Impacts in CEQA*, published by the Governor's Office of Planning and Research (OPR) in December 2018, provides recommendations regarding vehicle miles traveled evaluation methodology, significance thresholds and screening thresholds for projects. OPR defines screening thresholds for small projects as follows:

“Absent substantial evidence indicating that a project would generate a potentially significant level of vehicle miles traveled, or inconsistency with a Sustainable Communities Strategy or general plan, projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact” (OPR 2018).

The Proposed Project is considered a small project given the nature of the proposed investigations. The Proposed Project is anticipated to generate up to 90 daily roundtrips with up to three crews in the Proposed Project Area and thus would result in less than 110 trips per days when applying OPR's screening threshold.

Table 3.14-5. Existing and Project Construction VMT

2020 Napa County VMT	Estimated Project Construction VMTs	Percent Increase
2,763,860	2,943	0.1%

Once operational, the Proposed Project would involve a new pedestrian crossing across Lincoln Avenue and a realigned and connected Napa River Trail. These improvements would result in minor changes to pedestrian and bike traffic and would not impact VMT in the Proposed Project Area. The number of personnel traveling to and from the Proposed Project Area to complete O&M activities would be limited and these activities would only occur occasionally. Therefore, the Proposed Project would not conflict with or be inconsistent with the CEQA Guidelines section 15064.3, subdivision (b). The Proposed Project Alternative would result in a **less than significant impact** since some temporary VMTs would be generated, however, mitigation is not required or recommended.

Impact TRA-3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

No Project Alternative

Under the No Project Alternative, no construction would occur, and design features would be created that would increase hazards on the Proposed Project Area roadways. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a large flood, there would be the potential for the Napa River to rise and floodwaters to encroach on roadway, bicycle, and pedestrian facilities in the Proposed Project Area. However, these conditions would be temporary and would not be expected to involve re-design of the area, and therefore would not increase hazards due to a geometric design feature or incompatible uses. Therefore, **no impact** would occur, and no mitigation is required or recommended.

Proposed Project Alternative

The Proposed Project includes the construction of floodwalls, installation of scour protection under the Lincoln Avenue Bridge, and construction of a new recreational trail on the water side of the floodwall. The majority of the Proposed Project improvements would not result in geometric design hazards or incompatible uses since they would generally be located off local roadways. Only a short segment of the proposed floodwalls would be along local roadways (Lincoln Avenue and Wall Street).

As described under Impact TRA-1, the District has coordinated with the City of Napa on an acceptable design for the proposed floodwalls and driveway openings at Ace & Vine and the Napa River Pet Hospital on Lincoln Avenue to meet the local sight lines and standards for ingress and egress onto an arterial roadway. During construction, operation, and maintenance all street legal trucks and labor force vehicles would use existing roadways to enter and exit the Proposed Project Area and staging areas. The Proposed Project would not substantially increase hazards due to a geometric design feature or incompatible uses. Therefore, the Proposed Project Alternative would

have a **less than significant impact**. No mitigation is required or recommended.

Impact TRA-4: Result in inadequate emergency access.

No Project Alternative

Under the No Project Alternative, no construction would occur, and therefore, no construction vehicles or equipment would be required, and no new structures would be constructed that would block emergency access or routes. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a large flood, there would be the potential for the Napa River to rise and floodwaters to encroach on roadway, bicycle, and pedestrian facilities in the Proposed Project Area. This could lead to inadequate emergency access if roads become inaccessible. However, Since these conditions would be short term, the No Project Alternative would not be expected to result in inadequate emergency access. Therefore, the No Project Alternative would result in a **less than significant impact**. No mitigation is required or recommended.

Proposed Project Alternative

As discussed in Section 3.9, *Hazards and Hazardous Materials*, the Proposed Project would not interfere with emergency response and emergency evacuation routes, as none intersect the Proposed Project Area. The proposed floodwalls would be constructed in several-hundred-foot segments at a time as it progresses along the alignment. Traffic flow on access routes would be coordinated by the contractor as construction work progresses along the alignment. It is anticipated that roads used to access the site are wide enough to accommodate all truck and equipment traffic for the Proposed Project. No road widening would be required. Where possible, a 35-foot-wide construction corridor would be used for access and staging for construction work.

As discussed in Impact TRA-1, emergency access impacts could occur at three parcels: Escalante Towing, located at 501 N Bay Drive; Ace & Vine, located at 505 Lincoln Avenue; and Napa River Pet Hospital, located at 510 Lincoln Avenue. These businesses would have temporary access detours implemented based on the phasing of the closure structures and access would be coordinated with the contractor when performing utility and roadway improvements during construction. Based on these factors, construction of the Proposed Project would not result in inadequate emergency access and impacts would be less than significant.

The Proposed Project Area also includes a 15-foot-wide future O&M corridor on the land side of the floodwall alignment to allow vehicular access for inspection and maintenance activities. No full or partial road closures would be required for O&M. O&M activities would occur periodically and would require relatively few vehicles so they would not alter the traffic volumes on access roads for the Proposed Project. The Proposed Project would not result in inadequate emergency access. Therefore, the Proposed Project Alternative would have a **less than significant impact**. No mitigation is required or recommended.

Table 3.14-6. Mitigation Measures for Traffic/Transportation Impacts of the Proposed Project

Mitigation Measure	Description of Measure
MM-TRA-1: Establish detours, signage and a notification system for the Napa River Trail closure between Lincoln Avenue and Trancas Street and the northern paved trail in the dry bypass.	<p>The District in coordination with the City would establish detour routes that meet the area needs during construction. The District would install signage and develop a notification system to residences and businesses in the area to warn them of the closure and detours.</p>
MM-TRA-2: Prepare and Implement a Traffic Control Plan	<p>Before the start of project-related construction activities, USACE and the District would require the contractor to prepare a Traffic Control and Road Maintenance Plan. This plan would describe the methods of traffic control to be used during construction. All on-street construction traffic would be required to comply with the City's standard construction specifications. The items listed below would be included in the plan and as terms of the construction contracts:</p> <ul style="list-style-type: none"> • Follow the standard construction specifications of affected jurisdictions and obtain the appropriate encroachment permits, if required. Incorporate the conditions of the encroachment permit into the construction contract. Encroachment permit conditions would be enforced by the agency that issues the encroachment permit. • Provide adequate parking for construction trucks, equipment, and construction workers within the designated staging areas throughout the construction period. If inadequate space for parking is available at a given work site, the construction contractor would provide an off-site staging area and as needed, coordinate the daily transport of construction vehicles, equipment, and personnel to and from the work site. • Proposed lane closures would be coordinated with the City and be minimized to the extent possible during the morning and evening peak traffic periods. Construction specifications would limit lane closures during commuting hours where feasible, and lane closures would be kept as short as possible. If a road must be closed, detour routes and/or temporary roads would be made to accommodate traffic flows. Signs would be provided to direct traffic through detours. • Post signs providing advance notice of upcoming construction activities at least 1 week in advance so that motorists are able to avoid traveling through affected areas during these times. • Provide bicycle detours to allow for continued use by bicycle commuters. Maintain safe pedestrian and bicyclist access around the construction areas at all times. Construction areas would be secured as required by the City to prevent pedestrians and bicyclists from entering the work site, and all stationary equipment should be located as far away as possible from areas where bicyclists and pedestrians are present. • Notify (e.g., physical signage, internet postings, letters, or telephone calls) and consult with emergency service providers to inform them of construction activities, maintain emergency access, and facilitate the passage of emergency vehicles on city streets during construction activities. Emergency vehicle access would be made available at all times. • The construction contractor would document pre- and post-construction conditions on roadways used during construction. This information would be used to assess damage to roadways used during construction. The contractor would repair all potholes, fractures, or other damages.

3.15 Tribal Cultural Resources

3.15.1 Existing Conditions

The Proposed Project Area is situated within the ethnographic territory of the Patwin, neighbored by the Wappo, Pomo, and Miwok communities. Menefee notes that in the 1830s, the Napa inhabited the area of Entre Napa Rancho, which was centered on the Napa River and Napa Creek, while the Ulucas lived east of the Napa River near to the City of Napa (1873). According to accounts provided by Platon Vallejo, the son of General Mariano Vallejo, the Napa were closely related to or part of the Suisun (Bowman 1947). Menefee notes that there were several hundred Native Americans who lived on the Entre Napa Rancho (1873).

Patwin economic life was focused upon collecting plant foods, hunting, and fishing (Johnson 1978). As with most California cultures, the major vegetal food source was acorn, usually gathered in the fall by extended families or whole villages. Buckeye, pine nuts, juniper berries, manzanita berries, blackberries, wild grapes, Brodiaea bulbs, and tule roots were also gathered. Several different species of fish were driven into pens behind constructed weir gates and caught with a net. Fish species include salmon, sturgeon, perch, chub, sucker, hardhead, trout, pike, and steelhead. Some fishing areas were privately owned by individuals or families and thus required permission to use. Several other animals were caught using decoys and/or nets, including deer, tule elk, antelope, brown bear, ducks, geese, quails, and turtles.

Woven basketry was a staple in Patwin life. Certain animal skin or basketry items were specially decorated with woodpecker or raven feathers. These added decorations were a sign of materials that were highly prized or used for ceremonial purposes. A variety of stone tools were used, including knives, arrow and spear points, club heads, arrow shaft straighteners, scrapers, pestles, and mortars (Johnson 1978). Tool stone primarily was obsidian and occasionally chert was used. Many artifacts were made from wood (e.g., bows, digging sticks, and mortars), tule (e.g., mats, boats), and plant fibers (e.g., cordage, netting, and baskets). Bedrock mortars, and portable ones, were important components of acorn processing technology. Mussel shells were utilized as knives to cut fish and meat into strips.

There were typically four different types of structures that served as permanent habitation: family houses, ceremonial dance house, sudatory (sweathouse), and the menstrual hut. All of these were semi-subterranean, earth covered structures (Johnson 1978). The tribelet was the primary political group, represented by a chief who directed village communal activities. The position was passed from father to son, if possible, and otherwise would be chosen by village elders based on popularity and ability.

The Kuksu religion played an important role in Patwin society. The religion had two separate organizations. One was composed of men only and functioned as a general dancing society where boys and young men were initiated over time into performance of a series of specific dances. The other organization, composed of a limited number of men and women, had its performers wearing elaborate costumes to impersonate a variety of spirit beings.

Great emphasis was placed upon shamans, who acquired their power from paternal relatives. These were individual specialists in either native medicine and curing or who had direct contact with the supernatural realm. Shamans often were feared because of their potential to manipulate supernatural power for good or ill. In addition to dances associated with the Kuksu religion, a number of dances associated with the harvest of particular resources also occurred. In addition, multi-village

gathering were held. Dances were often held in large communal dance houses.

Today, Patwin and Wintun communities with cultural and traditional affiliation to the Proposed Project Area include the Yocha Dehe Wintun Nation, Cortina Rancheria – Kletsel Dehe Band of Wintun Indians, and the Cachil Dehe Band of Wintun Indians. Pomo communities with cultural and traditional affiliation to the Proposed Project Area include the Guidiville Indian Rancheria and the Pinoleville Pomo Nation. The Mishewal-Wappo Tribe of Alexander Valley is a Wappo community that has cultural and traditional affiliation to the Proposed Project Area. The Middletown Rancheria of Pomo Indians is a Lake Miwok and Pomo community that also has cultural and traditional affiliation to the Proposed Project Area.

3.15.2 Impact Analysis

Method of Analysis

This section describes the methods used to analyze TCRs within the Proposed Project Area.

AB 52 Consultation

Pursuant to PRC § 21080.3.1 and in support of AB 52, consultation efforts with Native American tribal contacts have been incorporated into the analysis of the Proposed Project Area, as “California Native American tribes traditionally and culturally affiliated with a geographic area may have expertise concerning their tribal cultural resources” (PRC § 21080.3.1[a]). Pursuant to PRC § 21080.3.1(b) and Section 106 (36 CFR § 800.2[iii]), lead agencies are required to consult with Native American tribes culturally affiliated with a project area. Accordingly, the District contacted the Native American Heritage Commission (NAHC) on May 28, 2023, to request a list of California Native American tribes and organizations that may have an interest in the Proposed Project pursuant to PRC 21080.3.1(c) as well as to request a search of the Sacred Lands File (SLF). The NAHC responded on June 2, 2023, providing a list of tribes that have cultural and traditional affiliation to the Proposed Project Area. The NAHC also reported that their search of the SLF yielded positive results and to contact the Mishewal-Wappo Tribe of Alexander Valley for further information.

On August 23, 2023, the District and USACE mailed invitations to consult on the Proposed Project to the following Native American tribes:

- Yocha Dehe Wintun Nation
- Cortina Rancheria – Kletsel Dehe Band of Wintun Indians
- Cachil Dehe Band of Wintun Indians of the Colusa Indian Community
- Guidiville Indian Rancheria
- Middletown Rancheria of Pomo Indians Mishewal-Wappo Tribe of Alexander Valley
- Pinoleville Pomo Nation

On November 11, 2023, the Tribal Historic Preservation Officer of the Yocha Dehe Wintun Nation requested to initiate formal consultation. Consultation with the Yocha Dehe Wintun Nation in cooperation with the Mishewal-Wappo Tribe of Alexander Valley is ongoing.

CEQA Significance Criteria

For the purposes of this SEIR, the Proposed Project would result in a significant impact TCRs materials if it would:

- Cause a substantial adverse change in the significance of a tribal cultural resource, listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k); and/or
- Cause a substantial adverse change in the significance of a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Summary of Tribal Cultural Resources Impacts

The No Project Alternative and Proposed Project Alternative impacts are summarized in **Table 3.15-1**.

Table 3.15-1. Summary of Tribal Cultural Resources Impacts

Impact Number	Impact Statement	CEQA Significance Determination
<i>No Project Alternative</i>		
TCR-1	Cause a substantial adverse change in the significance of a tribal cultural resource, listed or eligible for listing in the California Register of Historical Resources as defined in PRC § 5020.1(a), or in a local register of historical resources as defined in PRC § 5020.1(k)	No impact
TCR-2	Impact TCR-2: Cause a substantial adverse change in the significance of a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC § 5024.1. In applying the criteria set forth in subdivision (c) of PRC § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	Less than significant impact
<i>Proposed Project Alternative</i>		
TCR-1	Cause a substantial adverse change in the significance of a tribal cultural resource, listed or eligible for listing in the California Register of Historical Resources as defined in PRC § 5020.1(a), or in a local register of historical resources as defined in PRC § 5020.1(k)	Significant and unavoidable impact with mitigation incorporated

Impact Number	Impact Statement	CEQA Significance Determination
TCR-2	Impact TCR-2: Cause a substantial adverse change in the significance of a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC § 5024.1. In applying the criteria set forth in subdivision (c) of PRC § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	Significant and unavoidable impact with mitigation incorporated

Impact TCR-1: Cause a substantial adverse change in the significance of a tribal cultural resource, listed or eligible for listing in the California Register of Historical Resources as defined in PRC § 5020.1(a), or in a local register of historical resources as defined in PRC § 5020.1(k).

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, no direct disturbance would occur. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a larger flood, there would be the potential for the Napa River to rise and floodwaters to encroach on adjacent properties in the Proposed Project Area. However, these conditions would be temporary and would not be expected to cause a substantial adverse change in the significance of a TCR, listed or eligible for listing in the California Register of Historical Resources as defined in PRC § 5020.1(a), or in a local register of historical resources as defined in PRC § 5020.1(k). Therefore, **no impact** would occur, and no mitigation is required or recommended.

Proposed Project Alternative

As of this writing, no TCRs have been identified within the Proposed Project Area. AB 52 consultation with interested tribes is ongoing. The Proposed Project is anticipated to impact an archaeological resource at P-28-000218 (River Glen site), which is eligible for listing in both the CRHR and the NRHP (see Section 3.3, Cultural Resources). As described in Section 3.2, the construction activities of the Proposed Project north of Lincoln Avenue entail the replacement of a 36-inch-diameter steel water line and the transition from a concrete “T” wall to 810 linear feet of sheet pile “I” wall up to 30 feet deep in steep areas. These components of the Proposed Project intersect P-28-000218. As such, construction activities would result in a substantial adverse change in the significance of the in situ archaeological deposits of P-28-000218. Due to the sensitive nature of P-28-000218, the O&M of the Proposed Project could result in the damage or destruction of in situ archaeological deposits.

The Proposed Project north of Lincoln Avenue would cause a substantial adverse change in the significance of P-28-000218 pursuant to § 5020.1(a). It is not known at this time if P-28-000218 is in fact a TCR or contains TCRs. As consultation continues, it is reasonable to assume that the tribal community would identify this site as a TCR. If P-28-000218 is deemed a TCR by the tribal

community, then measures would need to be implemented to minimize or reduce effects of the Proposed Project on this site, based on tribal consultation.

With the implementation of mitigation measure **MM-CUL-1**, construction, operations, and maintenance impacts would be minimized but would not be fully reduced to a less than significant level for P-28-000218, as shown in **Table 3.15-2**. If P-28-000218 or associated archaeological deposit or artifact are found to be a TCR, the Proposed Project Alternative would result in a **significant and unavoidable impact with mitigation incorporated** since the Proposed Project Alternative would cause a substantial adverse change to this site.

Impact TCR-2: Cause a substantial adverse change in the significance of a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC § 5024.1. In applying the criteria set forth in subdivision (c) of PRC § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, no direct disturbance would occur. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a large flood, there would be the potential for the Napa River to rise and floodwaters to encroach on adjacent properties in the Proposed Project Area, including site P-28-000218. Potential flood fighting activities could result in effects to site P-28-000218 that would likely be less than analyzed under the Proposed Project. Since these conditions would be short term, the No Project Alternative is not expected to cause a substantial adverse change in the significance of a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC § 5024.1 to a California Native American tribe. Therefore, the No Project Alternative would result in a **less than significant impact**. No mitigation is required or recommended.

Proposed Project Alternative

As described above, although TCRs have not been formally identified in the Proposed Project Area, P-28-000218 is likely to be considered a significant resource by the tribal community pursuant to § 5024.1(c). As described in Section 3.2, the construction activities of the Proposed Project north of Lincoln Avenue entail the replacement of a 36-inch-diameter steel water line and the transition from a concrete “T” wall to 810 linear feet of sheet pile “I” wall up to 30 feet deep in steep areas. These components of the Proposed Project intersect P-28-000218. As such, construction activities would result in a substantial adverse change in the significance of the in situ archaeological deposits of P-28-000218. Due to the sensitive nature of P-28-000218, the O&M of the Proposed Project could result in the damage or destruction of in situ archaeological deposits. Therefore, the Proposed Project would severely impact P-28-000218 and mitigation measures would need to be implemented.

With the implementation of mitigation measure **MM-CUL-1**, construction, operations, and maintenance impacts would be minimized but would not be fully reduced to a less than significant level for P-28-000218. If P-28-000218 or associated archaeological deposits or artifacts are found to be a significant resource to a California Native American tribe, the Proposed Project Alternative

would result in a **significant and unavoidable impact with mitigation incorporated** because the Proposed Project Alternative would cause a substantial adverse change to this site.

Table 3.15-2. Mitigation Measures for Tribal Cultural Resources Impacts of the Proposed Project

Mitigation Measure	Description of Measure
MM-CUL-1 in Section 3.5	<p>Aligning with Mitigation Measure Cultural-7 from the 1999 Final SEIS/EIR (Napa County Flood Control and Water Conservation District and US Army Corps of Engineers 1999) and the 1999 PA between USACE, SHPO, FHWA, the District, the City of Napa, and Caltrans, a treatment plan shall be developed for P-28-000218. The PA specifies obligations and parameters pertaining to the development of a treatment plan which entail in part the following stipulations:</p> <ul style="list-style-type: none"> • USACE would develop a treatment plan for the P-28-000218 and any other archaeological sites determined NRHP eligible, and the treatment plan shall be in conformance with the Secretary of the Interior's Standards and Guidelines for Archeological Documentation (48 FR 44734-37) and take into account the Advisory Council on Historic Preservation's publication, Treatment of Archeological Properties (Advisory Council on Historic Preservation, 1980); • USACE and FHWA (if participating) shall consult with the Native American community, including but not limited to the Suscol Council, the Wappo Tribe, the Cortina Indian Rancheria of Wintun Indians, and the people of the Rumsey Rancheria, concerning the River Glen site and any other prehistoric archeological site designated as an historic property located within the APE; all inventory and evaluation reports and treatment plans shall be submitted to USACE for review and comment and then submitted by USACE to SHPO for review comment; if extending into multiple years, annual reports shall be produced summarizing activities over the previous year, and these reports shall be submitted to all signatories and interested parties of the PA.

3.16 Utilities and Service Systems

3.16.1 Existing Conditions

The following utility services will be discussed in the section and are summarized in **Table 3.16-1** below: electric power and natural gas (including substations, electrical power lines, and gas lines); solid waste and recycling; sewer and septic systems; stormwater and drainage; water supply; utility conflicts.

Table 3.16-1. Utility Services

Service	Discussion
Electric power and natural gas	The Pacific Gas and Electric Company (PG&E) is the primary provider of electricity within Napa County, including the generation and transmission of electricity, customer service, meter reading, billing, emergency response, and other services to commercial and residential developments located within its service area. Napa is also part of the Marin Clean Energy (MCE) Community Choice Aggregation program, which provides retail electric generation services and complementary energy programs to member communities. MCE offers sustainably produced electricity from renewable resources, like solar, wind, bioenergy, small hydroelectric, and geothermal heat to property owners in Napa, Marin, Solano, and Contra Costa counties, upon request. Although MCE provides sustainable energy options, electricity is provided through the PG&E grid, making it vulnerable to Public Safety Power Shutoffs during extreme weather conditions (City of Napa 2022).
Solid Waste and Recycling	Napa County currently has five solid waste providers and two joint powers agencies/authorities. Solid waste providers include the Upper Valley Disposal Service, Berryessa Garbage Service, Napa Recycling and Waste Services, Napa County Recycling and Waste Services (NCRWS), and Recology American Canyon. The joint power agencies/authorities in the county, which do not provide solid waste collection or disposal services, include the Upper Valley Waste Management Agency and the Napa Vallejo Waste Management Authority. Residential and commercial solid waste collection in the City of Napa is currently provided by NCRWS, which is located approximately 7.7 miles from the Proposed Project Area. This facility also provides electronic waste disposal and recycling services (Napa County 2009). Hazardous waste disposal is provided by Napa Vallejo Household Hazardous Waste Collection Facility, a separate facility located approximately 4.7 miles from the Proposed Project Area.
Sewer and Septic Systems	According to the Napa County General Plan Update - Draft Environmental Impact Report, there are several wastewater service providers in Napa County serving various portions of the County including: the Napa Sanitation District (NapaSan), Lake Berryessa Resort Improvement District, Napa Berryessa Resort Improvement District, Napa River Reclamation District #2109, Spanish Flat Water District, Circle Oaks County Water District, and American Canyon Public Works Department (Napa County 2007). The City of Napa uses a community wastewater system that is managed by the NapaSan. The wastewater treatment facility is located south of the Proposed Project Area along the Napa River. There are four ponds linked together by gate valves, with a total area of 342 acres and a capacity of about 665 million gallons (NapaSan 2023).

Service	Discussion
Stormwater and Drainage	The storm water drainage system for the City of Napa uses a network of open ditches, culverts, and underground pipes of various sizes and capacities, all of which is maintained by the City's Public Works Department. On the northern portion of the Project alignment, along Trout Lane, is an existing 72-inch storm drain outfall and a 36-inch steel waterline that crosses beneath the trail. The two would intersect within the Proposed Project construction area (City of Napa 2022).
Water Supply	The City of Napa's current water demands are met by three sources: Lake Hennessey, Milliken Reservoir, and through the State Water Project (SWP). Each source has its own separate water treatment plan. Hennessey Water Treatment Plant (WTP) treats water from Lake Hennessey. Milliken WTP treats water from Milliken Reservoir. Edward I. Barwick Jamieson Canyon WTP treats the SWP water (City of Napa 2020). Lake Hennessey is the City's primary local water source. Water from Conn Creek is captured in the lake's dam, Conn Creek Dam, and stored in the impoundment to a capacity of 31,000 acre-feet of water. The City does not obtain its water supply from groundwater sources and is an insignificant user of irrigation water from groundwater sources (City of Napa 2020).
Utility Conflicts	Construction of the Proposed Project would require the removal and relocation of some utilities in the Proposed Project Area. Anticipated utility conflicts for the Proposed Project are included in Table 3.16-2 below.

Table 3.16-2. Utilities Within the Proposed Project Area

Utility Description	APN	Action
North of Lincoln Avenue		
Landside of wall, Two Utility poles and OH Electrical	Lincoln Ave	To be Relocated By Others
30" RCP Drain (RiverPointe)	0442 0400 3000	Wall Penetration to provide outfall through wall
Abandoned Steel Water Line, Size unknown likely 36"	0443 1400 8000	Demo/Remove
Abandoned Steel Water Line, Size unknown likely 36"	0443 1400 8000	Demo/Remove
36" Steel Water Line under floodwall alignment	0443 0103 0000	Relocate
	0443 0102 3000	Relocate
36" Drain, Type Unknown	0443 0102 1000	Wall Penetration to provide outfall through wall
36" Steel Water Line under floodwall alignment	0443 0101 8000	Relocate
	0443 0101 7000	Relocate
72" CMP Drain	Trout Way	Pipe located below sheetpile wall

Utility Description	APN	Action
South of Lincoln Avenue		
10" PVC Drain	0442 4200 4000	Wall Penetration to provide outfall through wall
Storm Drain, Unknown size and type.	0442 4200 7000	Wall Penetration to provide outfall through wall
Waterside of wall, ICVx2, Unknown Water Line Supply	0442 3000 6000	Demo/Remove
Waterside of wall, Elec Vault, Unknown Electrical Supply	0442 3000 6000	Demo/Remove
Landside of wall, Elec Vault, Unknown Electrical Supply	0442 3000 6000	Protect-In-Place
Waterside of wall, Utility pole and OH Electrical	0442 2001 7000	To be Relocated By Others
18" Drain (Unknown Pipe Type)	0442 2001 7000	Wall Penetration to provide outfall through wall
Hydrant and Water Line, Unknown size and type, Service to Ace & Vine (Potentially Abandoned)	Wall Street	Relocate Hydrant and waterline in Wall Street, Demo/Remove abandoned service line under wall.
Waterside of wall, Utility pole and OH Electrical	Wall Street	To be Relocated By Others/Protect-In-Place
Sewer Manhole and Main line in Wall Street	Wall Street	Replace/Relocate MH and Service Lines
Sewer Service Lateral to Ace & Vine, Pipe Type and Size unknown	Wall Street	Wall Penetration to provide service through wall
Waterside of wall, Utility pole and OH Electrical	Wall Street	To be Relocated By Others/Protect-In-Place
Sewer Service Cleanout, Lateral Location, Pipe Type and Size unknown	Wall Street	Replace/Relocate CO and Service Line
Landside of wall, Utility pole and OH Electrical	Wall Street	To be Relocated By Others
Electrical Vault, Unknown Electrical Supply, Ace & Vine Parking Lot	0442 2000 8000	Demo/Remove
Double Check Valve (DCV) Backflow Preventor	0442 2000 8000	Demo/Remove
Fire Hydrant	0442 2000 8000	Wall Penetration to Relocate to Water Side of Wall
Waterside of wall, ICVx2, Unknown Water Line Supply, Ace & Vine	0442 2000 8000	Demo/Remove
Waterside of wall, Water Vault, Unknown Water Line Supply, Ace & Vine	0442 2000 8000	Demo/Remove
Waterside of wall, ICVx2, Unknown Water Line Supply, Ace & Vine	0442 2000 8000	Demo/Remove
Water Service to Ace & Vine from Lincoln Ave. Size & Type Unknown w/DCV Backflow Preventor	0442 2000 8000	Wall Penetration to provide service through wall

Utility Description	APN	Action
Gas Service to Ace & Vine from Lincoln Ave. Size & Type Unknown	0442 2000 8000	Wall Penetration to provide service through wall
2" Gas Line Parallel to Lincoln Avenue along Ace & Vine	Lincoln Ave	Relocate
	Lincoln Ave	Relocate
Landside of wall, Utility pole and OH Electrical	Lincoln Ave	To be Relocated By Others
18" DIP Water Service to Ace & Vine (Abandoned?)	0442 2000 8000	Demo/Remove
Sewer Manhole, Main Line, Service Lateral and Cleanout	0442 2000 4000	Relocate MH into Lincoln Ave. Wall Penetration to provide service through wall
Gas Service to Pet Hospital from Lincoln Ave. Size & Type Unknown	0442 2000 4000	Wall Penetration to provide service through wall
36" Drain (ADS Polyethylene)	0442 2000 4000	Wall Penetration to provide outfall through wall
Water Service to Pet Hospital	0442 2000 4000	Wall Penetration to provide service through wall

3.16.2 Impact Analysis

Method of Analysis

This section describes the methods used to analyze utility characteristics within the Proposed Project Area. The potential impacts from construction, operations, and maintenance of the of the Proposed Project on utilities were evaluated qualitatively using known utility locations and services in the Proposed Project Area.

A list of known utilities in the Proposed Project Area was obtained and reviewed to determine the potential conflicts of the proposed floodwalls with these utilities. Coordination with the City of Napa, PG&E, and other service providers in the area was conducted to incorporate any utility relocations, removals, or abandonments within the Proposed Project Alternative design. Chapter 2 describes the anticipated utility relocations.

CEQA Significance Criteria

For the purposes of this SEIR, the Proposed Project would result in a significant impact on utilities and service systems if it would:

- Require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects;
- Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years;
 - The Proposed Project would not need a water supply to operate over the long term and would not be impacted by available water supplies during future normal, dry, or multiple dry years. Therefore, no impact would occur, and this criterion is not

evaluated further in the impact analysis section below.

- Result in a determination by the wastewater treatment provider, which serves or may serve the Project, that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments;
 - The Proposed Project would not generate wastewater during operations and, during construction, would generate a small amount which would be hauled off site and disposed of at an approved facility that is permitted to receive wastewater. Therefore, no impact would occur, and this criterion is not evaluated further in the impact analysis section below.
- Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; and,
- Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.
 - The Proposed Project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. Construction-generated solid waste would be limited and temporary, and operation would generate no solid waste. Therefore, no impact would occur, and this criterion is not evaluated further in the impact analysis section below.

Summary of Utilities Impacts

The No Project Alternative and Proposed Project Alternative impacts are summarized in **Table 3.16-3**.

Table 3.16-3. Summary of Utilities Impacts

Impact Number	Impact Statement	CEQA Significance Determination
<i>No Project Alternative</i>		
UTIL-1	Require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects	Less than significant impact
UTIL-2	Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals	Less than significant impact
<i>Proposed Project Alternative</i>		
UTIL-1	Require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects	Less than significant impact
UTIL-2	Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals	Less than significant impact

Impact UTIL-1: Require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same. No construction would occur; therefore, no utility would be directly relocated. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a larger flood, there would be the potential for the Napa River to rise and floodwaters to encroach on adjacent properties and utility facilities in the Proposed Project Area. Depending on the severity of the flood event, there would be the potential for the flood to damage or destroy existing utilities. Since these conditions would be short term and would not be expected to occur frequently or on a regular basis each year, the No Project Alternative is not expected to result in the need for new or expanded water/wastewater treatment facilities, storm water systems, electric, natural gas, or telecommunication or the relocation of any utilities. Therefore, the No Project Alternative would result in a **less than significant impact**. No mitigation is required or recommended.

Proposed Project Alternative

As shown in **Table 3.16-2**, construction of the Proposed Project would require the removal and relocation of some utilities in the Proposed Project Area. Utility conflicts north of Lincoln Avenue would include 4 waterlines (including the 36-inch waterline described in Section 2.2.2), 3 storm drains, and 1 electrical line. Utility conflicts south of Lincoln Avenue would include 8 waterlines, 4 storm drains, 1 fire hydrant, 8 electrical lines, 3 sewer lines, 1 sewer cleanout, 1 backflow protector, and 3 gas lines. Utilities would either be protected in place, demolished and removed, abandoned in place, relocated, or maintained through the proposed floodwalls.

All utility relocations would be coordinated with the respective utility providers and would be relocated outside of the footprint of floodwalls while still being consistent with existing land uses. All potential utility relocations would be limited to those needed for the proposed floodwalls; no other utility relocations or new or expanded service connections would be required.

The Proposed Project would require relocation of utilities and service systems, but those relocations would be properly coordinated and consistent with existing regulations and land uses. Temporary construction activities would occur related to these utility relocations, which are analyzed in this Draft SEIR. Therefore, the Proposed Project Alternative would result in a **less than significant impact**. No mitigation is required or recommended.

Impact UTIL-2: Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

No Project Alternative

Under the No Project Alternative, existing conditions would remain the same and no construction would occur; therefore, there would be no direct generation of solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of

solid waste reduction goals. The District would continue current O&M activities and would implement its current flood fighting practices in the area in the case of a flood event. In the event of a large flood, there would be the potential for the Napa River to rise and floodwaters to overtop the banks and encroach on adjacent properties in the Proposed Project Area. Depending on the severity of the flood event, there would be the potential for the flood to cause damage to infrastructure in the Proposed Project Area, leading to the need for reconstruction or repair, which could generate solid waste from construction. However, because these conditions would be short-term, the No Project Alternative would not be expected to generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Therefore, the No Project Alternative would result in a **less than significant impact**. No mitigation is required or recommended.

Proposed Project Alternative

The Proposed Project would generate a minor amount of solid waste during construction activities that would require disposal. However, solid waste generated during construction would be limited and would not impair solid waste reduction goals for the region or state. During construction, organics, trash, and demolished material would be off-hauled, and material would be imported and disposed of at facilities within 30 miles of the Proposed Project Area. Any hazardous soil encountered by the Proposed Project would be disposed off-site at an approved facility with adequate capacity. The Proposed Project would comply with both state and local solid waste standards during construction and operation. Additionally, long-term project operations would not generate solid waste.

The Proposed Project would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Some solid waste would be generated temporarily during construction, but this would not be in excess of standards or otherwise impair reduction goals. Therefore, the Proposed Project would have a **less than significant impact**. No mitigation is required or recommended.

4 Alternatives

This chapter describes and compares the alternatives evaluated in detail in this SEIR, including the Proposed Project and No Project Alternative under CEQA. CEQA requires consideration of the potential effects of a reasonable range of project alternatives that could feasibly attain most of a project's basic objectives and accomplish the specified project purpose and need, while avoiding and/or substantially lessening potentially significant and significant environmental impacts of the Proposed Project. Project Alternatives that were considered, but rejected are identified and are not carried forward for analysis. The discussion of each Project Alternative includes measures to avoid or substantially lessen any of the significant or potentially significant adverse environmental effects of the Proposed Project, while still meeting most, if not all, of the basic project objectives.

4.1 Requirements for Alternatives Development, Selection, and Evaluation

CEQA requires the lead agency to consider alternatives that would avoid or substantially lessen one or more of the significant impacts of the Proposed Project. The State CEQA Guidelines declare that an EIR needs to describe and evaluate alternatives that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects (State CEQA Guidelines Section 15126.6[c]). An EIR must include a reasonable range of alternatives necessary to permit a reasoned choice and to foster informed decision-making and informed public participation (State CEQA Guidelines Section 15126.6[f]). CEQA requires consideration of a No Project Alternative where the project is not constructed.

The No Project Alternative for review under CEQA has been carried throughout the SEIR. No other alternatives were carried forward and evaluated in detail since they would not lessen environmental impacts and meet the Proposed Project purpose and need.

4.2 Alternatives Development

The Proposed Project's goals and objectives and significant environmental impacts are relevant to alternatives development and are therefore presented below.

4.2.1 Overall Flood Protection Project Background

The Overall Flood Protection Project was authorized by the Flood Control Act of 1965. The original approved plan is outlined in the 1975 GDM, updated in the 1995 SGDM, and re-analyzed in the Final SGDM dated October 1998. The plan was designed to provide a 100-year level of flood protection to the City of Napa downstream to Imola Avenue, while maintaining or enhancing the river's natural processes. The 1998 SGDM identifies and screens alternatives for the entire extent of the project. The plan intends to provide flood protection via a combination of channel excavation, floodwalls and levee construction between Trancas Street and Kennedy Park by identifying, by reach, the least costly channel improvement feature that would provide flood protection to the City of Napa and result in minimal environmental impacts. This plan included construction of a dry bypass channel at the oxbow just upstream of Third Street and preservation of the existing oxbow channel for low flows for most of the year.

The 1998 SGDM alternatives analysis includes a number of structural alternatives to increase the

level of flood protection in the Napa River Basin. The no-action plan and non-structural alternatives were also evaluated, as well as a re-examination of the 1975 GDM channel and levee plans, and of the 1975 GDM alternatives of upstream reservoir plans.

The 1999 Final SEIS/EIR Preferred Alternative which is consistent with the 1998 SGDM included offset levees, open bypass channel, underground bypass channel, a downstream flood basin, an upstream detention basin, flood protection for Napa Creek, and the separable downstream elements of Edgerly Island and the Napa Pipe Industrial Complex.

With each iteration and re-examination, the flood protection project design was altered. The comparison of plan features between the versions (specific to the current Proposed Project Area or reach) are summarized in **Table 4.2-1** below.

Table 4.2-1. Comparison of Previous Overall Flood Protection Project Features for the Proposed Project Area

Reach	1975 GDM	1995 SGDM	1998 SGDM/ 1999 Final SEIS/EIR Preferred Alternative
Randean Way to Lincoln Avenue	<ul style="list-style-type: none"> Riprap with berm and levees (except in areas of high ground) 	<ul style="list-style-type: none"> Excavation and levees (except in areas of high ground) 	<ul style="list-style-type: none"> Setback floodwall (west) Residual floodway to high ground (east)
Lincoln Avenue to Trancas Street	<ul style="list-style-type: none"> Riprap with berm and levees 	<ul style="list-style-type: none"> Flowage easement (east) Levees and high ground 	<ul style="list-style-type: none"> Setback floodwall (west) Raise existing levees (west) Residual floodway to high ground (east)

Construction of the Overall Flood Protection Project began in 2000, but due to shortfalls in federal appropriations, construction has been intermittent. The District's most recent construction was the Bypass Channel, completed in 2015. As described in Chapter 1, *Introduction*, in 2011, USACE determined that construction of the Increment 2, Floodwalls North of Bypass and along Riverside Drive, south of downtown Napa was not economically justifiable. The District undertook the VEIA effort to identify remaining increments, which USACE could find economically justifiable.

The District completed the VEIA in 2017, and through that effort the District found additional economically justifiable project increments, primarily by removing the pump stations in USACE's original SGDM. Removal of these pump stations in the design reduced costs and enabled two remaining project increments to achieve favorable benefit cost ratios. Therefore, the District found it was able to economically justify the Increment 2, Floodwalls North of Bypass and Increment 3, Floodwalls along Riverside Drive (Imola Avenue to the Hatt Building). Both increments are on the west side of the Napa River (refer to Figure 1.2-2). Following USACE review of the VEIA, USACE produced FID, which essentially concurred with the VEIA's findings and confirmed federal interest in these two remaining increments. USACE received funding for Increment 2, Floodwalls North of Bypass and Increment 3, Floodwalls along Riverside Drive (Imola Avenue to the Hatt Building) in 2021.

4.2.2 1999 Final SEIS/EIR Alternatives

The 1999 Final SEIS/EIR for the Napa River/Napa Creek Flood Protection Project identified other alternative methods of reducing flood damage along the Napa River. These alternative methods were rejected early in the process because they did not meet project purpose and need and objectives in that they were too costly, did not provide 100-year flood protection in the City of Napa,

resulted in significant environmental impacts; and/or would hinder economic development in Napa. Hence, these alternatives were not subjected to the detailed alternative analysis contained in the 1975 EIS, the 1995 Draft Supplemental EIS, and the 1999 Final SEIS/EIR.

The 1999 Final SEIS/EIR, which this SEIR supplements, considered but rejected the following alternatives.

Modification in Operations of Existing Reservoirs

Total or partial operation of existing dams in the Napa River watershed for flood control purposes does not meet project objectives since it would provide less than the needed flood storage. It would also impair water supply in Napa County, which would be environmentally problematic and a hindrance to economic development.

New Upstream Hard Storage

Creating upstream flood storage would not meet project objectives because it would cause significant environmental impacts, result in prohibitive construction costs, and fail to provide 100% protection for the city of Napa from the 100-year flood.

Improved Upstream Watershed Management and Storage

This approach would provide a "best-case" reduction in the 100-year peak flood flow of just 36.5%, which would leave flows in downtown Napa 30% to 40% above damaging levels. This level of flooding would be inconsistent with project objectives. Extensive downstream flood control measures similar to those proposed in the Preferred Alternative would still be required, without any significant savings in downstream improvement costs or impacts.

Moreover, each of the individual components would create significant additional economic impacts, particularly with regard to existing land uses and agriculture, as described above. This is also inconsistent with the project objectives.

Downstream Basin

This alternative does not meet project objectives for 100-year event flood protection for two reasons. First, there is insufficient land available downstream of the city of Napa to create a detention facility that would lower water surface elevations by more than one foot during the 100-year storm. Second, even if a reduction in water surface elevations of more than one foot during the 100-year event were possible, this reduction would have relatively little impact upstream in the city of Napa. Therefore, this alternative would not meet project objectives for 100-year flood protection.

Relocation of Buildings in the Flood Plain

This alternative would not meet project objectives since it would be financially infeasible. It would also result in significant disruption to the economic, social, and cultural life of Napa, because the entire downtown would have to be relocated. Numerous historic structures would be lost, and it is not clear whether an acceptable site in Napa Valley on vacant land and outside the floodplain could be found.

4.2.3 Alternatives Previously Considered but Eliminated

In combination, the 1975 EIS, the 1995 Draft SEIS/EIR, and the 1999 Final SEIS/EIR feature

detailed analysis of a range of alternatives to provide flood control to the City of Napa. These alternatives are summarized in **Table 4.2-2**.

Table 4.2-2. Alternatives Previously Considered but Eliminated

Alternative	Description	Meets Objectives / Goals?
1999 Final SEIS/EIR Preferred Alternative	The 1999 Final SEIS/EIR Preferred Alternative is significantly different from the 1975 and 1995 proposals. It consists of lowering dikes and levees south of Imola Avenue and widening of the Napa River to create marshplain and floodplain terraces, both of which would provide additional floodway capacity. In addition, the Preferred Alternative includes construction of a dry bypass at the oxbow of the river, construction of new flood walls and levees along much of the river north of Imola Avenue, and flood protection modifications to Napa Creek downstream of Jefferson Street.	The 1999 Final SEIS/EIR Preferred Alternative successfully meets the objectives by preserving and enhancing the natural environment while also providing flood control protection to the maximum extent feasible. Additionally, the 1999 Final SEIS/EIR Preferred Alternative has been designed to meet the community's objectives regarding recreational improvements and the development of an alternative that is acceptable from an aesthetic and scenic value perspective. USACE and the District believe that the Preferred Alternative meets all the project objectives to the greatest extent feasible. This is the alternative that the current Proposed Project is based on.
1999 Final SEIS/EIR No Action Alternative	Under the 1999 Final SEIS/EIR No Action Alternative, no action would be taken by USACE to lessen the frequency or magnitude of flooding. Flood control measures that have already been implemented would remain in place. For example, the City of Napa was asked by FEMA in 1975, under the auspices of the National Flood Insurance Program, to adopt a flood plain management program. A formal Flood Plain Management Program was adopted by the City in 1975. The last revision of the 100-year flood plain map and city flood plain zoning ordinances was compiled in March 1988. Structures that have substantial damage from floodwaters would continue to be required to be rebuilt to meet the floodplain management ordinance. No other pending or future projects that would have an impact upon the timing or duration of flooding are known to be planned or contemplated at this time.	The primary project objective of achieving 100-year level of flood protection would not be met by the 1999 Final SEIS/EIR No Action Alternative. Furthermore, additional recreational facilities would not be provided in the project area, opportunities for economic development would not be enhanced, aesthetic and environmental excellence would not be approached, and an environmentally restored Napa River would not be attained. Thus, the 1999 Final SEIS/EIR No Action Alternative would not meet the majority of the project objectives.
Modified 1975 GDM Plan	The 1975 GDM was approved as an alternative to the 1965 plan authorized for the Napa River Flood Control Project. The 1975 GDM Plan consists of approximately 11 miles of channel improvements, including channel enlargement, rectification, dredging, and levees from Trancas Street to the downstream reaches of Edgerley Island. The 1975 GDM Plan includes improvements from the south edge of Edgerley Island north to the Oxbow.	The 1975 GDM alternative does comply with the primary objectives of the project, including the achievement of 100-year level of flood protection, and providing recreational facilities in the project area. However, the project objectives developed by the local sponsor, including attaining an environmentally restored Napa River and approaching aesthetic and environmental excellence, would not be met with the 1975 GDM Plan. Further, it is unlikely that all impacts to fish and wildlife can be feasibly mitigated by the project. For this reason, the 1975 GDM Plan does not meet a significant number of the project's objectives.

Alternative	Description	Meets Objectives / Goals?
1995 GDM Plan	The 1995 GDM was developed by USACE after reactivation of the Napa River Flood Control Project was requested following the devastating flood of 1986. The 1995 GDM proposes channel improvements beginning at Kennedy Park and extending upstream approximately 5.7 miles to Trancas Street. Flood protection up to a 100-year level for the City of Napa and adjacent areas would be provided by a combination of channel excavation and deepening, vertical sheetpile walls, concrete floodwalls, set-back earth levees and a "wet" bypass channel constructed for the Oxbow.	The 1995 GDM alternative does comply with the primary objectives of the project, including the achievement of 100-year level of flood protection, and providing recreational facilities in the project area. However, the project objectives developed by the local sponsor, including attaining an environmentally restored Napa River and approaching aesthetic and environmental excellence, would not be met with the 1995 GDM Plan.

4.3 Alternatives Screening

The alternative screening criteria are listed here and are described below in detail.

- Ability to meet project objectives—the extent to which the alternative fulfills the project's objectives.
- Impact avoidance—the extent to which the alternative substantially avoids, minimizes, reduces, or eliminates an impact associated with the Proposed Project.
- Feasibility—the extent to which the alternative is potentially capable of being accomplished given economic, environmental, legal, social, and technological factors.

Through this screening process, alternatives were considered and included for further analysis in the SEIR or removed from further consideration. Those alternatives that meet the project objectives, which would reduce one or more project impacts, and that appear feasible are discussed in greater detail in Section 4.5, *Alternatives Evaluated*. Those alternatives that were considered but removed from further consideration are summarized under Section 4.2.3, *Alternatives Previously Considered but Eliminated*.

4.3.1 Ability to Meet Project Needs, Purposes, and Objectives

As stated in Chapter 2, *Project Description*, the purpose of the Project is to provide an economically feasible and environmentally sensitive method to protect the City and County of Napa from periodic flooding. USACE established the following objectives for the project:

- To achieve 100-year level of flood protection;
- To achieve flood damage reduction benefits that exceed project costs when calculated according to official USACE benefit-to-cost methodologies;
- To mitigate impacts to fish and wildlife from the project; and
- To provide recreational facilities in the project area.

The District shares those project objectives, in addition to the following:

- To attain an environmentally restored Napa River;
- To approach aesthetic and environmental excellence;

- To enhance opportunities for economic development;
- To secure a local financing plan that the community can support; and
- To comply with current or modified federal guidelines.

4.4 Impact Avoidance

In addition to identifying feasible mitigation for a Proposed Project's impacts, a lead agency must also consider alternatives that could provide a means of avoiding altogether or reducing the level of impact that would otherwise result from implementation of a project (State CEQA Guidelines Section 15126.6). The following significant impacts would result from the Proposed Project. These impacts are analyzed in detail in Chapter 3.

4.4.1 Potentially Significant Environmental Impacts of the Proposed Project

The following impacts have been identified as potentially significant in Chapter 3, but they can be mitigated to a less-than-significant level by implementation of mitigation measures:

- **Impact AES-3:** degrade the existing visual character or quality of public views of the site and its surroundings
- **Impact AQ-1:** Conflict with or obstruct implementation of the applicable air quality plan
- **Impact AQ-2:** Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard
- **Impact AQ-3:** Expose sensitive receptors to substantial pollutant concentrations
- **Impact CUL-3:** Disturb any human remains, including those interred outside of dedicated cemeteries
- **Impact BIO-A-1:** Adversely affect species identified as a candidate, sensitive, or special-status species
- **Impact AQBIO-2:** Adversely affect any riparian habitat or other sensitive natural community
- **Impact HAZ-4:** Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment
- **Impact HYD-1:** Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?
- **Impact NOISE-2:** Generation of excessive groundborne vibration or groundborne noise levels
- **Impact BIO-T-1:** Substantially adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species
- **Impact BIO-T-4:** Interfere with the movement of any native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites

- **Impact TRA-1:** Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.
- **Impact TRA-3:** Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)

4.4.2 Significant and Unavoidable Environmental Impacts of the Proposed Project

The following impacts have been identified as significant and unavoidable in Chapter 0:

- **Impact CUL-2:** Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5
- **Impact NOISE-1:** Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies
- **Impact TCR-1:** Cause a substantial adverse change in the significance of a tribal cultural resource, listed or eligible for listing in the California Register of Historical Resources as defined in PRC § 5020.1(a), or in a local register of historical resources as defined in PRC § 5020.1(k)
- **Impact TCR-2:** Cause a substantial adverse change in the significance of a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC § 5024.1. In applying the criteria set forth in subdivision (c) of PRC § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe

4.5 Alternatives Evaluated

The following alternatives were developed and are being considered:

- **No Project Alternative:** Consideration of this alternative is required by CEQA
- **Proposed Project Alternative:** This alternative was carried forward for analysis because it meets the project objectives and goals, as well as for its potential for reduction of significant impacts in comparison to the SGDM Increment 2 Alternative
- **1998 SGDM Increment 2 Alternative:** This alternative was carried forward for analysis in this chapter of the SEIR because it meets the project objectives and goals

With the exception of the No Project Alternative, these alternatives would meet the Proposed Project objectives and would be feasible. In accordance with the State CEQA Guidelines, the District has determined that these alternatives represent a reasonable range of alternatives.

Table 4.5-1 provides a description of each alternative and a comparison of each alternative to the Proposed Project, focusing on key differences in project components and in adverse and beneficial impacts between the Proposed Project and each alternative. **Table 4.5-2** provides a comparison summary of resource impacts for each alternative and whether they would be greater than, similar to, or less than the Proposed Project.

Table 4.5-1. Summary of Alternatives and Comparison to the Proposed Project

Alternative	Summary	Notable Comparisons to Proposed Project Alternative
No Project Alternative	<ul style="list-style-type: none"> No project construction Fails to meet the fundamental objectives of the Proposed Project Retained because CEQA requires the inclusion of a No Project Alternative 	<ul style="list-style-type: none"> Reduced construction-related impacts Leaves Napa vulnerable to flood risk
Proposed Project Alternative	<ul style="list-style-type: none"> Floodwalls south of Lincoln Avenue to River Terrace Inn Floodwalls north of Lincoln Avenue to Elks Way Rock scour protection under the Lincoln Avenue Bridge Floodwalls at the Dry Bypass 	<ul style="list-style-type: none"> N/A
SGDM Increment 2 Alternative	<ul style="list-style-type: none"> Floodwalls south of Lincoln Avenue to River Terrace Inn, with different trail alignment and floodgate Floodwalls north of Lincoln Avenue to Elks Way, with levee at Lake Park Rock scour protection under the Lincoln Avenue Bridge, large rock scour protection footprint Floodwalls at the Dry Bypass, floodwalls as gap closure 	<ul style="list-style-type: none"> Increased footprint due to levee at Lake Park Increased rock scour protection footprint Resulting increased impacts to aesthetics, aquatic biology, and construction-related impacts

Table 4.5-2. Alternative Comparison of Potential Impacts

Environmental Resource Topic	No Project Alternative	1998 SGDM Increment 2 Alternative
Aesthetics	-	+
Agricultural and Forestry Resources	0	0
Air Quality	-	+
Cultural Resources	-	0
Energy	0	0
Fisheries and Aquatic Species	-	+
Geology and Soils	-	0
Greenhouse Gas and Climate Change	-	+
Hazards and Hazardous Materials	-	0
Hydrology and Water Quality	+	0
Land Use and Planning	0	0
Mineral Resources	0	0

Environmental Resource Topic	No Project Alternative	1998 SGDM Increment 2 Alternative
Noise	-	+
Population and Housing	0	0
Public Services	0	0
Recreation	0	0
Terrestrial Biology	-	0
Traffic/Transportation	-	+
Tribal Cultural Resources	-	0
Utilities and Service Systems	0	0

Note: Greater-than (+), Similar-to (0) or Less-than (-) indicate whether the alternative would have greater, equal, or reduced environmental impacts, respectively, as compared to the Proposed Project. Where impacts in the Proposed Project Area would be less, but potential impacts exist elsewhere, for example at an offsite location, items have been denoted (-/+)

4.5.1 No Project Alternative

Alternative Description

Under the No Project Alternative, no further construction of the Overall Flood Protection Project would occur. The floodwalls and scour protection under the Proposed Project would not be constructed. This would leave portions of the City of Napa vulnerable to flooding of the Napa River.

Impact Analysis

The No Project Alternative would avoid all construction-related impacts to the environment attributed to the Proposed Project. As shown in **Table 4.5-1**, it would reduce effects for all resource topics impacted under the Proposed Project Alternative except hydrology, because the No Project Alternative would leave the City of Napa vulnerable to flooding.

Specifically, construction-related impacts associated with the Proposed Project would be reduced (e.g., aesthetics, air quality and GHG emissions, biological resources, cultural and tribal cultural resources, hazards from construction activity, noise, road closures). Existing flooding risks would continue; thus, the threat to public safety due to flooding would remain. Therefore, the No Project Alternative would not meet the fundamental objective of the Proposed Project, which is to protect the City and County of Napa from periodic flooding.

4.5.2 Proposed Project Alternative

Alternative Description

As discussed in detail in Chapter 2, *Project Description*, the Proposed Project Alternative can be broken down into four distinct segments and these, from south to north, are:

- The dry bypass - work includes two short floodwall closures at the dry bypass to complete the existing floodwall there. Drainage areas previously facilitating overland flow to reenter the

river during flood events on either side of the Soscol Avenue Bridge would be closed off by constructing additional floodwalls.

- South of Lincoln - floodwall would be constructed on the west bank of the Napa River beginning at the River Terrace Inn and continuing north toward Lincoln Avenue. New 10- to 12-foot-wide recreational trail would be constructed on the water side of the floodwall.
- Lincoln Avenue Bridge - rock scour protection would be placed in the river channel bottom and on bridge abutment aprons beneath the Lincoln Avenue Bridge.
- North of Lincoln - floodwall would tie into the north side of the western parapet wall at the Lincoln Avenue Bridge and continue north following the existing trail on the water side of businesses and homes.

Impact Analysis

The full impact analysis for the Proposed Project Alternative can be found in Chapter 0, Environmental Setting, Impacts, and Mitigation Measures. The Proposed Project Alternative would have significant and unavoidable impacts to cultural and tribal cultural resources because the project footprint includes an identified archeological resource that may also be identified as a TCR. Potential impacts on aesthetics, air quality, aquatic and terrestrial biological resources, hazards and hazardous materials, hydrology and water quality, noise, and traffic/transportation would also occur, but those impacts would be reduced to a less-than-significant level with the implementation of identified mitigation measures.

4.5.3 1998 SGDM Increment 2 Alternative

Alternative Description

The SGDM Increment 2 Alternative follows the design for Increment 2 as described in the 1998 SGDM. The design for this alternative includes the same four distinct segments as the Proposed Project Alternative, including floodwalls for much of the same alignment. The design differs in the Lake Park area, where it includes a berm or levee instead of a floodwall, as well as using significantly more rock in the scour protection at the Lincoln Avenue Bridge.

Differences between the SGDM Increment 2 Alternative and the Proposed Project Alternative follow, broken down by the same four distinct segments as above:

The Dry Bypass

Both the SGDM and the Proposed Project consist of new floodwalls constructed in the existing gaps in the northwestern side of the bypass floodwalls. Where the SGDM and current project differ is the existing gap between Soscol Avenue and the Napa Valley Wine Train Bridge embankments. The SGDM proposed floodwalls to close the gap between the two embankments with a 350-cfs capacity pump station located on the protected side of the floodwall to address the existing drainage outfalls in the area. The current project proposes a new outfall control structure with a manually operated sluice gate constructed in line with the floodwalls.

South of Lincoln Avenue

Both the SGDM and the Proposed Project consist of new floodwalls along the western bank of the Napa River starting at high ground at the Napa River Terrace Inn extending north along the western

bank then runs around the landside of Ace & Vine and Pet Hospital and tying into the Lincoln Avenue bridge. A new paved waterside recreational trail would be constructed for this segment connecting the existing river side recreational trail south of the River Terrace Inn to the existing river side recreational trail north of Lincoln. Where the two projects differ is in the finer details of the features. For the SGDM, the waterside trail is proposed to run waterward of both Ace & Vine and the Pet Hospital and underneath the Lincoln Avenue bridge before connecting to the existing trail north of Lincoln Avenue. The Proposed Project has the waterside paved trail crossing the floodwall alignment through a stoplog closure structure just south of Wall Street running landside of the floodwall in the 15-foot O&M corridor up to Lincoln Avenue, where it crosses Lincoln Avenue with a mid-block crossing. Additionally, the SGDM only proposed a single floodgate providing access to both Ace & Vine and the Pet Hospital, whereas the current project provides two floodgates, one for each parcel access.

Lincoln Avenue Bridge

Both projects include scour protection improvements for the Lincoln Avenue Bridge. The SGDM proposed a revetment up the banks of each side of the river and across the channel invert for a total length of 150 feet of the streambed. The rock was sized to have a D50=18-inches over 9-inches of bedding material. The SGDM did not mention the thickness of the layer of rock placed, but typically the minimum thickness is a multiple of the size of the D50 on the order of 2.5-3 times, so it is assumed roughly to have a thickness on the order of 3.75 to 4.5 feet. The City has since provided scour protection in the form of a concrete apron on either side of the river directly under the bridge. However, bridge pier scour was found to still be a concern, so the current project proposes a revetment around each bridge pier. The rock has been sized to have the same D50=18-inches over 10-inches of bedding material, placed to a thickness of 5-feet and to a width of 12-feet wide around each pier. The footprint of scour protection proposed under the Proposed Project for the Lincoln Avenue Bridge, even including the concrete aprons installed by the City, is less than half of what was proposed under the SGDM.

North of Lincoln Avenue

Of the four defined segments of Increment 2, the one that deviates the most from the SGDM to the current project is the North of Lincoln segment. Both consist of providing flood protection from the Lincoln Avenue Bridge around the RiverPointe parcel and through the Lake Park and River Glenn subdivisions and tying into high ground at Elks Way. However, the alignment and methods of providing flood protection for this reach vary greatly between the two projects.

For the RiverPointe segment, a significant erosion problem exists, with the banks eroding away to near vertical at some locations. The SGDM proposed to stabilize this location through the reconstruction of the bank slope for the areas that have eroded away, provision of scour protection with the replanting of vegetation and biotechnical measures, redirection of river flows away from the west bank by excavating the channel bottom and realigning the river channel flowline across a point bar on the east side of the river, and construction of a floodwall on top of the stabilized bank. The floodwall would extend through this reach and tie into a levee around the Lake Park subdivision.

The current project eliminates all bank stabilization and in-water work for this area with construction of a new floodwall alignment that has been setback from the eroded banks sufficiently enough such that in the event of continued slope failure the floodwall footing would not be undermined. This setback of the floodwall alignment, however, requires the removal of a row of tiny home pads and

utility services in the RiverPointe parcel. The floodwall would extend through this reach and continue north into the existing levee embankment around the Lake Park subdivision.

For the RiverPointe reach, both the SGDM and the current project would reconstruct a new paved waterside trail. The only difference between the two is that the SGDM-proposed trail would cross under the Lincoln Avenue bridge, while in the current project, the trail crosses the floodwall alignment through a stoplog structure near the current Napa River trailhead on the north side of Lincoln Avenue and then crossing Lincoln Avenue with a mid-block crossing as noted above.

For the Lake Park subdivision, the SGDM proposed a levee raise of three feet in height for a new levee meeting the current USACE levee design standards for the full length of the Lake Park subdivision. This new levee would be located within an existing City-owned flood easement located in the backyards of 25 parcels for this reach and would extend up to just south of the River Glenn townhomes, where the levee would transition to a floodwall. To construct the proposed levee would require the complete degrade of the existing levee that would impact the backyards of these parcels, shifting the levee alignment waterward 15-feet minimum from the existing City flood easement to allow for the construction of a 15-foot wide O&M road at the landside toe of the levee embankment (in the backyards of the adjacent parcels), and the construction of a new levee with 3:1 slopes (waterside and landside), a 15-foot wide crown and rock scour protection placed on the face of the waterside slope of the new levee embankment. Additionally, the existing Napa River Trail would be shifted to be located off the waterside toe of the levee. The existing Lake Park subdivision levee and the areas immediately waterward are heavily vegetated with mature trees and plants, so the construction of a new levee would require the removal of a significant amount of valuable riparian vegetation. Finally, there is an existing 36-inch waterline that would be relocated within the landside O&M road before crossing under the levee and ultimately under and across the river at its current location.

For the Lake Park area, the current project proposes to construct a new floodwall that is embedded within the waterside slope of the existing levee embankment roughly 15 feet waterward of the existing backyard fences on top of the existing levee crown and would extend up to just south of the River Glenn townhomes, where the floodwall would transition from a concrete T-wall to a sheetpile I-wall. The area between the existing fence line and new floodwall would be backfilled to be roughly flush with the top of the existing levee crown and would be surfaced with aggregate to serve as the O&M patrol road. This would minimize the impact to the backyards of the 25 parcels through this reach, allowing the homeowners roughly the same use of their backyards as they do currently. This also would minimize the riparian vegetation impacts to those located on the existing levee embankment and near the existing Napa River Trail, which would largely remain in its original location as it would only require the reconstruction of damaged portions of the trail. Finally, the existing 36-inch waterline would be required to cross through the floodwall roughly where it transitions to a sheetpile wall and then relocated to the waterside of the existing Napa River Trail.

For the River Glenn townhome section, the SGDM proposed a concrete T-Floodwall that is located roughly 15 feet waterward of the existing townhome backyard fence line that extends all the way up to the Elks Lodge. Along the waterside face of the floodwall rock scour protection would be placed and the existing trail would be reconstructed. Similar to the SGDM, the proposed floodwall alignment of the current project would be located roughly 15 feet waterward of the existing townhome backyard fence line, but the floodwall would be a steel sheet pile I-Floodwall with a concrete cap instead of being a concrete T-Floodwall. Finally, instead of terminating at the rear of the Elks Lodge, the

floodwall would terminate in high ground at the north end of the River Glenn townhomes roughly at Elks Way.

Impact Analysis

Due to the increased footprint in the Lake Park area, gap closures, and proposed rock scour used at the Lincoln Avenue Bridge, the SGDM Increment 2 Alternative would result in greater construction-related impacts compared with the Proposed Project Alternative. These include impacts to air quality and GHG emissions, noise, and traffic/transportation. The increased amount of rock used for scour protection would increase impacts to aquatic biological resources. The increased height of the levee as compared to the floodwall would have a greater impact on aesthetics.

4.6 Environmentally Superior Alternative

CEQA Guidelines Section 15126.6 requires that an “environmentally superior” alternative be selected among the alternatives that are evaluated in the EIR. Generally, the environmentally superior alternative is the alternative that would be expected to generate the fewest adverse impacts. Of the alternatives evaluated, the No Project Alternative is the environmentally superior alternative because it would avoid all construction-related impacts of the Proposed Project. However, the No Project Alternative would not meet the objectives, purpose and need of the project related to flood protection.

In cases when the No Project Alternative is the environmentally superior alternative, an EIR must also identify an environmentally superior alternative from among the other alternatives (State CEQA Guidelines Section 15126.6[e][2]). Accordingly, in addition to the No Project Alternative, the Proposed Project Alternative is considered the other environmentally superior alternative. As shown in **Table 4.5-1**, the Proposed Project meets the project objectives, purpose and need, and would result in less environmental impacts than the SGDM Increment 2 Alternative. However, for full flood protection, implementing all increments of the Project is necessary, as Increment 2 alone would not fully protect the community.

5 Cumulative Impacts and Other CEQA Considerations

5.1 Introduction

CEQA requires the consideration of cumulative impacts of the Proposed Project, together with the effects of other projects causing related impacts. The CEQA Guidelines define cumulative impacts as “two or more individual effects which, when considered together, are considerable or compound or increase other environmental impacts” (CEQA CCR, Title 14, Section 15355).

The cumulative impacts of the Overall Flood Protection Project were addressed in Section 6.2 of the 1999 Final SEIS/EIR, incorporated by reference. The cumulative impacts analysis below considers the effects of the Proposed Project when combined with other projects in the area. The projects included within this section would affect similar habitats or resources as the Proposed Project, both temporally and geographically. If the projects are not expected to contribute to a cumulative impact on a resource area, then that resource area is not included in the analysis. **Table 5.2-1** lists resources considered in the cumulative impacts analysis and the geographic scope of the analysis.

5.2 Past, Present, and Reasonably Foreseeable Future Projects

This section briefly describes other similar or related projects, focusing on development, flood-risk reduction, and habitat restoration projects that have similar effect mechanisms and affect similar resources as the Proposed Project, with project refinements. Reasonably foreseeable future projects are considered in this analysis. Past and present projects and activities have contributed on a cumulative basis to the existing environment within the Proposed Project Area.

Major past, present, and probable future projects were considered for this analysis, including projects under the county and regional plans and regional projects for which USACE has provided approval or is in the process of considering Section 408 permission. Each of these past, present, and probable future projects must be considered in the context of environmental effects from the Proposed Project to evaluate the cumulative impacts of this project and other similar projects on the environment.

After consideration, the projects determined to be relevant for this cumulative impacts analysis include Increment 3, Riverside Drive - Imola Avenue to the Hatt Building Floodwalls), as well as the Cinedome Master Plan. Previous segments of this Overall Flood Protection Project are described in Appendix A, *Project Background*. A subsequent NEPA and CEQA document will be prepared to evaluate Increment 3, Riverside Drive – Imola Avenue to the Hatt Building Floodwalls, design changes when they become available, hence it is reasonably foreseeable and should be considered in the cumulative context. These relevant projects are discussed in detail below in **Table 5.2-1**.

Table 5.2-1. Cumulative Impacts of Other Relevant Projects

Project	Description
Increment 3, Riverside Drive – Imola Avenue to the Hatt Building Floodwalls	This future phase involves construction of Increment 3, Riverside Drive – Imola Avenue to the Hatt Building Floodwalls along the west bank of the river on Riverside Drive, south of downtown to Imola Avenue. This increment was included in the USACE Authorized Project and evaluated in the 1999 Final SEIS/EIR.
Cinedome Master Plan	The City of Napa Cinedome Master Plan is a guide for development in the Cinedome Focus Area, a 4.5-acre collection of parcels in downtown Napa along the Napa River around Main Street and First Street. If each site in the Cinedome Master Plan were developed to the full potential outlined in the plan, up to an additional 22,000 square feet of new retail and restaurant space, 45 new housing units, 65,000 square feet of office space, and 500 new off-street parking spaces would be developed. This plan does not have a defined timeline, but it has geographical overlap with the Proposed Project (City of Napa 2018).

5.3 Cumulative Impacts

Some resources were not analyzed in detail in this SEIR, either because environmental impacts would be negligible, or because the Proposed Project would not create new or substantially more significant environmental effects from those analyzed in the 1999 Final SEIS/EIR. The resource-specific cumulative impact analysis is provided in **Table 5.3-1** below. These analyses consider the potential effects of the cumulative activities described in Section 5.2, combined with those of the Proposed Project discussed in Chapter 0.

Table 5.3-1. Proposed Project Cumulative Impacts

Resource Area	Cumulative Impacts Analysis
Aesthetics/Visual Resources	The Proposed Project has either no impact or less than significant impact to aesthetics. While the local projects identified above could cause a cumulative loss of visual quality during construction, they are unlikely to permanently degrade the visual quality of the area. Therefore, the Proposed Project does not cumulatively contribute to an impact to aesthetics.
Air Quality	Air pollutant emissions from the Proposed Project would combine with other local construction projects scheduled for the same construction seasons to create a cumulative effect. However, neither Increment 3 nor the Cinedome Master Plan construction timelines overlap with the Proposed Project, and therefore would not cumulatively contribute to air pollutant emissions. The Proposed Project would have a less than significant impact after the implementation of mitigation. As a result, the Proposed Project would not contribute a cumulative impact to air quality.

Resource Area	Cumulative Impacts Analysis
Fisheries and Aquatic Biological Resources	Activities associated with the reasonably foreseeable future projects and the Proposed Project could result in potentially significant cumulative impacts on aquatic biological resources and fisheries. Fisheries and Aquatic Biological Resources, the implementation of BMPs and avoidance, minimization and mitigation measures would lessen any potentially significant impacts of the Proposed Project to less than significant. Impacts from the other projects considered in this analysis would be similar and would require similar environmental review to identify and mitigate specific impacts. Therefore, the Proposed Project would not contribute a cumulative impact to fisheries and aquatic biological resources with the implementation of mitigation.
Cultural Resources	Ground disturbance associated with each of the aforementioned projects and the Proposed Project could result in potentially significant cumulative impacts on previously recorded and/or newly discovered cultural resources if identified within the footprint of each project. As described in Section 3.5, Cultural Resources, the Proposed Project has a significant and unavoidable impact even with mitigation. Implementing the mitigation measures outlined in that section would minimize, to the extent possible, the contribution of the Proposed Project to impacts on cultural resources meeting one of the significance criteria of the CRHR. With similar considerations and mitigation on other cumulative projects, the Proposed Project would not contribute a cumulative impact to cultural resources.
Geology and Soils	Cumulative projects identified in this chapter could result in damage to life and property from geologic and soils-related hazards during construction activities such as grading, excavations, or other ground disturbing activities. These hazards would be project-specific, and it is not anticipated that these impacts would combine across projects to create additional public risk. Cumulative projects would require individual environmental review, with project-specific analysis to evaluate the geologic- and soils-related hazard risks. Cumulative projects would be subject to applicable regulations, building codes, and construction standards that are designed to reduce geology and soils-related hazards. Additionally, none of the cumulative projects include septic tanks or alternative wastewater disposal systems. Therefore, the Proposed Project would not contribute a cumulative impact to geology and soils.

Resource Area	Cumulative Impacts Analysis
Greenhouse Gas Emissions and Climate Change	<p>The cumulative effect of human activities has been linked to quantifiable changes in the composition of the atmosphere, which in turn have been shown to be the main cause of global climate change. Therefore, the analysis of the environmental effects of GHG emissions is inherently a cumulative impact issue. While the emissions of one single project would not cause global climate change, GHG emissions from multiple projects throughout the world are causing a cumulative effect with respect to global climate change.</p> <p>The reasonably foreseeable future projects do not temporally overlap with the Proposed Project; therefore, the Proposed Project would not contribute a cumulative impact to GHG emissions and climate change.</p>
Hazards and Hazardous Materials	<p>Effects associated with hazardous wastes would be site-specific and would not combine with effects from other projects to create a cumulative effect.</p>
Hydrology and Water Quality	<p>The reasonably foreseeable future projects could cumulatively contribute to effects to water quality resulting from the combined effects of waterside construction on the Napa River. Any potential impacts from the Proposed Project would be less than significant. Impacts from other cumulative projects would be subject to appropriate permitting and environmental review and are not anticipated to significantly impact hydrology and water quality. Therefore, the Proposed Project would not contribute a cumulative impact to water quality.</p>
Noise	<p>The future projects identified in this chapter are not planned to be constructed at the same time as the Proposed Project. O&M of the Proposed Project would not create a noise impact; therefore, the Proposed Project would not contribute a cumulative impact to noise.</p>
Recreation	<p>There are no known planned projects that would impact recreation in the vicinity of the Proposed Project. The Proposed Project would result in the temporary closure of the Napa River Trail, and a detour would be set up during construction. The Napa River Trail would be reconstructed on the waterside after the floodwalls are constructed. No long-term effects would occur to recreational facilities; therefore, the Proposed Project would not contribute a cumulative impact to recreation.</p>

Resource Area	Cumulative Impacts Analysis
Terrestrial Biological Resources	Activities associated with the reasonably foreseeable future projects and the Proposed Project could result in potentially significant cumulative impacts on terrestrial biological resources, including special-status species, sensitive natural communities, and state or federally protected wetlands. Implementing the mitigation measures listed in Section 3.13, Terrestrial Biological Resources, would reduce the Proposed Project's potential contribution to cumulative impacts to a less than significant level. Impacts from the cumulative projects considered would be similar, and they also would require similar environmental review that would identify and mitigate for specific impacts. Therefore, the Proposed Project would not contribute a cumulative impact to terrestrial biological resources with the implementation of mitigation.
Traffic/Transportation	The reasonably foreseeable future projects would not temporally overlap with the Proposed Project. Therefore, it is reasonable to assume that temporary transportation impacts would not conflict with or overlap each other. Cumulative projects, including the Proposed Project, would not include any permanent impacts to emergency response routes. Therefore, the Proposed Project would not contribute a cumulative impact to transportation.
Tribal Cultural Resources	Similar to Cultural Resources, the issue that must be explored in a cumulative analysis is the cumulative loss of information. The Proposed Project has a significant and unavoidable impact even with mitigation incorporated. Implementing the mitigation measures outlined in that section would minimize, to the extent possible, the contribution of the Proposed Project to impacts on tribal cultural resources. With similar considerations and mitigation on other cumulative projects, the Proposed Project would not contribute a cumulative impact to tribal cultural resources.
Utilities and Service Systems	The Proposed Project would result in less than significant impacts to utilities. Cumulative projects would involve ground-disturbing work that could encounter utility infrastructure. However, it is assumed that cumulative projects could avoid, restore, or replace electrical or telecommunications infrastructure or stormwater drainage facilities, and that exposed ground from construction activities would be restored to its pre-construction condition. Therefore, the Proposed Project would not contribute a cumulative impact to utilities.

5.4 Growth-Inducing Impact

Because the Proposed Project with refinements would not involve construction of housing, it would not directly induce growth. Furthermore, the project would not involve constructing commercial

businesses or industrial facilities, nor would it extend roadways or other infrastructure that could indirectly induce population growth. Project-related construction activities would generate only temporary and short-term employment, but these construction jobs are anticipated to be filled from the existing local employment pool and would not indirectly result in a population increase. Consequently, the Proposed Project with refinements would not induce growth leading to changes in land use patterns, population densities, or related impacts on environmental resources.

Floodwall construction would benefit areas identified for future growth anticipated in the vicinity of the Napa River in the City of Napa. Local land use decisions are within the jurisdiction of the City of Napa, which has adopted a general plan consistent with state law. The City of Napa 2040 General Plan (City of Napa 2022) provides an overall framework for growth and development in the City.

The floodwall construction would provide reduced flood risk for growth anticipated in the City's General Plan. The Proposed Project would not allow additional growth outside of what has already been planned, nor would it change the locations where growth is planned. Consequently, implementation of the Proposed Project would not affect current and/or projected population growth patterns. As such, the Proposed Project would not be growth-inducing. The Proposed Project would mitigate flood risks, but it would not directly or indirectly support development in the base floodplain.

5.5 Irreversible and Irretrievable Commitment of Resources

The CEQA Guidelines Section 15126.2(c) requires discussion of potentially significant irreversible environmental changes stating: "Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified."

The Proposed Project would result in potentially significant irreversible environmental changes for the following resources during construction, operations, and maintenance:

- Construction materials, including such resources as wood, rock, soil, and metal
- Energy consumed in the form of electricity, gasoline, diesel fuel, oil, and lubricants for construction equipment, construction vehicles, and worker vehicles
- Permanent changes in the visual resources and landscape character of lands where Project facilities would be located
- Effects on biological resources and cultural resources at Project facility locations

Certain materials used for the Proposed Project are considered nonrenewable resources because reuse is either not possible or is highly unlikely. Nonrenewable resources expended for the Proposed Project nonetheless account for a minimal portion of the region's such resources, and the use of these resources would not cause scarcity or otherwise affect the availability of these resources to meet other needs in the region.

6 List of Preparers

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HDR		
Anna Clabaugh	Biologist	Aquatic Biological Resources
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Brian Fedrow	Technical Editor	Document Editing
Danielle Tannourji	Senior Biologist	Biological Resources Technical Review
David Clinnick	Cultural Resources Specialist	Cultural Resources and Tribal Cultural Resources
Eliza Schlein	Biologist	Special-status Species; Vegetation and Wildlife
Hillary Rolf	Environmental Planner	Purpose and Need; Alternatives; Regulatory Setting; Cumulative Impacts
John Lloyd	Senior Cultural Resources Specialist	Cultural Resources and Tribal Cultural Resources Review
John Spranza	Senior Biologist	Aquatic Biological Resources Review
Linda Fisher	Environmental Project Manager	CEQA/NEPA Technical Review
Matthew Galbraith	GIS Specialist	Geographical Data and Mapping
Natalie Bogan	Senior Environmental Planner	Aesthetics and Visual Resources; Environmental Justice; Hazardous, Toxic, and Radiological Waste; Land Use and Agriculture; Recreation; Socioeconomics; Water Resources; Water Quality and Wetlands; Water Rights
Hannah Sanders	Environmental Planner	Documentation preparation and coordination

The USACE Sacramento District Staff have also contributed to the preparation of this SEIR.

7 References

Chapter 1

No references are included in this Chapter.

Chapter 2

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Chapter 3

3.3 Aesthetics

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Appendix A. Project Background

Appendix A – Project Background

Original Project Authorization

The Napa River/Napa Creek Flood Protection Project was authorized by Congress in Section 204 of the Flood Control Act of 1965 (Pub. L. No. 89-298, 79 Stat. 1073, 1084 (October 27, 1965) for the purposes of flood control and recreation substantially in accordance with the 1965 Chief of Engineers Report for the Napa River Basin (H. Doc. 89-222). The Act reads in relevant part as follows:

Section 204. The following works of improvement for the benefit of navigation and the control of destructive floodwaters and other purposes are hereby adopted and authorized to be prosecuted under the direction of the Secretary of the Army and supervision of the Chief of Engineers in accordance with the plans of the respective reports hereinafter designated and subject to the conditions set forth therein: ...

The project for the Napa River, California, is hereby authorized substantially in accordance with the recommendations of Chief of Engineers in House Document Numbered 222, Eighty-ninth Congress, ...

The Chief of Engineers' recommendations contained in House Document 222 are based on the 1963 report "Review and Report for Flood Control and Allied Purposes." In House Document 222, the project authorization is for an 11-mile segment of the Napa River extending from Edgerly Island south of SR 29 to Trancas Street in the City of Napa. The development of recreational facilities is included as part of the original 1965 authorization. This design was transmitted in a General Design Memorandum (GDM) on December 8, 1970, by the District Engineer, San Francisco District, USACE, to the state Director of Water Resources. This plan met with considerable resistance from local citizens and was substantially altered to alleviate environmental problems regarding aesthetics, recreation, and river access.

During the 1972–73 session of the California Legislature, the Assembly passed an urgency measure, AB 60, which authorized state funding for the 1970 GDM version of the project. This bill also granted local authority to the District to implement the project. Key to this implementation was that local authorities accepted responsibility, as stipulated in the 1965 Flood Control Act, for easements, rights-of-way, liability, operation and maintenance costs, utilities and bridge modifications, water rights, access land donation, shared recreational costs, mitigation costs, and operating responsibilities, among others.

In a subsequent GDM in 1975, USACE developed a new design for the Overall Flood Protection Project (the 1975 proposal) that incorporated input from local interests. An Environmental Impact Statement (EIS) for the Overall Flood Protection Project, based on this 1975 proposal, was completed in 1975.

The 1975 proposal consisted of straightening (also known as "rectification") the Napa River channel and channel widening and deepening. The existing oxbow was to be eliminated entirely. Riverbanks were to be lined with riprap in most areas. This project alternative was analyzed in depth in the 1975 EIS.

Napa County held a referendum in 1976 to determine the acceptability of the 1975 proposal, which was narrowly defeated. In another referendum in 1977, project construction was opposed by a

slightly wider margin. Consequently, in 1977, the Overall Flood Protection Project was placed on inactive status by USACE at the request of the District.

Authorization for Mitigation Lands and Napa Creek Flood Damage Reduction

Prior to the above-referenced referendum, the project was subsequently modified by Section 136 of the Water Resources Development Act of 1976 (Pub. L. No. 94-587, 90 Stat. 2917, 2929 (October 22, 1976)) to include the addition of Napa Creek and the acquisition of 577 acres of land for the purpose of mitigating adverse impacts to fish and wildlife caused by the project. The law reads in relevant part as follows:

Section 136. (a) The project for flood control on the Napa River, Napa County, California, authorized by section 204 of the Flood Control Act of 1965, is hereby modified to authorize and direct the Secretary of the Army, acting through the Chief of Engineers, to acquire approximately 577 acres of land for the purpose of mitigating adverse impacts on fish and wildlife occasioned by the project....

(b) Such project is further modified to include construction...of the Napa Creek watershed project of the Soil Conservation Service approved June 25, 1962....

In 1987, after the devastating flood of 1986, the District petitioned USACE and Congress to reactivate the Napa River Flood Protection Project in letters dated February 9 and April 9, 1987. In response, USACE generated a Plan of Action in December 1988 that presented descriptions, cost estimates, background information, and scheduling of Preconstruction and Engineering Design (PED). In 1989, a Notice of Intent to prepare an EIS was posted in the Federal Register. During a General Design Conference held on January 12, 1989, USACE decided that a federal interest in the project still existed. Consequently, USACE initiated PED activities in fiscal year 1989.

This effort culminated in the preparation of a first Draft Supplemental General Design Memorandum (SGDM). A Notice of Preparation to prepare an EIR was developed in 1994, and scoping was conducted at this time to solicit agency and public input. In April 1995, a Draft SEIS/EIR was released for public review. The 1995 SGDM relied primarily on channel bottom deepening and widening as means of flood control, and it also incorporated a “wet bypass” that would divert the Napa River from the downtown oxbow at all times.

The 1995 proposal generated numerous comments from both citizens and resource protection agencies. The major comments dealt with salinity intrusion due to deepening the channel, degradation of water quality in the river oxbow due to constructing the wet bypass channel, disposal of contaminated dredge material, and deficiencies in the environmental analysis. Because of these concerns, four public agencies (U.S. Department of the Interior, California Department of Fish and Game [now Wildlife], San Francisco Bay Regional Water Quality Control Board, and California State Lands Commission) specifically requested that the SEIS/EIR be reissued for additional public review to comply with NEPA and CEQA.

The 1995 project alternative, which was analyzed in depth in the 1995 Draft SEIS/EIR, was summarized and compared with the new preferred alternative, proposed in the 1998 Draft SGDM, in the 1999 Final SEIS/EIR.

1999 Final SEIS/EIR

Because of the large amount of public concern regarding the 1995 proposal, the District and local groups created a community-wide coalition to foster community consensus regarding the project design and to initiate a collaborative process with the local community and resource agencies to refine the Overall Flood Protection Project. The 1995 Draft SEIS/EIR was reissued for public review from December 1997 to February 1998. A public meeting was held in 1998.

The community coalition, with the assistance of outside consultants, resource agency personnel, City of Napa and Napa County staff, and USACE, developed the major concepts of the 1999 Final SEIS/EIR's preferred alternative, which meets the dual objectives of flood damage reduction and environmental restoration, to eliminate the primary concerns related to the 1995 proposal.

The 1999 Final SEIS/EIR's preferred alternative was described in detail in the 1998 Final SGDM. The SGDM presents the results of engineering and design studies conducted for flood control improvements along the Napa River and serves as the official project description in the 1999 Final SEIS/EIR. The design and studies in the 1998 Final SGDM were conducted to determine the most economical plan for conveying the computed 100-year flood event, minimizing environmental impacts, and meeting applicable government standards for the flood-control improvements.

The 1999 Final SEIS/EIR's preferred alternative (the Authorized Project) is significantly different from the 1975 and 1995 proposals. South of Imola Avenue, the 1999 Final SEIS/EIR's preferred alternative consists of lowering dikes on the west side of the Napa River south of downtown and setting back dikes and levees on the east side of the river to increase conveyance. It also includes widening the river up to Third Street through creation of marshplain and floodplain terraces, both of which would also provide additional floodway capacity. In addition, the 1999 Final SEIS/EIR's preferred alternative includes constructing a Dry Bypass at the oxbow of the river, constructing new flood-walls and levees along the Napa River north of Imola Avenue, and adding flood management features to Napa Creek downstream of Jefferson Street. The 1999 Final SEIS/EIR's preferred alternative as developed to provide protection from the computed 100-year flood water surface elevation in most of the City of Napa.

A summary of the impacts for each resource area evaluated in the 1999 Final SEIS/EIR is presented below. The resource areas that were not evaluated in detail in the 1999 Final SEIS/EIR are also described below.

Aesthetics/Visual Factors

Aesthetics and visual factors were evaluated in the 1999 Final SEIS/EIR, but impact criteria have changed since the previous analysis. The 1999 Final SEIS/EIR discussed the visual effects of construction of levees and floodwalls. Mitigation was provided for the Overall Flood Protection Project in the 1999 Final SEIS/EIR for some aspects and those mitigation measures still apply.

The 1999 Final SEIS/EIR concluded that views from the Napa Valley RV Resort would be impaired with construction of a 10-foot-high floodwall (Visual-6). Visitors to the RV resort currently enjoy views of the river, which would no longer be present with implementation of the Overall Flood Protection Project 1999 Preferred Alternative. As a result, this was identified as a significant and unavoidable impact in the 1999 Final SEIS/EIR. Significant aesthetic and visual impacts were also identified for grading of terrace banks and construction of levees; the unsightly placement of excavated material; removal of landmark trees or significant stands of trees; and impeded views between the pet hospital

and the traffic on Lincoln Avenue. These impacts were reduced to less than significant levels with implementation of mitigation measures.

Air Quality

Air quality impacts were evaluated in the 1999 Final SEIS/EIR, but impact criteria have changed since the previous analysis. It evaluated the effects of construction activities, including construction vehicle traffic and wind blowing over exposed earth generating particulate matter emissions. Mitigation was provided for some aspects, and those mitigation measures still apply. It concluded that air quality emissions would be generated due to construction activities, but the impacts would be less than significant after implementation of mitigation.

Cultural Resources

Cultural resources impacts were evaluated in the 1999 Final SEIS/EIR. The 1999 Final SEIS/EIR evaluated the effects of construction activities, including construction of the proposed floodwall through site P-028-000218. Mitigation was provided for the effects to site P-028-000218 and Mitigation Measure Cultural-7 still applies. The 1999 Final SEIS/EIR concluded that cultural resources impacts would be significant but would be less than significant after implementation of mitigation.

Fisheries and Aquatic Biological Resources

Impacts to aquatic biological resources were evaluated in the 1999 Final SEIS/EIR, but impact criteria have changed since the previous analysis. The 1999 Final SEIS/EIR evaluated the effects of construction and operation activities on aquatic and riparian species. Mitigation was provided for some aspects, and those mitigation measures still apply. The 1999 Final SEIS/EIR concluded that there would be impacts including loss of important habitat, loss of woody vegetation, and effects to fisheries and other aquatic species, but the impacts would be less than significant after implementation of mitigation and the various permitting requirements associated with the Overall Flood Protection Project.

Geology and Soils

Geology and soils impacts were examined in the 1999 Final SEIS/EIR, but impact criteria have changed since the previous analysis. Results of the 1999 Final SEIS/EIR analysis indicated that Overall Flood Protection Project would not result in impacts to geology and soils, as documented in Section 6.5 of the 1999 Final SEIS/EIR. Therefore, geology and soils were not addressed in detail in the 1999 Final SEIS/EIR. The basis for this dismissal was that geotechnical evaluations have and will provide sound design for all project structures and facilities, and that there were no anticipated significant impacts to or from geology with implementation of the 1999 Preferred Alternative of the Overall Flood Protection Project. Paleontological resources were not analyzed in the 1999 Final SEIS/EIR.

Greenhouse Gas Emissions and Climate Change

Greenhouse gas emissions and climate change were not analyzed in the 1999 Final SEIS/EIR because there were no requirements or guidelines for analysis at that time under CEQA or NEPA, which has now changed.

Hazards and Hazardous Materials

Hazardous substances were analyzed in the 1999 Final SEIS/EIR, but impact criteria have changed since the previous analysis. Results of the analysis in the 1999 Final SEIS/EIR indicated that significant impacts would occur from the routine transport, use, or disposal of hazardous materials; and accident conditions involving the likely release of hazardous materials into the environment. Mitigation measures were proposed to reduce these impacts to a less than significant level, and these measures still apply. Additional impacts were identified related to several remediation sites that were identified in the Overall Flood Protection Project footprint. Mitigation measures were established in the 1999 Final SEIS/EIR to address impacts related to these sites and would be applicable to the Proposed Project evaluated in this SEIR if they are encountered in the current Proposed Project Area. The potential for encountering contaminated soil and PCBs due to relocation or power lines and removal of transformers was also identified in the 1999 Final SEIS/EIR and mitigation measures were identified for soil sampling and disposing of any contamination accordingly, and these measures still apply.

Hydrology and Water Quality

Hydrology and water quality impacts were evaluated in the 1999 Final SEIS/EIR, but impact criteria have changed since the previous analysis. Results of the analysis in the 1999 Final SEIS/EIR indicated that implementation of the Overall Flood Protection Project would provide protection from the computed 100-year storm event in most of the city of Napa. This is considered a beneficial impact. The 1999 Final SEIS/EIR also indicated that construction activities have the potential to temporarily increase turbidity and suspended sediments in the Napa River, and that degradation of runoff water quality due to point source pollutants that could emanate from the Proposed Project Area during construction activities would add cumulatively significant water quality impacts to Napa River. These impacts would require mitigation to reduce significant impacts to a less than significant level. All impacts in the Hydrology and Water Quality section of the 1999 Final SEIS/EIR were reduced to a less than significant level with mitigation.

Noise and Vibration

Noise impacts were evaluated in the 1999 Final SEIS/EIR, but impact criteria have changed since the previous analysis. The 1999 Final SEIS/EIR evaluated whether construction of the Overall Flood Protection Project could generate noise and disturb local receptors. The 1999 Final SEIS/EIR determined that the Overall Flood Protection Project would result in a significant and unavoidable impact because construction activities would generate noise that would expose residential neighborhoods to sound levels above existing ambient noise levels. Mitigation measures Noise 1-a through 1e were established in the 1999 Final SEIS/EIR to address construction impacts and would be applicable to the Proposed Project evaluated in this SEIR as well.

Recreation

Recreation impacts were evaluated in the 1999 Final SEIS/EIR. The 1999 Final SEIS/EIR determined that the project would have a beneficial effect due to the expansion of the multi-use recreation trail. The 1999 Final SEIS/EIR also evaluated the potential impacts of the trail alignment and construction. The 1999 Final SEIS/EIR concluded that the project would result in a less than significant impact after coordination with the California Department of Fish and Wildlife due to the trail alignment and construction. Various mitigation measures are proposed for project-related

biological resources effects, presumably for the trail in the 1999 SEIS/EIR. The previous biological resources mitigation measures in the 1999 Final SEIS/EIR still apply.

Terrestrial Biological Resources

Impacts to terrestrial biological resources were evaluated in the 1999 Final SEIS/EIR, but impact criteria have changed since the previous analysis. The 1999 Final SEIS/EIR evaluated the effects of construction and operation activities on terrestrial species. Mitigation was provided for some aspects, and those mitigation measures still apply. The 1999 Final SEIS/EIR concluded that there would be impacts including loss of important habitat, loss of woody vegetation, and effects to terrestrial species, but the impacts would be less than significant after implementation of mitigation and the various permitting requirements associated with the Overall Flood Protection Project ultimately authorized.

Traffic/Transportation

Traffic and transportation impacts were evaluated in the 1999 Final SEIS/EIR, but impact criteria have changed since the previous analysis. The 1999 Final SEIS/EIR concluded that after implementation of the 1999 preferred alternative, a number of intersections and roadways would operate at unacceptable levels of service or that detours would result in unacceptable operations. The 1999 Final SEIS/EIR also concluded that after implementation of the 1999 preferred alternative, loss of parking in downtown Napa would result in a potentially significant impact. Mitigation Measures TRAFFIC-1 through TRAFFIC-9 were provided to reduce these impacts to less than significant. These impacts were not identified within the Proposed Project Area evaluated in this SEIR, and therefore, are not generally applicable.

Tribal Cultural Resources (TCR)

TCRs were not analyzed in the 1999 Final SEIS/EIR because there were no requirements or guidelines for analysis at that time under CEQA. Tribal Cultural Resources are defined under California Public Resources Code § 21080.3.1.

Utilities and Service Systems

Utilities impacts were evaluated in the 1999 Final SEIS/EIR, but impact criteria have changed since the previous analysis. The 1999 Final SEIS/EIR evaluated removal, abandonment, modification, relocation or protection existing of gas, water, sewer, power, communication and storm drainage lines in the Overall Flood Protection Project. The 1999 Final SEIS/EIR stated where possible, required relocations would be accomplished prior to construction of the 1999 Preferred Alternative and some utility relocations would require the work to be phased with construction of the flood management facilities to preclude construction delays. Project construction was to be coordinated with service providers to ensure that disruptions in utility services are not significant. This assessment and the utility service provider coordination efforts are still applicable to the Proposed Project evaluated in this SEIR.

Previous Environmental Documentation

Below is a list of previously completed environmental documentation relating to the Proposed Project.

- USACE 1975 Napa River Flood Control Project EIS. San Francisco District, California.

- USACE 1995 Napa River Flood Control Project Draft EIS.
- USACE 1997 Napa River Flood Control Project Revised Draft EIS/EIR.
- USACE and the District 1999 Napa River/Napa Creek Flood Protection Project Final SEIS/EIR. Sacramento District, California.
- USACE and the District 2001 Napa River Flood Protection Project Railroad Relocation and Detour Final Revised Supplemental EA/EIR.
- USACE and the District 2001 Napa River Flood Protection Project Contract 2 East Part A Final Supplemental EA/EIR.
- USACE and the District 2002 Napa River/Napa Creek Flood Protection Project Part B Contract 2 East Petroleum Hydrocarbon Remedial Action.
- The District 2005 Addendum to the Napa River/Napa Creek Flood Protection Project Final SEIS/EIR Ghisletta Fill Site Boundary Adjustment.
- USACE and the District 2009 Napa River/Napa Creek Flood Protection Project Napa Creek Improvement Project Final EA/IS.

Current Status of the Overall Project and Construction

Project Status Post 1999 Final SEIS/EIR

Construction of the Overall Flood Protection Project began in 2000 but, due to shortfalls in federal appropriations, construction has been intermittent. In 2011 USACE determined that the remaining Overall Flood Protection Project elements left to be constructed were not economically justifiable. In July 2012 USACE completed a Limited Reevaluation Report (LRR) for the Overall Flood Protection Project. Recommendations from the LRR included the following:

“18. Recommendations. I recommend that the South Pacific Division approve this LRR as the current economic analysis for the Napa River/Napa Creek Flood Protection Project.

I further recommend that the Sacramento District be allowed to complete construction of the current approved plan based on the remaining benefit/remaining cost ratio of 1.2 to 1 (using the FY2011 water resources discount rate of 4 1/8%), and consistent with Corps economic investment policy per ER 1105-2-100. Completion of the project should be given high budget priority based on the remaining economic net benefits, as well as social and environmental benefits.

In the event that completion of the entire remaining project is not given high budget priority, the Sacramento District should be authorized to identify the features of the approved plan that are incrementally-justified under current budget criteria, and other features that may be necessary to make the project safe, operable and maintainable. These features would be included in future budget submittals, while the other remaining features would be deferred until circumstances warrant further action. Identifying the most cost-effective remaining features of the approved plan would require much less time and expense than reformulating the entire project through a General Reevaluation Report (GRR). Because of the advanced state of construction of the approved plan, it is unlikely that reformulation of the project would provide significant additional net benefits, compared to implementing the justified portions of the approved plan, particularly if the additional delay in project completion that would be caused by the reformulation process is taken into consideration.”

Due to budget constraints, the USACE could not complete a comprehensive incremental analysis (IA) of the remaining features. However, the USACE was able to determine that the Dry Bypass

segment of the Project was incrementally justified and was funded by the USACE in the fiscal year 2014 Budget/Work Plan at \$16.8 million. Construction of the Dry Bypass began in 2014 and was completed in 2015.

In order to fulfill the above-stated LRR recommendations that the USACE Sacramento District should be authorized to identify features of the approved plan that are incrementally justified under current budget criteria, and other features that may be necessary to make the project safe, operable, and maintainable, the District completed a value engineering (VE) review, which was recommended earlier by the USACE Sacramento District to the local sponsor. Because of Federal funding constraints, the local sponsor completed the VE review of the Post-Bypass remaining features to identify potential cost savings and completed an IA to identify features that are incrementally justified under current budget criteria and other features that may be necessary to make the project safe, operable, and maintainable, as well as an analysis to determine any induced flooding resulting from recommended project features. The ultimate document completed by the District was a value engineering study and an incremental analysis (VEIA) of remaining project features to identify remaining increments which USACE could find economically justifiable.

The District completed the VEIA in 2017, and through that effort the District found additional economically justifiable project increments, primarily by removing pump stations in Increments 2 and 3. Removal of these pump stations enabled two remaining project increments to achieve favorable benefit cost ratios. Therefore, the District found it was able to economically justify the Increment 2, Floodwalls North of the Bypass and Increment 3, Riverside Drive, Imola Avenue to the Hatt Building. Both the Increment 2, Floodwalls North of Bypass (Proposed Project) and Increment 3, Floodwalls along Riverside Drive (Imola Avenue to the Hatt Building), are on the west side of the Napa River. Following USACE review of the VEIA, USACE produced a Federal Interest Determination, which concurred with the VEIA's findings and confirmed federal interest in these two remaining increments. USACE received funding for the Increment 2, Floodwalls North of Bypass and Increment 3, Floodwalls along Riverside Drive (Imola Avenue to the Hatt Building) in 2021.

Although at this time USACE has determined Increments 1 and 4 of the Overall Flood Protection Project are not economically justified and are therefore not eligible for federal funding, there is no intention to deauthorize Increments 1 and 4. If future analyses demonstrate the economic viability of Increments 1 and 4, they may still be submitted for federal funding consideration. The District does not currently have plans for construction of Increments 1 and 4.

For the purposes of this Draft SEIR, the USACE Authorized Project's non-Federal sponsor, the District, proposes to construct one of the two remaining federally justified increments of the USACE Authorized Project – Increment 2, Floodwalls North of the Bypass – pursuant to Section 204 of the Water Resources Development Act of WRDA 1986, as amended (33 U.S.C. 2232) (Section 204).

Overall Flood Protection Project Construction

A number of the Overall Flood Protection Project components have been constructed, with the latest construction of the Dry Bypass Channel and associated floodwalls completed in 2015. Other components of the Overall Flood Protection Project that have been constructed include restoring and establishing over 1,200 acres of restored wetland and riparian habitats throughout the project area including the South Wetlands Opportunity Area; replacing and elevating the Third Street Bridge, First Street Bridge, Maxwell Avenue Bridge (SR 121/Imola Avenue), and the railroad bridge over the Napa River near Soscol Avenue; constructing the new Soscol Avenue Bridge, First Street Bridge, and railroad bridge over the Dry Bypass channel; cleaning up contaminated properties in the Oil

Company Road area; terracing the east bank of the Napa River to create new floodplains and marshplains; constructing the Hatt Building to First Street floodwall and promenade, including renovating Veterans Memorial Park in downtown Napa; making improvements along Napa Creek, including removing bridges; and relocating the railroad tracks and building a flood control dike from Kennedy Park to Imola Avenue and a levee from Imola Avenue to Tulocay Creek on the East side of the river.

Appendix B. CEQA Scoping

Appendix B – CEQA Scoping

A public scoping period for the Proposed Action took place from November 1 through December 1, 2023. A public scoping meeting was held virtually on November 9, 2023, to present information about the Proposed Action and the District's decision-making process, and to listen to the views of the public on the range of issues relevant to the scope and context of the future Draft SEA/EIR.

The District and USACE received three written comments from the California Department of Fish and Wildlife, the California Department of Transportation, and the Native American Heritage Commission regarding project description information, regulatory requirements, habitat considerations, state right-of-way impacts, equitable access, and AB 52 consultation and cultural resources assessments. These comments have been taken into consideration and incorporated into the Draft SEA/EIR.

This appendix includes the comment letters received during the scoping period, the notice of preparation and initial study that was submitted to the State Clearinghouse through CEQASubmit and the County Clerk on November 1, 2023, and the scoping meeting presentation that was provided on November 9, 2023.



State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Bay Delta Region
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GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director



November 29, 2023

Richard Thomasser, Deputy Director of Public Works/District Manager
Napa County Flood Control and Water Conservation District
804 First Street
Napa, CA 94559
Flooddistrict@countyofnapa.org

Subject: Napa River/Napa Creek Flood Protection Project – Increment 2 Floodwalls
North of the Bypass, Notice of Preparation of a Supplemental Draft
Environmental Impact Report, SCH No. 1997044002, Napa County

Dear Mr. Thomasser:

The California Department of Fish and Wildlife (CDFW) received a Notice of Preparation (NOP) of a Draft Supplemental Environmental Impact Report (SEIR) for the Napa River/Napa Creek Flood Protection Project – Increment 2 Floodwalls North of the Bypass (Project).

CDFW is providing the Napa County Flood Control and Water Conservation District (County), as the Lead Agency, with specific detail about the scope and content of the environmental information related to CDFW's area of statutory responsibility that must be included in the EIR (Cal. Code Regs., tit. 14, § 15082, subd. (b)).

CDFW ROLE

CDFW is a **Trustee Agency** with responsibility under the California Environmental Quality Act (CEQA) for commenting on projects that could impact fish, plant, and wildlife resources (Pub. Resources Code, § 21000 et seq.; Cal. Code Regs., tit. 14, § 15386). CDFW is also considered a **Responsible Agency** if a project would require discretionary approval, such as a permit pursuant to the California Endangered Species Act (CESA) or Native Plant Protection Act (NPPA), the Lake and Streambed Alteration (LSA) Program, and other provisions of the Fish and Game Code that afford protection to the state's fish and wildlife trust resources. Pursuant to our authority, CDFW has the following concerns, comments, and recommendations regarding the Project.

PROJECT DESCRIPTION AND LOCATION

The County seeks to implement activities to provide 100-year level of flood protection in the City of Napa north of the bypass (Increment 2), as part of the overall Napa River/Napa Creek Flood Protection Project. The Increment 2 flood protection measures consist of four elements: floodwalls south of Lincoln Avenue, floodwalls north of Lincoln

Richard Thomasser
Napa County Flood Control and Water Conservation District
November 29, 2023
Page 2

Avenue, scour protection under the Lincoln Avenue bridge, and two short floodwall closures at the dry bypass.

The Project covers approximately 19.6 acres in the City of Napa, following the Napa River, with crossroads of Lincoln Avenue and Soscol Avenue; at approximately 38.311286° North, -122.277567° West.

The CEQA Guidelines (Cal. Code Regs., tit. 14, § 15000 et seq.) require that the EIR incorporate a full project description, including reasonably foreseeable future phases of the Project, that contains sufficient information to evaluate and review the Project's environmental impact (CEQA Guidelines, §§ 15124 & 15378). Please include a complete description of the following Project components in the Project description:

- Footprints of permanent Project features and temporarily impacted areas, such as staging areas and access routes;
- Area and plans for any proposed buildings/structures, ground disturbing activities, fencing, paving, stationary machinery, landscaping, and stormwater systems;
- Operational features of the Project, including level of anticipated human presence (describe seasonal or daily peaks in activity, if relevant), artificial lighting/light reflection, noise, traffic generation, and other features; and
- Construction schedule, activities, equipment, and crew sizes.

REGULATORY REQUIREMENTS

California Endangered Species Act and Native Plant Protection Act

Please be advised that a CESA Incidental Take Permit (ITP) must be obtained if the Project has the potential to result in "take" of plants or animals listed under CESA or NPPA, either during construction or over the life of the Project. Issuance of a CESA ITP is subject to CEQA documentation; the CEQA document must specify impacts, mitigation measures, and a mitigation monitoring and reporting program. If the Project will impact CESA listed species, such as those identified in **Attachment 1**, early consultation is encouraged, as significant modification to the Project and mitigation measures may be required in order to obtain a CESA ITP.

CEQA requires a Mandatory Finding of Significance if a project is likely to substantially restrict the range or reduce the population of a threatened or endangered species (Pub. Resources Code, §§ 21001, subd. (c) & 21083; CEQA Guidelines, §§ 15380, 15064, and 15065). Impacts must be avoided or mitigated to less-than-significant levels unless the CEQA Lead Agency makes and supports Findings of Overriding Consideration

Richard Thomasser
Napa County Flood Control and Water Conservation District
November 29, 2023
Page 3

(FOC). The CEQA Lead Agency's FOC does not eliminate the Project proponent's obligation to comply with CESA.

Lake and Streambed Alteration Agreement

An LSA Notification, pursuant to Fish and Game Code section 1600 et seq., is required for Project activities affecting lakes or streams and associated riparian habitat. Notification is required for any activity that will substantially divert or obstruct the natural flow; change or use material from the bed, channel, or bank including associated riparian or wetland resources; or deposit or dispose of material where it may pass into a river, lake or stream. Work within ephemeral streams, washes, watercourses with a subsurface flow, and floodplains are subject to notification requirements. CDFW, as a Responsible Agency under CEQA, will consider the CEQA document for the Project. CDFW may not execute the final LSA Agreement until it has complied with CEQA as a Responsible Agency.

Nesting Birds

CDFW also has authority over actions that may disturb or destroy active nest sites or take birds. Fish and Game Code sections 3503, 3503.5, and 3513 protect birds, their eggs, and nests. Migratory birds are also protected under the federal Migratory Bird Treaty Act.

Fully Protected Species

Fully Protected species, including those listed in **Attachment 1**, may not be taken or possessed at any time (Fish & G. Code, §§ 3511, 4700, 5050, & 5515) except for: 1) collecting these species for necessary scientific research, including efforts to recover fully protected species; 2) relocation of the bird species for the protection of livestock; 3) if they are a covered species whose conservation and management is provided for in a Natural Community Conservation Plan, or 4) certain projects pursuant to Fish and Game Code section 2081.15.

ENVIRONMENTAL SETTING

The EIR should provide sufficient information regarding the environmental setting ("baseline") to understand the Project's, and its alternative's (if applicable), potentially significant impacts on the environment (CEQA Guidelines, §§ 15125 & 15360).

CDFW recommends that the CEQA document prepared for the Project provide baseline habitat assessments for special-status plant, fish and wildlife species located and potentially located within the Project area and surrounding lands, including, but not limited to, all rare, threatened, or endangered species (CEQA Guidelines, § 15380). The EIR should describe aquatic habitats, such as wetlands or waters of the U.S. or state,

Richard Thomasser
Napa County Flood Control and Water Conservation District
November 29, 2023
Page 4

and any sensitive natural communities or riparian habitat occurring on or adjacent to the Project site (for sensitive natural communities see:

<https://wildlife.ca.gov/Data/VegCAMP/NaturalCommunities#sensitive%20natural%20communities>), and any stream or wetland set back distances the County may require.

Fully protected, threatened or endangered, candidate, and other special-status species that are known to occur, or have the potential to occur in or near the Project site, include, but are not limited to, those listed in **Attachment 1**.

Habitat descriptions and the potential for species occurrence should include information from multiple sources: aerial imagery, historical and recent survey data, field reconnaissance, scientific literature and reports, U.S. Fish and Wildlife Service's (USFWS) Information, Planning, and Consultation System, and findings from "positive occurrence" databases such as California Natural Diversity Database (CNDDB). Based on the data and information from the habitat assessment, the EIR should adequately assess which special-status species are likely to occur on or near the Project site, and whether they could be impacted by the Project.

CDFW recommends that prior to Project implementation, surveys be conducted for special-status species with potential to occur, following recommended survey protocols if available. Survey and monitoring protocols and guidelines are available at: <https://www.wildlife.ca.gov/Conservation/Survey-Protocol>.

Botanical surveys for special-status plant species, including those with a California Rare Plant Rank (<http://www.cnps.org/cnps/rareplants/inventory/>)¹, must be conducted during the blooming period within the Project area and adjacent habitats that may be indirectly impacted by, for example, changes to hydrological conditions, and require the identification of reference populations. More than one year of surveys may be necessary based on environmental conditions. Please refer to CDFW protocols for surveying and evaluating impacts to special-status plants available at: <https://www.wildlife.ca.gov/Conservation/Plants>.

IMPACT ANALYSIS AND MITIGATION MEASURES

The EIR should discuss all direct and indirect impacts (temporary and permanent) that may occur with implementation of the Project (CEQA Guidelines, § 15126.2). This includes evaluating and describing impacts such as:

- Encroachments into riparian habitats, wetlands or other sensitive areas;

¹ California Rare Plant Rank (CRPR) 1B plants are considered rare, threatened, or endangered in California and elsewhere. Further information on CRPR ranks is available in CDFW's *Special Vascular Plants, Bryophytes, and Lichens List* (<https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline>) and on the California Native Plant Society website (<https://www.cnps.org/rare-plants/rare-plant-ranking-review>).

Richard Thomasser
Napa County Flood Control and Water Conservation District
November 29, 2023
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- Potential for impacts to special-status species;
- Loss or modification of breeding, nesting, dispersal and foraging habitat, including vegetation removal, alternation of soils and hydrology, and removal of habitat structural features (e.g., snags, roosts, vegetation overhanging banks);
- Permanent and temporary habitat disturbances associated with ground disturbance, noise, lighting, reflection, air pollution, traffic or human presence; and
- Obstruction of movement corridors, fish passage, or access to water sources and other core habitat features.

The CEQA document should also identify reasonably foreseeable future projects in the Project vicinity, disclose any cumulative impacts associated with these projects, determine the significance of each cumulative impact, and assess the significance of the Project's contribution to the impact (CEQA Guidelines, §15355). Although a project's impacts may be insignificant individually, its contributions to a cumulative impact may be considerable; a contribution to a significant cumulative impact – e.g., reduction of available habitat for a special-status species – should be considered cumulatively considerable without mitigation to minimize or avoid the impact.

Based on the comprehensive analysis of the direct, indirect, and cumulative impacts of the Project, the CEQA Guidelines direct the Lead Agency to consider and describe all feasible mitigation measures to avoid potentially significant impacts in the EIR, and/or mitigate significant impacts of the Project on the environment (CEQA Guidelines, §§ 15021, 15063, 15071, 15126.2, 15126.4 & 15370). This includes a discussion of impact avoidance and minimization measures for special-status species, which are recommended to be developed in early consultation with CDFW, USFWS, and the National Marine Fisheries Service. These measures can then be incorporated as enforceable Project conditions to reduce potential impacts to biological resources to less-than-significant levels.

The Project will require an LSA Notification and may require an ITP for CESA listed species. Please include as mitigation measures the requirements to submit an LSA Notification to CDFW and comply with the LSA, if issued, and obtain an ITP from CDFW, if take of CESA listed species may occur.

ENVIRONMENTAL DATA

CEQA requires that information developed in EIRs and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations (Pub. Resources Code, § 21003, subd. (e)). Accordingly,

Richard Thomasser
Napa County Flood Control and Water Conservation District
November 29, 2023
Page 6


please report any special-status species and natural communities detected during Project surveys to CNDDDB. The CNDDDB online field survey form and other methods for submitting data can be found at the following link:
<https://wildlife.ca.gov/Data/CNDDDB/Submitting-Data>. The types of information reported to CNDDDB can be found at the following link:
<https://wildlife.ca.gov/Data/CNDDDB/Plantsand-Animals>.

FILING FEES

CDFW anticipates that the Project will have an impact on fish and/or wildlife, and assessment of filing fees is necessary (Fish & G. Code, § 711.4; Pub. Resources Code, § 21089). Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW.

If you have any questions, please contact Melanie Day, Senior Environmental Scientist (Supervisory), at (707) 210-4415 or Melanie.Day@wildlife.ca.gov.

Sincerely,

DocuSigned by:

B77E9A6211EF486...
Erin Chappell
Regional Manager
Bay Delta Region

Attachment 1: Special-Status Species and Sensitive Natural Communities

ec: Office of Planning and Research, State Clearinghouse (SCH No. 1997044002)

Richard Thomasser
 Napa County Flood Control and Water Conservation District
 November 29, 2023
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Attachment 1: Special-Status Species and Sensitive Natural Communities

Scientific Name	Common Name	Status
Amphibians and Reptiles		
<i>Dicamptodon ensatus</i>	California giant salamander	SSC
<i>Rana boylei</i> pop. 1	foothill yellow-legged frog - north coast DPS	SSC
<i>Emys marmorata</i>	western pond turtle	SSC
Birds		
<i>Haliaeetus leucocephalus</i>	bald eagle	SE, BGEPA, FP
<i>Buteo swainsoni</i>	Swainson's hawk	ST
<i>Agelaius tricolor</i>	tricolored blackbird	ST
<i>Athene cunicularia</i>	burrowing owl	SSC
<i>Geothlypis trichas sinuosa</i>	saltmarsh common yellowthroat	SSC
<i>Elanus leucurus</i>	white-tailed kite	FP
<i>Buteo regalis</i>	ferruginous hawk	WL
Fishes		
<i>Hypomesus pacificus</i>	Delta smelt	SE, FT
<i>Spirinchus thaleichthys</i>	longfin smelt	ST, FC
<i>Oncorhynchus tshawytscha</i>	Chinook salmon - winter-run	SE, FE
<i>Oncorhynchus tshawytscha</i>	Chinook salmon - spring-run	ST, FT
<i>Acipenser medirostris</i>	southern green sturgeon	FT, SSC
<i>Oncorhynchus mykiss</i>	Central California coast winter steelhead	FT
<i>Entosphenus tridentata</i>	Pacific lamprey	SSC
<i>Pogonichthys macrolepidotus</i>	Sacramento splittail	SSC
<i>Acipenser transmontanus</i>	white sturgeon	SSC

Richard Thomasser
 Napa County Flood Control and Water Conservation District
 November 29, 2023
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<i>Lampetra richardsoni</i>	western brook lamprey	SSC
Invertebrates		
<i>Syncaris pacifica</i>	California freshwater shrimp	SE, FE
<i>Branchinecta conservatio</i>	conservancy fairy shrimp	FE
<i>Danaus plexippus plexippus</i> pop. 1	monarch - California overwintering population	FC
Mammals		
<i>Reithrodontomys raviventris</i>	salt-marsh harvest mouse	SE, FE, FP
<i>Antozous pallidus</i>	Pallid bat	SSC
Plants		
<i>Trifolium amoenum</i>	two-fork clover	FE, CRPR 1B.1
<i>Lasthenia conjugens</i>	Contra Costa goldfields	FE, CRPR 1B.1
<i>Lilaeopsis masonii</i>	Mason's lilaeopsis	SR, CRPR 1B.1
<i>Trichostema ruygtii</i>	Napa bluecurls	CRPR 1B.2
<i>Trifolium hydrophilum</i>	saline clover	CRPR 1B.2
<i>Extriplex joaquinana</i>	San Joaquin spearscale	CRPR 1B.2
<i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	Delta tule pea	CRPR 1B.2
<i>Symphyotrichum lentum</i>	Suisun Marsh aster	CRPR 1B.2
Sensitive Natural Communities		
<i>Quercus lobata</i> riparian	valley oak, live oak, Fremont cottonwood riparian alliance	S3
<i>Bolboschoenus maritimus</i>	salt marsh bulrush marshes alliance	S3

FE = federally listed as endangered under ESA; FT = federally listed as threatened under ESA; FC = federally listed as candidate under ESA; BGEPA = Bald and Golden Eagle Protection Act; SE = state listed as endangered under CESA; ST = state listed as threatened under CESA; SR = state listed as rare under NPPA; FP = fully protected; SSC = state Species of Special Concern; WL = CDFW Watch List species; CRPR = California Rare Plant Rank; DPS = distinct population segment; S3 = sensitive natural community state ranked as vulnerable

California Department of Transportation

DISTRICT 4
OFFICE OF REGIONAL AND COMMUNITY PLANNING
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November 30, 2023

CH #: 1997044002
GTS #: 04-NAP-2023-00336
GTS ID: 31297
Co/Rt/Pm: Napa/121/8.505

Richard Thomasser, Deputy Director of Public Works
Napa County Flood Control and Water District
804 First Street
Napa, CA 94559

Re: Napa River/Napa Creek Flood Protection Project – Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR)

Dear Richard Thomasser:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the Napa River/Napa Creek Flood Protection Project. We are committed to ensuring that impacts to the State's multimodal transportation system and to our natural environment are identified and mitigated to support a safe, sustainable, integrated and efficient transportation system.

The Local Development Review (LDR) Program reviews land use projects and plans to ensure consistency with our mission and state planning priorities. The following comments are based on our review of the November NOP.

Project Understanding

The proposed project will implement measures to provide 100-year level of flood protection in the City of Napa. The project site is located near State Route 121.

Construction-Related Impacts

Potential impacts to the State Right-of-Way (ROW) from project-related temporary access points should be analyzed. Mitigation for significant impacts due to construction and noise should be identified. Project work that requires movement of oversized or excessive load vehicles on State roadways requires a transportation permit that is issued by Caltrans. To apply, please visit Caltrans Transportation Permits ([link](#)).

Prior to construction, coordination may be required with Caltrans to develop a Transportation Management Plan (TMP) to reduce construction traffic impacts to the State Transportation Network (STN).

Equitable Access

If any Caltrans facilities are impacted by the project, those facilities must meet American Disabilities Act (ADA) Standards after project completion. As well, the project must maintain bicycle and pedestrian access during construction. These access considerations support Caltrans' equity mission to provide a safe, sustainable, and equitable transportation network for all users.

Lead Agency

As the Lead Agency, the District is responsible for all project mitigation, including any needed improvements to the STN. The project's fair share contribution, financing, scheduling, implementation responsibilities and lead agency monitoring should be fully discussed for all proposed mitigation measures.

Thank you again for including Caltrans in the environmental review process. Should you have any questions regarding this letter, please contact Marley Mathews, Transportation Planner, via LDR-D4@dot.ca.gov. For future early coordination opportunities or project referrals, please contact LDR-D4@dot.ca.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'Yunsheng Luo'.

YUNSHENG LUO
Branch Chief, Local Development Review
Office of Regional and Community Planning

c: State Clearinghouse

NATIVE AMERICAN HERITAGE COMMISSION

November 2, 2023

Richard Thomasser
Napa County Flood Control and Water Conservation District
804 First Street
Napa, CA 94559

Re: 1997044002, Napa River/Napa Creek Flood Protection Project – Increment 2 Floodwalls North of the Bypass, Napa County

Dear Mr. Thomasser:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, § 15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.



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VICE-CHAIRPERSON
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Yokayo Pomo, Yuki,
Nomlaki

SECRETARY
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AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project:

Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- a. A brief description of the project.
- b. The lead agency contact information.
- c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
- d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1 (b)).

- a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- a. Alternatives to the project.
- b. Recommended mitigation measures.
- c. Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

- a. Type of environmental review necessary.
- b. Significance of the tribal cultural resources.
- c. Significance of the project's impacts on tribal cultural resources.
- d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

- a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
- b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

- 7. Conclusion of Consultation:** Consultation with a tribe shall be considered concluded when either of the following occurs:
- a.** The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
 - b.** A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).
- 8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document:** Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).
- 9. Required Consideration of Feasible Mitigation:** If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).
- 10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:**
- a.** Avoidance and preservation of the resources in place, including, but not limited to:
 - i.** Planning and construction to avoid the resources and protect the cultural and natural context.
 - ii.** Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
 - b.** Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
 - i.** Protecting the cultural character and integrity of the resource.
 - ii.** Protecting the traditional use of the resource.
 - iii.** Protecting the confidentiality of the resource.
 - c.** Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
 - d.** Protecting the resource. (Pub. Resource Code §21084.3 (b)).
 - e.** Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).
 - f.** Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).
- 11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource:** An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
- a.** The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.
 - b.** The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
 - c.** The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
 - a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
 - b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: <http://nahc.ca.gov/resources/forms/>.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (https://ohp.parks.ca.gov/?page_id=30331) for an archaeological records search. The records search will determine:
 - a. If part or all of the APE has been previously surveyed for cultural resources.
 - b. If any known cultural resources have already been recorded on or adjacent to the APE.
 - c. If the probability is low, moderate, or high that cultural resources are located in the APE.
 - d. If a survey is required to determine whether previously unrecorded cultural resources are present.
2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
 - a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
 - b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
 - a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
 - b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.
4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
 - a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, § 15064.5(f) (CEQA Guidelines § 15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
 - b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
 - c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code § 7050.5, Public Resources Code § 5097.98, and Cal. Code Regs., tit. 14, § 15064.5, subdivisions (d) and (e) (CEQA Guidelines § 15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address:
Cameron.Vela@nahc.ca.gov.

Sincerely,

Cameron Vela

Cameron Vela
Cultural Resources Analyst

cc: State Clearinghouse

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
 For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH # 1995044002, 1997044002

Project Title: Napa River/Napa Creek Flood Protection Project – Increment 2 Floodwalls North of the Bypass

Lead Agency: Napa County Flood Control and Water Conservation District

Contact Person: Richard Thomasser

Mailing Address: 804 First Street

Phone: 707-259-8600

City: Napa

Zip: 94559

County: Napa

Project Location: County: Napa

City/Nearest Community: Napa

Cross Streets: Lincoln Avenue and Soscol Avenue

Zip Code: 94558

Longitude/Latitude (degrees, minutes and seconds): 38 ° 18 ' 37.60 " N / -122 ° 16 ' 42.17 " W Total Acres: 19.6

Assessor's Parcel No.: multiple

Section: 00

Twp.: 5N and 6N

Range: 4W

Base: Diablo

Within 2 Miles: State Hwy #: 29, 121

Waterways: Napa River and Napa Creek

Airports: NA

Railways: California Northern Railroad, Napa Valley Wine Train

Schools: Multiple

Document Type:

CEQA: ☒ NOP

☐ Draft EIR

NEPA: ☐ NOI

Other: ☐ Joint Document

☐ Early Cons

☐ Supplement/Subsequent EIR

☐ EA

☐ Final Document

☐ Neg Dec

(Prior SCH No.) 1995044002 and 1997044002

☐ Draft EIS

☐ Other: _____

☐ Mit Neg Dec

Other: _____

☐ FONSI

Local Action Type:

☐ General Plan Update

☐ Specific Plan

☐ Rezone

☐ Annexation

☐ General Plan Amendment

☐ Master Plan

☐ Prezone

☐ Redevelopment

☐ General Plan Element

☐ Planned Unit Development

☐ Use Permit

☐ Coastal Permit

☐ Community Plan

☐ Site Plan

☐ Land Division (Subdivision, etc.)

☒ Other: Flood Protection

Development Type:

☐ Residential: Units _____ Acres _____

☐ Office: Sq.ft. _____ Acres _____ Employees _____

☐ Commercial: Sq.ft. _____ Acres _____ Employees _____

☐ Industrial: Sq.ft. _____ Acres _____ Employees _____

☐ Educational: _____

☐ Recreational: _____

☐ Water Facilities: Type _____ MGD _____

☐ Transportation: Type _____

☐ Mining: Mineral _____

☐ Power: Type _____ MW _____

☐ Waste Treatment: Type _____ MGD _____

☐ Hazardous Waste: Type _____

☒ Other: Flood Protection

Project Issues Discussed in Document:

☐ Aesthetic/Visual

☐ Fiscal

☐ Recreation/Parks

☐ Vegetation

☐ Agricultural Land

☐ Flood Plain/Flooding

☐ Schools/Universities

☐ Water Quality

☐ Air Quality

☐ Forest Land/Fire Hazard

☐ Septic Systems

☐ Water Supply/Groundwater

☒ Archeological/Historical

☐ Geologic/Seismic

☐ Sewer Capacity

☐ Wetland/Riparian

☐ Biological Resources

☐ Minerals

☐ Soil Erosion/Compaction/Grading

☐ Growth Inducement

☐ Coastal Zone

☐ Noise

☐ Solid Waste

☐ Land Use

☐ Drainage/Absorption

☐ Population/Housing Balance

☐ Toxic/Hazardous

☐ Cumulative Effects

☐ Economic/Jobs

☐ Public Services/Facilities

☐ Traffic/Circulation

☒ Other: Tribal Cultural Resources

Present Land Use/Zoning/General Plan Designation:

Urban Residential

Project Description: (please use a separate page if necessary)

The Napa County Flood Control and Water Conservation District and the U.S. Army Corps of Engineers are proposing to implement measures to provide 100 year level of flood protection in the City of Napa north of the bypass (Increment 2), as part of the overall Napa River/Napa Creek Flood Protection Project. The Increment 2 flood protection measures consist of four elements: floodwalls south of Lincoln Avenue, floodwalls north of Lincoln Avenue, scour protection under the Lincoln Avenue bridge, and two short floodwall closures at the dry bypass.

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "X".
If you have already sent your document to the agency please denote that with an "S".

<input checked="" type="checkbox"/> Air Resources Board	<input checked="" type="checkbox"/> Office of Historic Preservation
<input type="checkbox"/> Boating & Waterways, Department of	<input type="checkbox"/> Office of Public School Construction
<input type="checkbox"/> California Emergency Management Agency	<input checked="" type="checkbox"/> Parks & Recreation, Department of
<input type="checkbox"/> California Highway Patrol	<input type="checkbox"/> Pesticide Regulation, Department of
<input checked="" type="checkbox"/> Caltrans District # 4	<input type="checkbox"/> Public Utilities Commission
<input type="checkbox"/> Caltrans Division of Aeronautics	<input checked="" type="checkbox"/> Regional WQCB # 2
<input type="checkbox"/> Caltrans Planning	<input type="checkbox"/> Resources Agency
<input type="checkbox"/> Central Valley Flood Protection Board	<input type="checkbox"/> Resources Recycling and Recovery, Department of
<input type="checkbox"/> Coachella Valley Mtns. Conservancy	<input type="checkbox"/> S.F. Bay Conservation & Development Comm.
<input type="checkbox"/> Coastal Commission	<input type="checkbox"/> San Gabriel & Lower L.A. Rivers & Mtns. Conservancy
<input type="checkbox"/> Colorado River Board	<input type="checkbox"/> San Joaquin River Conservancy
<input type="checkbox"/> Conservation, Department of	<input type="checkbox"/> Santa Monica Mtns. Conservancy
<input type="checkbox"/> Corrections, Department of	<input checked="" type="checkbox"/> State Lands Commission
<input type="checkbox"/> Delta Protection Commission	<input type="checkbox"/> SWRCB: Clean Water Grants
<input type="checkbox"/> Education, Department of	<input checked="" type="checkbox"/> SWRCB: Water Quality
<input type="checkbox"/> Energy Commission	<input type="checkbox"/> SWRCB: Water Rights
<input checked="" type="checkbox"/> Fish & Game Region # 3	<input type="checkbox"/> Tahoe Regional Planning Agency
<input type="checkbox"/> Food & Agriculture, Department of	<input type="checkbox"/> Toxic Substances Control, Department of
<input type="checkbox"/> Forestry and Fire Protection, Department of	<input checked="" type="checkbox"/> Water Resources, Department of
<input type="checkbox"/> General Services, Department of	
<input type="checkbox"/> Health Services, Department of	Other: _____
<input type="checkbox"/> Housing & Community Development	Other: _____
<input checked="" type="checkbox"/> Native American Heritage Commission	

Local Public Review Period (to be filled in by lead agency)

Starting Date November 1, 2023 Ending Date December 1, 2023

Lead Agency (Complete if applicable):

Consulting Firm: _____ Applicant: Napa County Flood Control and Water Conservation District - Richard Thomasser
Address: _____ Address: 804 First Street
City/State/Zip: _____ City/State/Zip: Napa, Ca 94559
Contact: _____ Phone: 707-259-8600
Phone: _____

Signature of Lead Agency Representative:  Date: Nov. 1, 2023

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

SUPPLEMENTAL NOTICE OF PREPARATION

From: Napa County Flood Control and Water Conservation District
804 First Street
Napa, CA 94559

Subject: Supplemental Notice of Preparation of a Supplemental Environmental Impact Report/Environmental Assessment for the Napa River/Napa Creek Flood Protection Project – Increment 2 Floodwalls North of the Bypass

Napa County Flood Control and Water Conservation District (District) will be the Lead Agency and will prepare a Supplemental Environmental Impact Report/Environmental Assessment (Supplemental EIR/EA) with the US Army Corps of Engineers for the project identified above. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the Proposed Project. Your agency may need to use the EIR prepared by our agency when considering your permit or other approval for the Proposed Project.

The project description, location, and the potential environmental effects are contained in the attached Initial Study.

Due to the time limits mandated by state law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice. The District will also hold a scoping meeting to provide an additional opportunity for input on the scope and content of the information to be addressed in the Supplemental Draft EIR/EA.

The scoping meeting will be held virtually at 5:00 pm on November 9th, 2023. You can join the meeting using the following link: <https://countyofnapa.zoom.us/j/87405518019>. Meeting materials and additional information can be found through the District's website at <https://www.countyofnapa.org/1083> as well as the meeting link.

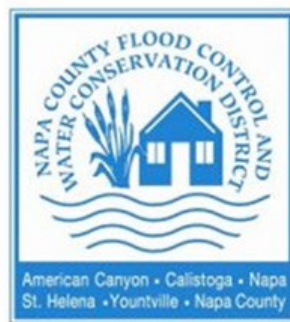
Please send your response to Napa County Flood Control and Water Conservation District, 804 First Street, Napa, CA 94559 or by email to flooddistrict@countyofnapa.org. Please provide your name and contact information when responding.

Signature 
Richard Thomasser, P.G.
District Manager

Reference: California Code of Regulations, Title 14, (CEQA Guidelines) Sections 15082(a), 15103, 15375.

**DRAFT INITIAL STUDY FOR THE
NAPA RIVER/NAPA CREEK FLOOD PROTECTION PROJECT –
INCREMENT 2 FLOODWALLS NORTH OF THE BYPASS**

NOVEMBER 2023



Napa County Flood Control and Water Conservation District

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Acronyms

°F	degrees Fahrenheit
AB	Assembly Bill
ARB	California Air Resources Board
BAAQMD	Bay Area Air Quality Management District
BIOS	Biogeographic Information and Observation System
BMP	best management practice
CAAQS	California Ambient Air Quality Standards
CAL FIRE	California Department of Forestry and Fire Protection
CalEEMod	California Emissions Estimator Model
CAP	Napa County Climate Action Plan
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFCs	chlorofluorocarbons
CH ₄	methane
CNPS	California Native Plant Society
CO	carbon monoxide
CO ₂	carbon dioxide
CO _{2e}	carbon dioxide equivalent
dB	decibel
dBA	A-weighted decibels
District	Napa Flood Control and Water Conservation District
DPM	diesel particulate matter
e.g.	for example
EA	Environmental Assessment
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
etc.	and so on
GDM	General Design Memorandum
GHG	greenhouse gas
i.e.	that is
iPaC	Information for Planning and Consulting database

LRA	Local Responsibility Area
mph	miles per hour
MRZ	mineral resource zone
MT	metric tons
N ₂ O	nitrous oxide
NA	not applicable
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NO _x	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O&M	operations and maintenance
O ₃	ozone
OPR	Governor's Office of Planning and Research
Pb	lead
PCBs	polychlorinated biphenyls
PED	Preconstruction and Engineering Design
PM ₁₀	inhalable particulate matter
PM _{2.5}	fine particulate matter
Proposed Project	Napa River/Napa Creek Flood Protection Project – Increment 2
RMS	root mean square
ROG	reactive organic gases
SEIR	Supplemental Environmental Impact Report
SEIS	Supplemental Environmental Impact Statement
SFBAAB	San Francisco Bay Area Air Basin
SGDM	Supplemental General Design Memorandum
SO ₂	sulfur dioxide
SWPPP	Stormwater Pollution Prevention Plan
TAC	toxic air contaminant
TCR	tribal cultural resource
US	United States
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
VdB	vibration decibels

Introduction

The Napa Flood Control and Water Conservation District (District) and the United States Army Corps of Engineers (USACE) are providing notice of the anticipated preparation of a Draft Supplemental Environmental Impact Report/Environmental Assessment (SEIR/EA) for the Napa River/Napa Creek Flood Protection Project – Increment 2 Floodwalls North of the Bypass (Proposed Project). Previous environmental documentation in compliance with the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) has been prepared for the overall Napa River/Napa Creek Flood Protection Project. The overall project includes improvements to 6.9 miles of the Napa River from Highway 29 at the Butler bridge/Southern Crossing to near Trancas Street, and Napa Creek from its outfall to the Napa River for about 1 mile upstream. Elements of the overall project include bank terracing, bridge replacements, bypass channels, culverts, floodwalls, and levees. The latest environmental documentation for the overall Napa River/Napa Creek Flood Protection Project culminated in 1999 with the Napa River/Napa Creek Flood Reduction Project Final Supplemental Environmental Impact Statement/Environmental Impact Report (1999 Final SEIS/EIR).

The District and USACE plan to prepare a Supplemental EIR/EA that will focus on the changes and additions within Increment 2 of the overall Napa River/Napa Creek Flood Reduction Project as well as the changed regulatory conditions that have transpired since the 1999 Final SEIS/EIR was completed. The District is the lead agency under CEQA, and USACE is the federal lead agency under NEPA. The District and USACE are proposing to implement the Proposed Project to provide 100-year level of flood protection in the city of Napa north of the bypass. The Increment 2 north of the bypass floodwalls include constructing concrete or sheet pile floodwalls along the west bank of the Napa River from approximately the Napa River Terrace Inn to the Elks Lodge.

In support of the Proposed Project, an Initial Study has been completed to provide an initial review of potential impacts of the Proposed Project and to guide the District and USACE in the anticipated environmental review for the Draft SEIR/EA.

Background

Original Project Authorization

The Napa River/Napa Creek Flood Protection Project, formerly known as the Napa River Flood Control Project, was authorized by Congress through the Flood Control Act of 1965 (Public Law 89-298). The Act reads in part as follows:

Section 204. The following works of improvement for the benefit of navigation and the control of destructive floodwaters and other purposes are hereby adopted and authorized to be prosecuted under the direction of the Secretary of the Army and supervision of the Chief of Engineers in accordance with the plans of the respective reports hereinafter designated and subject to the conditions set forth therein: ...

The project for the Napa River, California, is hereby authorized substantially in accordance with the recommendations of Chief of Engineers in House Document Numbered 222, Eighty-ninth Congress, ...

The Chief of Engineers' recommendations contained in House Document 222 are based on the 1963 report "Review and Report for Flood Control and Allied Purposes." In House Document 222,

the project authorization is for an 11-mile segment of the Napa River extending from Edgerly Island south of Highway 29 to Trancas Street in the city of Napa. The development of recreational facilities is included as part of the original 1965 authorization. This design was transmitted in a General Design Memorandum (GDM) on December 8, 1970, by the District Engineer, San Francisco District, USACE, to the state Director of Water Resources. This plan met with considerable resistance from local citizens and was substantially altered to alleviate environmental problems regarding aesthetics, recreation, and river access.

During the 1972–73 session of the California Legislature, the Assembly passed an urgency measure, Assembly Bill 60, which authorized state funding for the 1970 GDM version of the project. This bill also granted local authority to the District to implement the project. Key to this implementation was that local authorities accepted responsibility, as stipulated in the 1965 Flood Control Act, for easements, rights-of-way, liability, operation and maintenance costs, utilities and bridge modifications, water rights, access land donation, shared recreational costs, mitigation costs, and operating responsibilities, among others.

In a subsequent GDM in 1975, USACE developed a new design for the overall project (the 1975 proposal) that incorporated input from local interests. The existing approved Environmental Impact Statement (EIS) for the overall project, based on this 1975 proposal, was completed in 1975.

The 1975 proposal consisted of straightening (also known as “rectification”) the Napa River channel and channel widening and deepening. The existing oxbow was to be eliminated entirely. Riverbanks were to be lined with riprap in most areas. This project alternative was analyzed in depth in the 1975 EIS.

Napa County held a referendum in 1976 to determine the acceptability of the 1975 proposal, which was narrowly defeated. In another referendum in 1977, project construction was opposed by a slightly wider margin. Consequently, in 1977, the overall project was placed on inactive status by USACE at the request of the District.

Authorization for Mitigation Lands and Napa Creek Flood Damage Reduction

Public Law 94-587, passed by Congress in 1976, authorized the addition of Napa Creek to the overall Napa River Flood Control Project and the acquisition of 577 acres of land for the purpose of mitigating adverse impacts to fish and wildlife caused by the project. The law reads in part as follows:

Section 136. (a) The project for flood control on the Napa River, Napa County, California, authorized by section 204 of the Flood Control Act of 1965, is hereby modified to authorize and direct the Secretary of the Army, acting through the Chief of Engineers, to acquire approximately 577 acres of land for the purpose of mitigating adverse impacts on fish and wildlife occasioned by the project

(b) Such project is further modified to include construction ... of the Napa Creek watershed project ...

In 1987, after the devastating flood of 1986, the District petitioned USACE and Congress to reactivate the Napa River Flood Control Project in letters dated February 9 and April 9, 1987. In response, USACE generated a Plan of Action in December 1988 that presented descriptions, cost estimates, background information, and scheduling of Preconstruction and Engineering Design (PED). In 1989, a Notice of Intent to prepare an EIS was posted in the Federal Register. During a

General Design Conference held on January 12, 1989, USACE decided that a federal interest in the project still existed. Consequently, USACE initiated PED activities in fiscal year 1989.

This effort culminated in the preparation of a first Draft Supplemental General Design Memorandum (SGDM). A Notice of Preparation to prepare an Environmental Impact Report (EIR) was prepared in 1994, and scoping was conducted at this time to solicit agency and public input. In April 1995, a Draft SEIS/EIR was released for public review. The 1995 SGDM relied primarily on channel bottom deepening and widening as means of flood control, and it also incorporated a “wet bypass” that would divert the Napa River from the downtown oxbow at all times.

The 1995 proposal generated numerous comments from both citizens and resource protection agencies. The major comments dealt with salinity intrusion due to deepening the channel, degradation of water quality in the river oxbow due to constructing the wet bypass channel, disposal of contaminated dredge material, and deficiencies in the environmental analysis. Because of these concerns, four public agencies (US Department of the Interior, California Department of Fish and Game, California Regional Water Quality Control Board, and California State Lands Commission) specifically requested that the SEIS/EIR be reissued for additional public review to comply with NEPA and CEQA.

The 1995 project alternative, which was analyzed in depth in the 1995 Draft SEIS/EIR, was summarized and compared to the new preferred alternative in the 1999 Final SEIS/EIR.

1999 Final Supplemental EIS/EIR

Because of the large amount of public concern regarding the 1995 proposal, the District and local groups created a community-wide coalition to foster community consensus regarding the project design and to initiate a collaborative process with the local community and resource agencies to refine the overall project. The 1995 Draft SEIS/EIR was reissued for public review from December 1997 to February 1998. A public meeting was held in 1998.

The District and local groups created a community-wide coalition to foster community consensus regarding the project design. The Community Coalition, with the assistance of outside consultants, resource agency personnel, City of Napa and Napa County staff, and USACE, developed the major concepts of the 1999 Final SEIS/EIR’s preferred alternative, which meets the dual objectives of flood damage reduction and environmental quality, to eliminate the primary concerns related to the 1995 proposal. The 1999 Final SEIS/EIR’s preferred alternative was also developed based on its ability to satisfy the criteria of the Federal Water Resources Council’s Principles and Guidelines for completeness, effectiveness, efficiency, and acceptability.

The 1999 Final SEIS/EIR’s preferred alternative was described in detail in the 1998 Draft SGDM. This SGDM presents the results of engineering and design studies conducted for flood-control improvements along the Napa River and serves as the official project description in the 1999 Final SEIS/EIR. The design and studies in the 1998 Draft SGDM were conducted to determine the most economical plan for conveying the computed 100-year flood event, minimizing environmental impacts, and meeting applicable government standards for the flood-control improvements.

The 1999 Final SEIS/EIR’s preferred alternative is significantly different from the 1975 and 1995 proposals. South of Imola Avenue, the 1999 Final SEIS/EIR’s preferred alternative consists of lowering dikes on the west side of the Napa River and setting back dikes and levees on the east side of the river to increase conveyance. It also includes widening the river up to Third Street to create marshplain and floodplain terraces, both of which would also provide additional floodway capacity. In addition, the 1999 Final SEIS/EIR’s preferred alternative includes constructing a dry bypass at the

oxbow of the river, constructing new flood walls and levees along the Napa River north of Imola Avenue, and adding flood-management features to Napa Creek downstream of Jefferson Street. The 1999 Final SEIS/EIR's preferred alternative has been calculated to provide protection from the computed 100-year flood elevation in most of the City of Napa.

Current Status of the Overall Project and Construction

A number of the overall project components have been constructed, including developing and establishing at least 600 acres of restored wetlands in the South Wetlands Opportunity Area; replacing the Third Street bridge, First Street bridge, and Maxwell Avenue bridge (Highway 121/Imola Avenue); constructing the new Soscol Avenue bridge; cleaning up contaminated properties in the Oil Company Road area; terracing the east bank of the Napa River; constructing the Hatt Building to First Street floodwall and promenade, including renovating Veterans Memorial Park in downtown Napa; making improvements along Napa Creek, including replacing bridges; and constructing the dry bypass.

Increment 2 Project Description

The Proposed Project consists of four elements: floodwalls south of Lincoln Avenue, floodwalls north of Lincoln Avenue, scour protection under the Lincoln Avenue bridge, and two short floodwall closures at the dry bypass. Figure 1 shows the Proposed Project area.

Floodwalls South of Lincoln Avenue

A floodwall would be constructed on the west bank of the Napa River beginning at the River Terrace Inn and continuing north toward Lincoln Avenue. The floodwall would start at the high ground near the edge of the River Terrace Inn property. The floodwall would consist of 30 feet of sheet pile "I" wall and would then transition to a concrete "T" wall with a foundation constructed below ground. The exposed stem of the floodwall would be approximately 5 feet high aboveground and less than 2 feet wide as it goes north. The floodwall would be set back from the existing bank on the water side of existing businesses and the operations and maintenance (O&M) corridor. A new 10-12-foot-wide recreational trail would be constructed on the water side of the floodwall starting at the high ground at River Terrace Inn and running north to Wall Street, where the trail would then cross the wall through a 15-foot-wide stop log pedestrian gate.

Continuing north, the floodwall would jog to the land side of the Ace & Vine and Napa River Pet Hospital businesses. The 10-12-foot-wide recreational trail would run on the land side of the floodwall in this area, where it would tie into the sidewalk along Lincoln Avenue. Two 30-foot-wide swing gates and signs would be installed in the floodwall at the existing driveway locations on Lincoln Avenue to allow access to the businesses. The floodwall would tie into and terminate at the south abutment to the Lincoln Avenue bridge. In total, the floodwall south of Lincoln Avenue would consist of 2,345 linear feet of concrete "T" wall and 30 linear feet of "I" wall.

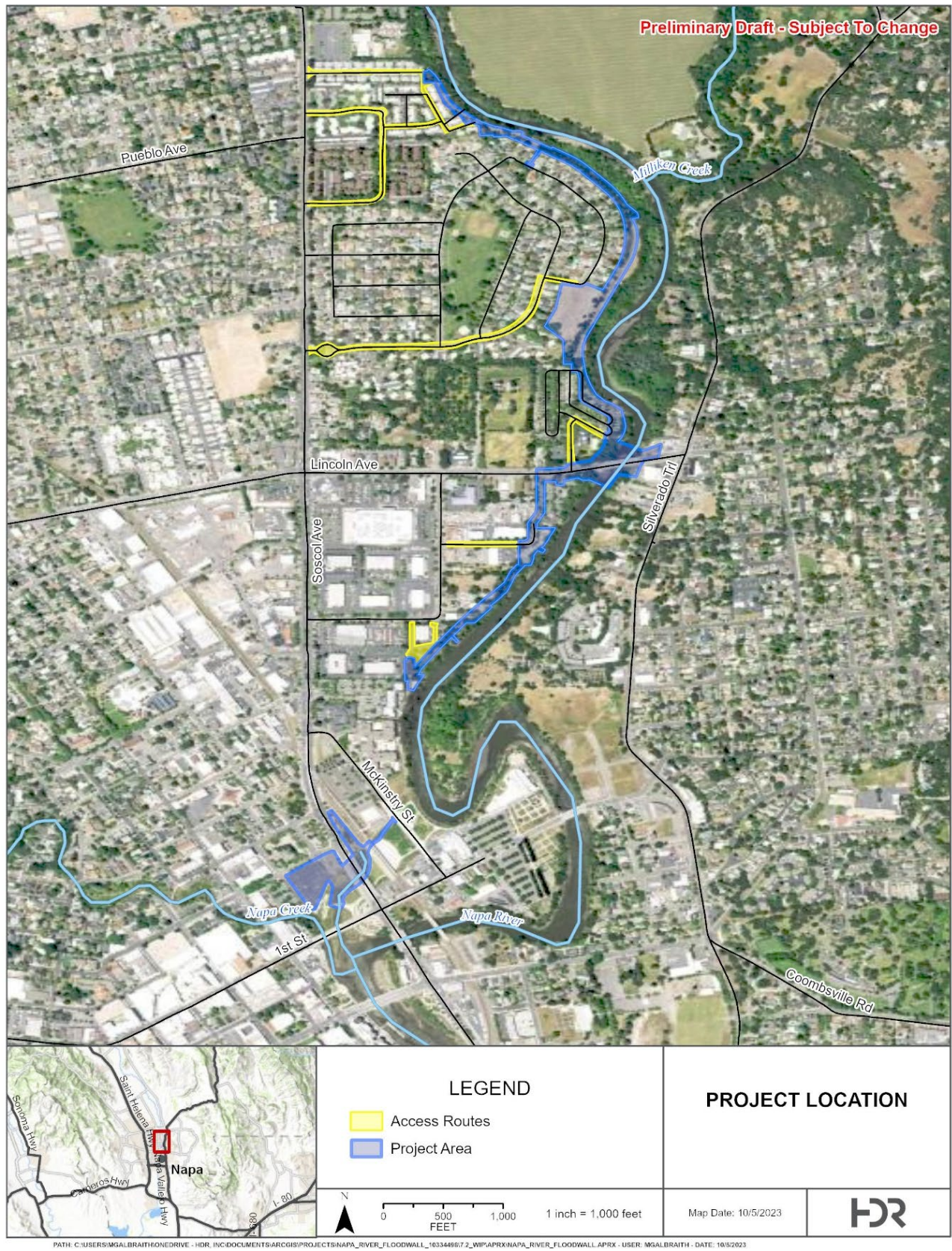


Figure 1. Proposed Project Area

Floodwalls North of Lincoln Avenue

At the Lincoln Avenue bridge, the floodwall would tie into the bridge abutment and continue north following the existing trail and the water side of businesses and homes. A 10-foot-wide stop log pedestrian gate would be installed at the start of the RiverPointe Napa Valley Resort property located just north of the Lincoln Avenue bridge. This gate would allow access to the existing Napa River Trail on the water side of the floodwall. The floodwall alignment would be set back from the river bank because of the active scour along this section of the existing bank. Constructing the floodwall would require removing the row of tiny vacation rental homes closest to the river to make space for the floodwall. Burrows Court may be realigned adjacent to the floodwall. Currently, the tiny vacation rental homes at RiverPointe are removed during the winter because flooding occurs on the property. After the floodwall is constructed, the tiny vacation rental homes could be left in place all year because the wall would prevent flooding on the property. A 15-25-foot-wide swing gate to provide pedestrian and O&M access would be constructed in the floodwall on the north and south sides of the RiverPointe property to maintain access to the existing Napa River Trail. In this area, the floodwall would be approximately 6-10 feet high.

North of the RiverPointe property is the Lake Park subdivision. There is an existing noncertified levee on the land side of the trail behind the homes on Shoreline Drive. This levee was built when the Lake Park subdivision was built to provide some flood protection to homes in the subdivision. The existing levee berm would be excavated, and the floodwall would be constructed in its place. Homes on the water side of Shoreline Drive have flood easements in their back yards. These easements are not suitable for project construction and maintenance, so new easements would be acquired. After project construction, the berm would be rebuilt around the floodwall to serve as an O&M road, and existing fences would be replaced. The floodwall would be constructed 15 feet waterward of the existing fence line of the existing homes on Shoreline Drive to minimize impacts to the back yards. In this area, the exposed portion of the floodwall would be approximately 1 to 3 feet tall when viewed from the land. Existing trees on the existing berm would be removed, and some trees would need to be trimmed or removed on the water side of the trail to allow clearance of construction equipment. An existing 36-inch-diameter steel water line crosses underneath the existing berm along the trail. This water line would be backfilled with concrete or removed and relocated along the water side of the trail.

North of the Lake Park subdivision, the floodwall would transition from a concrete “T” wall to a sheet pile “I” wall to accommodate a narrower footprint and setback requirements in this segment of the floodwall corridor while also providing flood protection. The sheet pile wall would have a concrete cap surrounding it so that it appears the same as the other parts of the concrete floodwall. The sheet pile wall would continue north along the water side of the townhomes on Trout Way, Pike Drive, and Elk Way and tie into the high ground on the north side of Elk Way. The sheet pile wall may be up to 30 feet deep in steep areas. Beneath Trout lane is an existing 72-inch-diameter drain outfall that the sheet pile wall would span over. The drain outfall would be avoided during construction. The sheet pile wall would be anchored into the land side of the slope with steel rod tie-backs in this area. In total, the floodwall north of Lincoln Avenue would consist of 3,300 linear feet of concrete “T” wall and 810 linear feet of “I” wall.

Scour Protection under the Lincoln Avenue Bridge

Rock scour protection would be placed in the river channel bottom and on bridge abutment aprons beneath the Lincoln Avenue bridge. This area of construction would be accessed from a ramp that

would be constructed on the west bank of the Napa River. Approximately 8 feet would be excavated into the existing grade and replaced with small and large riprap on top of geotextile fabric.

Water management in the Napa River would be required during construction for placement of scour protection under Lincoln Avenue bridge. Water management in the Napa River would be carried out in accordance with Waste Discharge Requirement #99-074 and to limit any potential water quality impacts especially turbidity in the Napa River. Water quality best management practices would also be implemented.

Floodwalls at the Dry Bypass

As part of previous construction at the dry bypass, some floodwalls have already been constructed. With the Proposed Project, additional drainage areas on either side of the Soscol Avenue bridge would be closed off by constructing additional floodwalls. The exposed portion of the concrete “T” walls would be approximately 4-7 feet tall north of the Soscol Avenue bridge and approximately 4-7 feet tall south of the Soscol Avenue bridge. The floodwall for the dry bypass consists of 230 linear feet of concrete “T” wall.

Construction Methods

Where possible, a 35-foot-wide construction corridor would be used for access and staging for construction work. This corridor includes a 15-foot-wide future O&M corridor on the land side of the floodwall alignment. Relocating the 36-inch-diameter water pipe in the Lake Park subdivision would be the critical-path item addressed early in construction, followed by constructing the floodwall and in-water work associated with the Lincoln Avenue bridge as permitted. The floodwall would be constructed in several-hundred-foot segments at a time as it progresses along the alignment. Some trees would need to be removed (as shown in project plans) in construction areas to allow construction access and equipment clearance. As construction progresses along the alignment, excavated material would be side-cast and reused as backfill. Staging areas might also be used for stockpiling material. Material would be balanced on site to the extent possible. Organics, trash, and demolished material would be off-hauled, and some fill, aggregate base, and rock revetment would be imported. Concrete would be trucked to the site on concrete trucks. Staging activities would occur within the Proposed Project area. No nighttime work or installation of lighting is anticipated.

After construction, the existing trail would serve as a maintenance corridor and would be repaved in areas that were previously paved. The wall could be covered with aesthetic treatments to improve the appearance of the concrete wall.

Construction Schedule

Construction of the Proposed Project is expected to span two construction seasons between 2025-2026. Construction would begin in the summer of 2025 and is anticipated to be complete in the summer of 2026.

Operations and Maintenance

After construction, all O&M activities would be undertaken by the District indefinitely as part of their areawide O&M activities. The 15-foot-wide O&M corridor on the land side of the floodwall and the existing Napa River Trail on the water side of the floodwall would serve as maintenance corridors. Any damage to the existing Napa River Trail as a result of construction would be repaired as necessary.

Permits and Approvals

Anticipated permits and approvals for the Proposed Project are included in Table 1 below.

Table 1. Anticipated Permits and Approvals

Agency	Type of Approval
California Department of Fish and Wildlife	Fish and Game Code Section 1602 Streambed Alteration Agreement
California Department of Fish and Wildlife	California Endangered Species Act, Section 2081 Incidental Take Permit
California Native American Heritage Commission	Consultation for effects on Native American burials or artifacts
State Historic Preservation Officer	National Historic Preservation Act, Section 106 Consultation
National Marine Fisheries Service	Endangered Species Act, Section 7 Consultation
US Fish and Wildlife Service	Endangered Species Act, Section 7 Consultation
Regional Water Quality Control Board	Clean Water Act Section 402 National Pollutant Discharge Elimination System General Permit for Stormwater Discharges Associated with Construction Activities, Clean Water Act Section 401 Water Quality Certification
US Army Corps of Engineers	Clean Water Act Section 404
Bay Area Air Quality Management District	Consultation for Authority to Construct/Permit to Operate

Scoping and Public Involvement Process

Written comments and suggestions concerning the Proposed Project must be received by December 1st, 2023, and sent to Napa County Flood Control and Water Conservation District, 804 First Street, Napa, CA 94559 or by email to flooddistrict@countyofnapa.org. Please provide your name and contact information when responding.

A public scoping meeting will be held virtually on November 9th, 2023, to present information about the Proposed Project and the District's decision-making process, and to listen to the views of the public on the range of issues relevant to the scope and context of the future Draft SEIR/EA. The details of the scoping meeting are as follows:

Thursday, November 09, 2023

5:00– 6:00 p.m.

Via Zoom: <https://countyofnapa.zoom.us/j/87405518019>

Project information will also be posted periodically at <https://www.countyofnapa.org/1083>

Initial Study

Environmental Factors Potentially Affected

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

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

The following environmental factors were not considered in the 1999 Final SEIS/EIR because the regulatory environment was different at that time but would require further analysis for the Proposed Project: agriculture and forestry resources, energy, paleontological resources, greenhouse gas emissions, minerals, vibration impacts to residences, recreation, transportation, tribal cultural resources, utilities, and wildfire (Napa County Flood Control and Water Conservation District and US Army Corps of Engineers 1999).

Evaluation of Environmental Impacts

1. A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources, a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors, as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact might occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.

4. “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from “Earlier Analyses,” as described in (5) below, may be cross-referenced).
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a. **Earlier Analysis Used.** Identify and state where they are available for review.
 - b. **Impacts Adequately Addressed.** Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c. **Mitigation Measures.** For effects that are “Less than Significant with Mitigation Measures Incorporated,” describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project’s environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
 - a. The significance criteria or threshold, if any, used to evaluate each question; and
 - b. The mitigation measure identified, if any, to reduce the impact to less than significance.

Aesthetics

Environmental Issue Area:	1999 Final SEIS/EIR Impact Conclusion	Potentially Significant Impact after Mitigation	Potentially Significant Unless Mitigation Incorporated	Less-than- Significant Impact	No Impact
<i>Except as provided in Public Resources Code Section 21099, would the project:</i>					
a) Have a substantial adverse effect on a scenic vista?	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?	NA	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Significant Unavoidable	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The Proposed Project is located along the west bank of the Napa River in downtown Napa. The floodwall would be constructed along the Napa River riparian corridor and the Napa River Trail, a recreational trail. Views of the area include views of mature trees and the Napa River, as well as single-family homes and multistory buildings and businesses.

Impact Analysis

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

Scenic corridors are defined by the City of Napa as an area visible from a highway, waterway, or railway or a major hiking, biking, or equestrian trail that provides vistas over water, across expanses of land (such as farmlands, woodlands, or coastal wetlands), or from mountaintops or ridges (City of Napa 2022a). There are no official scenic vistas in Napa or Napa County. From the Napa River Trail, views over the Napa River are visible and are considered a scenic corridor. However, the floodwall would be constructed on the land side of the Napa River Trail and would not obstruct views of the river from the trail. Therefore, the Proposed Project would have no impact on scenic vistas, and no mitigation is required.

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

There are no officially designated scenic highways within the vicinity of the Proposed Project (California Department of Transportation 2018). Therefore, the Proposed Project would have no impact on scenic resources within a state scenic highway, and no mitigation is required.

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

As discussed above, views in the scenic corridor of the Napa River along the Napa River Trail would not be obstructed or changed because the proposed floodwalls would be constructed on the land side of the trail. Scour protection below the Lincoln Avenue bridge would not be visible above the high-water line. During construction, vegetation would be removed along the riparian corridor to allow construction access, and some revegetation or mitigation would be needed for protected trees. Mitigation Measure Visual-1 from the 1999 Final SEIS/EIR would be applicable to the Proposed Project because the final grading and revegetation of the riparian corridor after construction would be designed to appear natural and, therefore, would not be substantially degraded.

Mitigation Measure Visual-6 from the 1999 Final SEIS/EIR addressed changes in views from the front row of the tiny vacation rental homes closest to the river at the RiverPointe property due to the proposed 10-foot-high floodwall to be constructed in front of these tiny vacation rental homes at that time. However, the project design has been revised to construct a 6-foot-tall floodwall in this area and the front row of tiny vacation rental homes would be removed to allow the floodwall to be constructed further landward. For this reason, views from the front row of tiny vacation rental homes closest to the river at the RiverPointe property would no longer exist after construction. The second row of tiny vacation rental homes would no longer have a view of the first row of tiny vacation rental homes but rather would have a buffer left by the removed tiny vacation rental homes in front of the floodwall. So, views from the second row would not substantially change. Additionally, the Proposed Project would be designed to have aesthetic treatments on the wall along with revegetation and landscaping so that the floodwall does not detract from the visual appearance of the area.

The Ace & Vine property and Napa River Pet Hospital would remain on the water side of the proposed floodwall and would retain their scenic quality views. Signs would be installed as part of the Proposed Project to direct customers to the businesses on the other side of the floodwall.

Views from the backyards of the homes on Shoreline Drive, Pike Drive, and Trout Way would be altered. Currently a berm exists, however, views of the Napa River corridor are visible over this existing berm. Once the floodwall is constructed in this area, approximately 2 to 3 feet of wall would be visible from the backyards of the homes on Shoreline Drive, Pike Drive, and Trout Way. The newly constructed floodwall would alter the visual landscape for these homes; however, these are not public views.

Overall, the construction of the floodwall would not impede views but would alter the viewshed given the presence of a new floodwall.

Therefore, the Proposed Project would have less-than-significant impacts on the existing visual character or quality of public views and would be consistent with zoning and regulations governing scenic quality after mitigation is incorporated, and no mitigation is required.

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

No nighttime construction work is planned, and no lighting would be installed as part of the Proposed Project. Therefore, the Proposed Project would have no impact on light or glare which would adversely affect day or nighttime views in the area, and no mitigation is required.

Agriculture and Forestry Resources

Environmental Issue Area:	1999 Final SEIS/EIR Impact Conclusion	Potentially Significant Impact after Mitigation	Potentially Significant Unless Mitigation Incorporated	Less-than- Significant Impact	No Impact
<p><i>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.</i></p> <p><i>Would the project:</i></p>					
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The entirety of the Proposed Project area is classified as urban and built-up land. None of the land in the Proposed Project area is classified as prime farmland and included in a Williamson Act Contract (DOC 2022). The closest area designated as Unique Farmland/Prime Farmland is on the east side

of the Napa River. There are no forestry resources in the Proposed Project area (Napa County 2008).

Impact Analysis

a) *Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?*

The Proposed Project area is not characterized as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Therefore, the Proposed Project would not use land that is designated as prime farmland and would not result in the conversion of prime, unique, or statewide importance farmland to non-agricultural uses. No impact would occur, and no mitigation is required.

b) *Conflict with existing zoning for agricultural use, or a Williamson Act contract?*

The Proposed Project area does not contain land zoned for agricultural use or any Williamson Act contract land. Therefore, the Proposed Project would not use agricultural lands and would not impact land within an existing Williamson Act contract and would not conflict with those uses. No impact would occur, and no mitigation is required.

c) *Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?*

The Proposed Project area does not contain forest land or timberland. Therefore, the Proposed Project would not conflict with existing zoning for or cause rezoning of forest land or timberland. No impact would occur, and no mitigation is required.

d) *Result in the loss of forest land or conversion of forest land to non-forest use?*

The Proposed Project area is not characterized as forest land or timberland. Therefore, the Proposed Project would not result in the loss or conversion of forest land. No impact would occur, and no mitigation is required.

e) *Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?*

There is no farmland in the Proposed Project area; therefore, no farmland would be converted to non-agricultural use. There is no forest land in the Proposed Project area; therefore, no forest land would be converted to non-forest use. The Proposed Project would not involve other changes in the existing environment that due to their location or nature could result in the conversion of farmland to non-agricultural use or the conversion of forest land to non-forest use. No impact would occur, and no mitigation is required.

Air Quality

Environmental Issue Area:	1999 Final SEIS/EIR Impact Conclusion	Potentially Significant Impact after Mitigation	Potentially Significant Unless Mitigation Incorporated	Less-than-Significant Impact	No Impact
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Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.

Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	Less than Significant with Mitigation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	Less than Significant with Mitigation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

Topography and Meteorology

Napa County, including the Proposed Project area, is in the San Francisco Bay Area Air Basin (SFBAAB). The SFBAAB is bound by the North Coast Ranges on the west and the Northern Sierra Nevada Mountains on the east. The San Francisco Bay Area is relatively flat. Hot dry summers and mild rainy winters characterize the Mediterranean climate of the SFBAAB. During the year, the temperature might range from 20 to 115 degrees Fahrenheit (°F) with summer highs usually in the 90s and winter lows occasionally below freezing. Average annual rainfall is about 20 inches, and the rainy season generally occurs from November through March. The prevailing winds are moderately strong and vary from moist clean breezes from the south to dry land flows from the north. The period from May through October in the San Francisco Bay Area is characterized by stagnant morning air or light winds with the delta sea breeze arriving in the afternoon out of the southwest. Usually, the evening breeze transports the airborne pollutants to the north out of the San Francisco Bay Area.

Air Pollutants of Concern

Criteria Air Pollutants

The pollutants introduced into the ambient air by stationary and mobile sources are categorized as primary and/or secondary pollutants. Primary air pollutants are those that are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxide (NO_x), sulfur dioxide

(SO₂), inhalable particulate matter (PM₁₀), fine particulate matter (PM_{2.5}), and lead (Pb) are primary air pollutants. ROG and NO_x are criteria pollutant precursors that form secondary criteria air pollutants such as ozone (O₃) through chemical and photochemical reactions in the atmosphere.

Toxic Air Contaminants

Toxic air contaminants (TACs) are pollutants that cause or might cause cancer or other serious health effects such as birth defects, neurological and reproductive disorders, or chronic eye, lung or skin irritation. TACs also might cause adverse environmental and ecological effects. TACs include substances such as volatile organic compounds, chlorinated hydrocarbons, asbestos, dioxin, toluene, gasoline engine exhaust, particulate matter emitted by diesel engines, and metals such as cadmium, mercury, chromium, and lead compounds, among many others.

Diesel engines emit a complex mixture of pollutants, including very small carbon particles, or “soot” coated with numerous organic compounds, known as diesel particulate matter (DPM). In 1998, the California Air Resources Board (ARB) identified DPM as a TAC. A primary source of DPM emissions is combustion from diesel engines, such as those in trucks and other motor vehicles. DPM is of concern because it is a potential source of both cancer and non-cancer health effects, and because it is present at some concentration in all developed areas of the state. DPM contributes to numerous health impacts that have been attributed to particulate matter exposure, including increased hospital admissions, particularly for heart disease, but also for respiratory illnesses, and even premature death.

Attainment Status

Regulated by the US Environmental Protection Agency (USEPA), the federal Clean Air Act has established National Ambient Air Quality Standards (NAAQS) for seven criteria air pollutants that have been linked to potential health concerns: CO, NO₂, O₃, SO₂, PM₁₀, PM_{2.5}, and Pb. The California Clean Air Act is administered by the ARB at the state level and by the air quality management districts and air pollution control districts at the regional and local levels. In California, ARB has established the California Ambient Air Quality Standards (CAAQS). CAAQS are generally more stringent than the corresponding federal standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles.

Table 2 summarizes the attainment status for SFBAAB in Napa County for both the NAAQS and the CAAQS.

Table 2. Attainment Status Designations

Criteria Pollutant	Federal Designation	State Designation
O ₃	Marginal Attainment	Nonattainment
CO	Attainment	Attainment
PM ₁₀	Attainment	Nonattainment
PM _{2.5}	Moderate Nonattainment (2006)	Nonattainment
NO ₂	Attainment	Attainment
SO ₂	Attainment	Attainment
Lead	Attainment (2008)	Attainment
Sulfates	(No Federal Standard)	Attainment

Criteria Pollutant	Federal Designation	State Designation
Hydrogen Sulfide	(No Federal Standard)	Unclassified
Visibility Reducing Particles	(No Federal Standard)	Unclassified

O₃ = ozone

CO = carbon monoxide

PM₁₀ = particulate matter less than or equal to 10 microns in diameter

PM_{2.5} = particulate matter less than or equal to 2.5 microns in diameter

NO₂ = nitrogen dioxide

SO₂ = sulfur dioxide

Sources: US Department of the Interior, "Reported Historic Asbestos Mines Historic Asbestos Projects, and Other Natural Occurrences of Asbestos in California"; California Air Resources Board Area Designations (Activities and Maps), 2018; USEPA, Current Nonattainment Counties for All Criteria Pollutants, 2018.

As shown in Table 2, Napa County is currently in marginal nonattainment for O₃ under the NAAQS and nonattainment for O₃ under the CAAQS. Napa County is designated as nonattainment for PM₁₀ under the CAAQS and attainment under the NAAQS.

Sensitive Receptors

Some receptors are considered more sensitive than others to air pollutants. The reasons for greater than average sensitivity include pre-existing health problems, proximity to emission sources, or the duration of exposure to air pollutants. For CEQA purposes, a sensitive receptor is generically defined as a location where human populations, especially children, seniors, or sick persons are found. Examples of sensitive receptors include residences, hospitals, and schools.

There are approximately 30 residences in the vicinity of the Proposed Project area. The nearest sensitive receptors are residences on Shoreline Drive, Pike Drive, and Trout Way, approximately 25 feet from the limits of the construction area.

Bay Area Air Quality Management District

The Bay Area Air Quality Management District (BAAQMD) has jurisdiction over all of Napa County. BAAQMD administers the federal CAA and California Clean Air Act. BAAQMD regulates air quality through its district rules and permit authority. BAAQMD also participates in planning review of discretionary project applications and provides recommendations. BAAQMD has adopted rules and regulations and CEQA guidelines that apply to the Proposed Project.

Impact Analysis

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

BAAQMD has established CEQA guidelines that set forth significance thresholds, below which a project may be safely assumed to conform to the relevant air quality plans for this area. The Proposed Project would generate short-term criteria pollutant emissions during construction. Emissions would be modeled in future CEQA documentation for the Proposed Project. Emissions are expected to be below the established significance thresholds. The Proposed Project would not create a permanent stationary source of air contaminants, include a land use that would generate a substantial number of trips from mobile sources, or involve the use of high-ROG architectural coatings or solvents. Therefore, the Proposed Project would not conflict with or obstruct

implementation of the relevant air quality plans. As a result, no impact would occur, and no mitigation is required.

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

During construction, the Proposed Project would generate short-term criteria pollutant emissions from the use of construction equipment, haul trucks, and construction worker commute vehicles. The California Emissions Estimator Model (CalEEMod) would be used to estimate criteria pollutant emissions during construction of the Proposed Project site in future CEQA documentation. Modeling would take into account ground disturbance, construction equipment, and construction timeframes.

The BAAQMD developed thresholds of significance that focus on quantifying and reducing emissions from construction projects in the region. For the purposes of this analysis, net increases of criteria pollutants would be deemed cumulatively considerable if they were to exceed the thresholds developed by BAAQMD.

Criteria air pollutant emissions generated during construction are anticipated to be below the thresholds of significance adopted by BAAQMD, but this will be confirmed once modeling is complete. Potential air quality impacts would be further reduced through Napa County's compliance with BAAQMD's dust control rules and other standard measures for construction projects. Mitigation measure Air-1 from the 1999 Final SEIS/EIR would be implemented to reduce impacts to air quality (Napa County Flood Control and Water Conservation District and US Army Corps of Engineers 1999). Additional mitigation measures may be required based on best available control methods and BMPs. Therefore, with the implementation of mitigation measures the Proposed Project's incremental contribution to criteria pollutant emissions is not anticipated to be cumulatively considerable and would be a less-than-significant impact.

c) Expose sensitive receptors to substantial pollutant concentrations?

As described above, approximately 30 residences are within 25 feet of the work areas along Shoreline Drive, Pike Drive, and Trout Way. These residences are considered the nearest sensitive receptors to the Proposed Project.

The Proposed Project's construction activities could generate TACs, specifically DPM, from the use of diesel equipment. However, construction would be temporary and would occur over a relatively short duration compared to the operational lifetime of the Proposed Project. Operation of construction equipment as work progresses along the Proposed Project alignment would allow the dispersal of TAC emissions and would avoid continuous construction activity in the portions of the sites closest to existing sensitive receptors. In addition, all construction equipment and operation thereof would be regulated per ARB's regulations for heavy-duty diesel vehicles. Furthermore, required compliance with applicable BAAQMD rules would limit exposure of sensitive receptors to TACs. Therefore, the Proposed Project would not expose sensitive receptors to substantial pollutant concentrations, thereby resulting in a less-than-significant impact. No mitigation would be required.

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

As described above, there are residences in the vicinity of the Shoreline Drive, Pike Drive, and Trout Way portion of the Proposed Project area. Construction of the Proposed Project would generate diesel exhaust emissions from on-site construction equipment. The diesel exhaust emissions would be intermittent and temporary and would dissipate rapidly from the source with an increase in distance. No other odors would be generated by the Proposed Project. Therefore, the Proposed Project would not generate emissions of odors affecting a substantial number of people, resulting in a less-than-significant impact. No mitigation would be required.

Biological Resources

Environmental Issue Area:	1999 Final SEIS/EIR Impact Conclusion	Potentially Significant Impact after Mitigation	Potentially Significant Unless Mitigation Incorporated	Less-than- Significant Impact	No Impact
<i>Would the project:</i>					
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?	Less than Significant with Mitigation		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	Less than Significant with Mitigation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Less than Significant with Mitigation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	NA	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Less than Significant with Mitigation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

A desktop survey was performed to assess biological resources potentially occurring in the Proposed Project area. Nine quads (Mt. George, Cordelia, Capell Valley, Sonoma, Yountville, Rutherford, Napa, Cuttings Wharf, and Sears Point) in the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (California Department of Fish and Wildlife 2023a), along with the USFWS Information for Planning and Consulting database (iPaC) (USFWS 2023), and the California Native Plant Society (CNPS) (California Native Plant Society 2023) were queried on May 11, 2023. The following special-status species are the most likely to occur in the Proposed Project area.

- Burrowing owl has the potential to be present at staging areas.
- Pallid bat is likely to occur at day or night roosts under the Lincoln Avenue bridge.
- Salt marsh harvest mouse has the potential to occur along the Napa River.
- Salt marsh common yellowthroat is likely to occur in the Proposed Project area within its breeding range.
- Swainson's hawk has the potential to occur in the Proposed Project area.
- Bald eagle has the potential to occur in the Proposed Project area.
- Western pond turtle's northwestern population is likely to occur in the Proposed Project area in aquatic habitat and upland nesting habitat.
- Western bumble bee/Crotch's bumble bee is likely to occur in the Proposed Project area.
- Monarch has the potential to occur in the Proposed Project area because, although no overwintering habitat exists in Napa County, foraging habitat exists.
- Delta smelt has the potential to occur in the Proposed Project area.
- Longfin smelt has the potential to occur in the Proposed Project area.
- Western ridged mussel is rare but has the potential to occur in the Proposed Project area.
- California freshwater shrimp has the potential to occur in the Proposed Project area.
- Conservancy fairy shrimp has the potential to occur in the Proposed Project area.
- Central California steelhead has the potential to occur in the Proposed Project area.
- Sacramento splittail has the potential to occur in the Proposed Project area.
- Delta tule pea is likely to occur in marsh and swamp habitat in the Proposed Project area.
- Mason's lilaeopsis is likely to occur in riparian, marsh, and swamp habitat in the Proposed Project area.

Additional species will be considered in the biological resources analysis in the future environmental documentation based on the query results and on-site habitat assessment surveys.

Habitat in the Proposed Project area includes a riparian corridor on the margin of an urban area. No critical habitat types were identified in the iPaC report.

Impact Analysis

a) *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?*

The Proposed Project has the potential to cause adverse effects on special-status species either directly or through habitat modifications or disturbances. Special-status birds identified to potentially occur in the Proposed Project area include burrowing owl, salt marsh common yellowthroat, Swainson's hawk, and bald eagle. Special-status mammals identified to potentially occur in the Proposed Project area include pallid bat and salt marsh harvest mouse. Special-status amphibians identified to potentially occur in the Proposed Project area include the western pond turtle. Special-status insects identified to potentially occur in the Proposed Project area include western bumble bee/Crotch's bumble bee and monarch. Special-status fish identified to potentially occur in the Proposed Project area include delta smelt, longfin smelt, western ridged mussel, California freshwater shrimp, conservancy fairy shrimp, Central California steelhead, and California splittail. Special-status plants identified to potentially occur in the Proposed Project area include delta tule pea, Mason's lilaeopsis, two fork clover (showy Indian clover), and contra costa goldfields.

Although bats could occur in the Proposed Project area and use the Lincoln Avenue bridge structure for roosting, because the bridge would not be impacted by construction activities, the bats could move out of the area during construction to avoid disturbance. Additionally, no nighttime work would occur.

Habitat assessment surveys would be performed to determine whether suitable terrestrial and aquatic habitat is present and which specific species could occur in the Proposed Project area and could be potentially affected by construction activities. Nesting bird preconstruction clearance surveys would be required prior to construction for burrowing owl and salt marsh common yellowthroat. Protocol-level raptor surveys would be required for Swainson's hawk and bald eagle. Upland habitat containing sandy soils in and adjacent to riparian habitat would need to be surveyed for western pond turtle during nesting season. Preconstruction clearance surveys would be required to determine whether salt marsh harvest mouse occurs in the Proposed Project area. Aquatic surveys would be required to determine the presence of aquatic species. Surveys would be required to determine whether two fork clover (showy Indian clover) and contra costa goldfields occur in the Proposed Project area.

Mitigation measures such as buffers and exclusion devices would be implemented to avoid special-status species during construction. If nesting birds or raptors are located during preconstruction clearance surveys, buffers would be implemented. Mitigation Measures Bio-1a, Bio-1b, and Bio-1c from the 1999 Final SEIS/EIR would be implemented for re-establishment of vegetation; Bio-3a and Bio-3b from the 1999 Final SEIS/EIR would be implemented for protection of woody vegetation during construction; Bio-6a, Bio-6b, Bio-6c, and Bio-6d from the 1999 Final SEIS/EIR would be implemented for in-water work; and Bio-7a, Bio-7b, and Bio-7c from the 1999 Final SEIS/EIR would be implemented for Mason's lilaeopsis (Napa County Flood Control and Water Conservation District and US Army Corps of Engineers 1999). Based on results of surveys performed in support of the Proposed Project, additional mitigation measures might be required.

A detailed analysis of biological resources in the Proposed Project area would be completed in the future CEQA/NEPA document for the Proposed Project.

Therefore, the Proposed Project could cause substantial adverse effects on special-status species either directly or through habitat modifications or disturbances; however, after the implementation of mitigation measures, impacts would be reduced to a less-than-significant level.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?

The Proposed Project has the potential to impact riparian habitat during placement of rock riprap for scour protection under the Lincoln Avenue bridge. As described above, surveys would be required to determine whether special-status vegetation and aquatic species occur under the Lincoln Avenue bridge prior to construction. Based on the results of the surveys, nets would need to be placed to prevent aquatic species from entering construction areas during in-water work, and additional mitigation measures may be required.

Habitat in the Proposed Project area includes a riparian corridor on the margin of an urban area. No critical habitat types were identified in the iPaC report. The CDFW Biogeographic Information and Observation System (BIOS) (California Department of Fish and Wildlife 2023b) viewer shows terrestrial connectivity across the entire Proposed Project area. Although the proposed floodwall would create a physical barrier between riparian habitat and the urban area, gates in the floodwall would allow wildlife movement. Tree removal along the Napa River Trail would be required to allow vehicle and equipment access during construction. Tree removal has the potential to cause disturbance to birds and other species. Clearance surveys would be required prior to any tree removal. Tree replacement would likely be required since new mitigation and would be done in accordance with applicable tree ordinances in the city and county of Napa.

Therefore, the Proposed Project would cause a substantial adverse effect on riparian habitat or other sensitive natural community; however, after the implementation of mitigation measures, impacts would be reduced to a less-than-significant level.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

The Proposed Project would include the placement of rock riprap for scour protection in the Napa River under the Lincoln Avenue bridge. The scour protection would place permanent fill in a jurisdictional water of the US. The Proposed Project would need to obtain all appropriate permits and approvals for filling waters of the US, and mitigation might be required. During construction, there could be temporary hydrological interruption of the Napa River as a result of water management in the Napa River during construction for the placement of scour protection under Lincoln Avenue bridge. Water management in the Napa River would be carried out in accordance with Waste Discharge Requirement #99-074 and to limit any potential water quality impacts especially turbidity in the Napa River. Water quality best management practices would also be implemented and, this would be a temporary impact. Therefore, the Proposed Project would have an adverse effect on state or federally protected water of the US through the direct filling and hydrological interruption; however, after the implementation of required permits, approvals, and mitigation measures, impacts would be reduced to a less-than-significant level.

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

As described above, water management in the Napa River would be required during construction for the placement of scour protection under the Lincoln Avenue bridge. Water management in the Napa River would be carried out in accordance with Waste Discharge Requirement #99-074 and to limit any potential water quality impacts especially turbidity in the Napa River. Water quality best management practices would also be implemented. Although these actions would be temporary, they have the potential to disrupt aquatic species in the Napa River. Mitigation measures such as using nets to prevent aquatic species from accessing work areas would be required to reduce potential effects to aquatic species. Additionally, vibration impacts from pile-driving activities associated with the Proposed Project could disrupt aquatic species and might require mitigation. Mitigation might include fish rescue or exclusion devices to keep fish away from work areas, and avoidance of spawning areas and periods. Vibration should be considered in the aquatic permits for Proposed Project activities. Additionally, as described above, terrestrial species could have impeded movement past the floodwall because it would act as a physical barrier; however, gates would be installed in the floodwall and would provide movement pathways for terrestrial species. Therefore, the Proposed Project may interfere with the movement of aquatic or wildlife species; however, with the implementation of mitigation measures, impacts would be reduced to a less-than-significant level.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Tree removal would be required for the Proposed Project to allow construction vehicle and equipment access. Tree removal would occur in accordance with tree protection ordinances in the city and county of Napa. Therefore, the Proposed Project would not conflict with any local policies or ordinances protecting biological resources and impacts would be less than significant, and no mitigation is required.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

There are no adopted Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plans in the Proposed Project area. Therefore, the Proposed Project would not conflict with any habitat conservation plans; no impact would occur, and no mitigation is required.

Cultural Resources

Environmental Issue Area:	1999 Final SEIS/EIR Impact Conclusion	Potentially Significant Impact after Mitigation	Potentially Significant Unless Mitigation Incorporated	Less-than-Significant Impact	No Impact
<i>Would the project:</i>					
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	Less than Significant with Mitigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	Less than Significant with Mitigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

Two tribes participated in past consultation for the Proposed Project: the Suscol Intertribal Council and the Wappo Tribe. The River Glen archaeological site is located in and near the Proposed Project area. Given the history of the area, there is a high probability for archaeological resources to occur in the Proposed Project area.

The River Glen site (CA-NAP-261) is on the west bank of the Napa River, near the end of Trout way, east of Shoreline Drive. Despite the site's disturbed condition, it was determined eligible for listing on the National Register of Historic Places (NRHP) due to its research potential. The site was subjected to data recovery in 1976, and in addition to human interments, the existence of an upper stratum of disturbed late-period deposits was confirmed to overlie a relatively undisturbed Late Archaic (Middle Horizon) midden. The site was revisited and tested in 1993, and, although the site was noted to have been further disturbed in the intervening years, it retained sufficient integrity to remain eligible for listing on the National Register.

Impact Analysis

a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

No historic buildings or bridges would be altered as a result of the Proposed Project. Therefore, there would be no impact or change in the significance of a historical resource pursuant to §15064.5, and no mitigation is required.

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

The Proposed Project would have a substantial adverse impact on archaeological resources at the eligible River Glen site. Pile driving to construct the sheet pile floodwall would be hammered through the area containing the River Glen site. This would be a significant impact, and data extraction would

be required before construction as required by Mitigation Measure Cultural-7 from the 1999 Final SEIS/EIR (Napa County Flood Control and Water Conservation District and US Army Corps of Engineers 1999). Mitigation Measures Cultural-7, Cultural-8, and Cultural-9 from the 1999 Final SEIS/EIR would be implemented to reduce impacts to the River Glen site and discovery of any unknown sites (Napa County Flood Control and Water Conservation District US Army Corps of Engineers 1999). In addition, Assembly Bill 52 (AB 52) consultation with interested tribes will take place prior to construction of the Proposed Project. Although tribal cultural resources have not been formally identified, the known sites are likely to be considered significant by the tribal community as a tribal cultural resources. Mitigation measures may not be sufficient to fully offset impacts, and impacts after implementation of mitigation measures may remain significant because an NRHP eligible archaeological site would be destroyed regardless of determinations during consultation. Therefore, the Proposed Project would cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5, and impacts would remain significant after the implementation of mitigation measures.

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

Human remains are likely to be encountered and disturbed at the River Glen site according to past documentation. The potential to encounter and disturb human remains also exists at the discovery of unknown sites during construction. Mitigation Measures Cultural-7, Cultural-8, and Cultural-9 from the 1999 Final SEIS/EIR would be implemented to reduce impacts to the River Glen site and discovery of unknown sites (Napa County Flood Control and Water Conservation District and US Army Corps of Engineers 1999). Although tribal cultural resources have not been formally identified, the known sites are likely to be considered significant by the tribal community as a tribal cultural resources. Mitigation measures may not be sufficient to fully offset impacts and impacts after implementation of mitigation measures could remain significant because human remains would be disturbed regardless of determinations during consultation. Therefore, impacts to human remains would remain significant after the implementation of mitigation measures.

Energy

Environmental Issue Area:	1999 Final SEIS/EIR Impact Conclusion	Potentially Significant Impact after Mitigation	Potentially Significant Unless Mitigation Incorporated	Less-than-Significant Impact	No Impact
<i>Would the project:</i>					
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	No Impact	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	No Impact	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

PG&E provides electric services to Napa County, where the Proposed Project area is located. PG&E is also the gas service provider in Napa. According to PG&E's Economic Development Site Tool (PG&E 2023), there are no existing electric transmission lines near the Proposed Project area. The closest existing electric transmission line is a 100-to-161-volt transmission line near Napa River Terrance Inn at the south end of the Proposed Project area.

The Napa County General Plan (Napa County 2008) states that the County promotes "research and the development and use of advanced and renewable energy technology." Additionally, Goal CON-16 in the general plan is to "promote the economic and environmental health of Napa County by conserving energy, increasing the efficiency of energy use, and producing renewable energy locally."

Impact Analysis

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

The Proposed Project would result in the temporary consumption of energy during construction work. The general use of construction equipment and vehicles, the delivery of earthmoving equipment and construction materials, utility relocation, and floodwall construction would all contribute to the consumption of energy resources during construction. However, energy consumption would be short term and temporary. It is also anticipated that there would not be any substantial changes to operations or maintenance when compared to existing conditions that would cause a substantial or wasteful use of energy. If any energy distribution lines are found in the Proposed Project area, the line would be relocated by PG&E or an appropriate provider. Thus, energy consumption would also not be considered wasteful, inefficient, or unnecessary during both project construction and operation. Therefore, this impact would be less than significant, and no mitigation is required.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The Proposed Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, there would be no impact, and no mitigation is required.

Geology and Soils

Environmental Issue Area:	1999 Final SEIS/EIR Impact Conclusion	Potentially Significant Impact after Mitigation	Potentially Significant Unless Mitigation Incorporated	Less-than-Significant Impact	No Impact
<i>Would the project:</i>					
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:					
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	No Impact	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii. Strong seismic ground shaking?	No Impact	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. Seismic-related ground failure, including liquefaction?	No Impact	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv. Landslides?	No Impact	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	No Impact	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	No Impact	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect risk to life or property?	No Impact	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	No Impact	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	NA	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

Napa County is in the Coast Ranges Geomorphic Province, which is bounded on the west by the Pacific Ocean and on the east by the Great Valley Geomorphic Province (Napa County 2007). According to Figure 4.10-2, Napa County Fault Features, in the Napa County General Plan, the Proposed Project is outside the Alquist Priolo Fault Zone (Napa County 2007). Soda Creek Fault is a quaternary fault that borders sections of the Proposed Project area to the east (DOC 2015). However, Soda Creek Fault is not active (Napa County 2007). There are four known faults that are of concern in Napa County. These are West Napa, Hunting Creek, Green Valley, and Cordelia, approximately 2 miles, 31 miles, 7 miles, and 9 miles east of the Proposed Project area, respectively. According to The Association of Bay Area Governments' "Earthquake Hazard Map for the Entire Bay Area Scenario: West Napa Fault," the southern portion of Napa County could be subject to Violent (Modified Mercalli IX) and Very Strong (Modified Mercalli VIII) movement as a result of a 6.5-magnitude event from the West Napa Fault. Based on data presented in the Napa County General Plan EIR, there is a 67% chance for a 6.7 or larger magnitude earthquake to occur in the San Francisco Bay Area by the year 2032.

The principal soil series in the Napa Valley is Bale-Cole-Yolo, which has formed on the nearly level, gently sloping, deep alluvium of the Valley. The soils range from well drained to somewhat poorly drained loams, silt loams, and clay loams on floodplains, alluvial fans, and terraces. There are expansive soils at a number of locations in the county, and such conditions are typical in much of the San Francisco Bay Area (Napa County 2007). According to Figure 4.10-3, Liquefaction Susceptibility, in the Napa County General Plan, the Proposed Project area is in areas designated as high and very high for liquefaction susceptibility (Napa County 2007). The Proposed Project area is not in an area designated for high landslide hazard potential (USGS 2023).

Impact Analysis

a-i) *Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving: Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?*

The Proposed Project is outside the Alquist Priolo Fault Zone (Napa County 2007). Soda Creek Fault borders the Proposed Project area to the east; however, it is not considered active. Active faults, specifically West Napa, Hunting Creek, Green Valley, and Cordelia, are approximately 2 miles, 31 miles, 7 miles, and 9 miles east of the Proposed Project area, respectively. Geotechnical evaluations would guide sound seismic design for all Proposed Project structures and facilities. Therefore, the Proposed Project would not result in substantial adverse effects, including the risk of loss, injury, or death involving the rupture of a known earthquake or fault. As a result, impacts would be less than significant, and no mitigation is required.

a-ii) *Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving: Strong seismic ground shaking?*

Active faults, specifically West Napa, Hunting Creek, Green Valley, and Cordelia, are approximately 2 miles, 31 miles, 7 miles, and 9 miles east of the Proposed Project area, respectively. The Proposed Project has the potential to experience strong seismic ground shaking from nearby faults in the county; however, geotechnical evaluations would guide sound seismic design for all Proposed Project structures. Therefore, the Proposed Project would not result in substantial adverse effects,

including the risk of loss, injury, or death involving strong seismic ground shaking. Impacts would be less than significant, and no mitigation is required.

a-iii) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving: Seismic-related ground failure, including liquefaction?

According to Figure 4.10-3, Liquefaction Susceptibility, in the Napa County General Plan, the Proposed Project area is in areas designated as high and very high for liquefaction susceptibility (Napa County 2007). Therefore, the Proposed Project area could experience liquefaction if a large earthquake occurs. However, the Proposed Project, including construction of floodwalls and scour protection, would be designed to meet USACE standards and would be composed of approved materials and structures that have low potential for liquefaction to meet USACE standards. Further, geotechnical evaluations would provide data on soils that would inform the project design in areas with liquefaction concerns. Therefore, the Proposed Project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction. Impacts would be less than significant, and no mitigation is required.

a-iv) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving: Landslides?

The Proposed Project area is not in an area designated for high landslide hazard potential (USGS 2023). Further, geotechnical evaluations would provide sound design for all project structures, and the Proposed Project would be designed to meet USACE standards. As a result, the Proposed Project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides. As a result, impacts would be less than significant, and no mitigation is required.

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

Ground disturbance, excavation, and other construction activities associated with the Proposed Project would remove ground cover and expose and disturb soils. Exposed and disturbed soils are vulnerable to erosion. However, a project Stormwater Pollution Prevention Plan (SWPPP) would be implemented. As part of the Proposed Project, coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit would be obtained from the California Regional Water Quality Control Board. The NPDES General Permit requires SWPPP implementation for projects with greater than 1 acre of disturbance to control stormwater runoff in the construction and staging areas, thus minimizing soil erosion and impacts to surface waters to the extent possible. SWPPP best management practices (BMPs) include measures to reduce erosion from disturbed areas, prevent sediment from migrating off site, provide dust and tracking control, and prescribe good housekeeping practices for material storage and stockpile management. Additionally, once constructed, floodwalls and rock scour protection would improve long-term erosion conditions in the Proposed Project area. Therefore, the Proposed Project would not result in substantial soil erosion or topsoil loss. As a result, the impact would be less than significant, and no mitigation is required.

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

Soils in the Proposed Project area are well drained to somewhat poorly drained loams, silt loams, and clay loams on floodplains, alluvial fans, and terraces. The Proposed Project area is not in an area designated for high landslide hazard potential (USGS 2023). However, there are expansive

soils at a number of locations in the county, and the Proposed Project area is in areas designated as high and very high for liquefaction susceptibility (Napa County 2007). Therefore, the Proposed Project area could experience liquefaction if a large earthquake occurs. The proposed floodwalls and rock scour protection would be designed to meet USACE standards and would be composed of materials and structures to meet USACE standards. Although the Proposed Project may be located on a geologic unit or soil that has a marginal potential for liquefaction and subsidence, due to the nature of the proposed improvements, this risk would be low and would exist with or without the Proposed Project. Therefore, the Proposed Project would not result in on- or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse. As a result, the impact would be less than significant, and no mitigation is required.

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

There are expansive soils at a number of locations in the county, and they may be present in the Proposed Project area. As stated above, the proposed floodwalls and rock scour protection would be designed to meet USACE standards and would be composed of approved materials and structures to meet the USACE standards. Furthermore, once constructed, the Proposed Project would reduce risk to life or property by improving flooding conditions in the Proposed Project area. Although the Proposed Project may be located on expansive soil that has a marginal potential to result in the direct or indirect risk to life or property, due to the nature of the proposed improvements, this risk would be low and would exist with or without the Proposed Project. Therefore, the Proposed Project would not create a substantial direct or indirect risk to life or property because of expansive soils. As a result, the impact would be less than significant, and no mitigation is required.

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

No septic tanks or alternative wastewater disposal systems are included as part of the Proposed Project. Therefore, the Proposed Project would not locate septic tanks or alternative wastewater disposal systems on soils incapable of adequate support. As a result, no impact would occur, and no mitigation is required.

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

Although much of the Proposed Project area has been previously disturbed, unique paleontological or geologic features could be discovered during subsurface work, which would be considered a significant impact. Therefore, mitigation measures would be implemented to minimize impacts resulting from the potential for discovery of buried paleontological resources during short-term construction.

Long-term operations in the Proposed Project area would not result in additional ground-disturbing activities and, therefore, would not have the potential to encounter unique paleontological or geologic resources. With the implementation of mitigation measures during short-term construction, the Proposed Project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, and impacts resulting from the Proposed Project would be less than significant with mitigation incorporated.

Greenhouse Gas Emissions

Environmental Issue Area:	1999 Final SEIS/EIR Impact Conclusion	Potentially Significant Impact after Mitigation	Potentially Significant Unless Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:					
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to greenhouse gas (GHG) emissions. GHG emissions are emitted by natural processes and human activities. Human-produced GHG emissions are created primarily by burning fossil fuels for energy. The human-produced GHG emissions most responsible for global warming and their relative contribution to it are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and chlorofluorocarbons (CFCs).

Global Warming Potential

Each type of GHG has a different capacity to trap heat in the atmosphere, and each type remains in the atmosphere for a particular length of time. The ability of a GHG to trap heat is measured by an index called the *global warming potential* expressed as carbon dioxide equivalent (CO₂e). CO₂ is considered the baseline GHG in this index and has a global warming potential of 1. CH₄ has a global warming potential of 21 times that of CO₂, and N₂O has a global warming potential of 310 times that of CO₂. The families of CFCs, hydrofluorocarbons, and perfluorocarbons have a substantially greater global warming potential than other GHGs, generally ranging from approximately 1,300 to over 10,000 times that of CO₂. Although CO₂ represents the vast majority of the total volume of GHGs released into the atmosphere, the release of even small quantities of other types of GHGs can be significant for their contribution to climate change.

Napa County Climate Action Plan

On July 23, 2018, the Napa County Board of Supervisors adopted the Napa County Climate Action Plan (CAP) (Napa County 2018). The CAP includes an inventory of GHG emissions from unincorporated areas in Napa County. The CAP establishes goals to reduce emissions. The CAP

contains measures that will help the community achieve GHG reductions and successfully adapt to climate change.

Impact Analysis

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

Construction activities would generate short-term GHG emissions from the operation of construction equipment, fueling activities, materials hauling, and commute trips by construction workers. The CalEEMod would be used to estimate GHG emissions during construction of the floodwalls in future CEQA documentation. The thresholds of significance adopted by BAAQMD would be used to determine the significance of GHG emissions. For typical land use projects, BAAQMD recommends use of a construction threshold of 25,000 metric tons (MT) of CO₂e per year to determine whether construction would result in the generation of GHG emissions sufficient to result in a significant impact on the environment (BAAQMD 2023).

Amortized over the 30-year life of the Proposed Project, GHG emissions from construction are expected to be below BAAQMD's threshold of significance of 25,000 MT CO₂e per year.

Therefore, the Proposed Project would likely not generate GHG emissions directly or indirectly that would have a significant impact on the environment, resulting in a less-than-significant impact. No mitigation is required.

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

The Proposed Project would generate short-term GHG emissions during construction. The short-term construction GHG emissions are not expected to exceed BAAQMD's significance thresholds. Further, the CAP does not include GHG-emissions-reduction measures that are applicable to the Proposed Project. Therefore, the Proposed Project would not conflict with any state or regional GHG-emission-reduction goals. As a result, there would be no impact, and no mitigation would be required.

Hazards and Hazardous Materials

Environmental Issue Area:	1999 Final SEIS/EIR Impact Conclusion	Potentially Significant Impact after Mitigation	Potentially Significant Unless Mitigation Incorporated	Less-than-Significant Impact	No Impact
<i>Would the project:</i>					
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Less than Significant with Mitigation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?	Less than Significant with Mitigation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	Less than Significant with Mitigation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

Schools near the Proposed Project area include Blue Oak Middle School, approximately 0.80 mile west of the southern end of Proposed Project area; New Technology High School, approximately 0.50 mile west of the southern end of the Proposed Project area; and Saint John the Baptist Catholic School, approximately 0.50 mile west of the Proposed Project area.

There are no public-use airports within 2 miles of the Proposed Project area. The nearest airport is the Napa County Airport, approximately 7 miles south of the Proposed Project area. The Proposed Project is not located within an airport land use plan.

According to the California Department of Forestry and Fire Protection (CAL FIRE), the Proposed Project area is in a local responsibility area (LRA) outside a Very High Fire Hazard Severity Zone (CAL FIRE 2008).

The Proposed Project area is in evacuation zones NAP-EO32 and NAP-EO26 for various hazardous events (Napa County 2023a).

According to the Department of Toxic Substances Control's (DTSC) EnviroStor Database (DTSC 2023), hazardous material database listings near the Proposed Project area include the following:

- **3011 Soscol Avenue:** This listing is a "Voluntary Agreement" 0.25 mile northwest of the Proposed Project area. The site has been used as a pear orchard and residence for the Von Uhlig family since 1933. The agricultural operations included a chemical storage, mixing area for pesticides, and fruit drying. Pesticides were applied in the orchard area of the site. Contaminants found on site in soil include DDT, DDE, DDD, dieldrin, lead, and arsenic. Contaminants in the groundwater include gasoline, diesel, benzene, toluene, ethylbenzene, total xylenes, MTBE, chloroform, 1,2-DCA, carbon sulfide, and isopropyl benzene.
- **750 Randean Way:** This listing is an "Evaluation" approximately 0.10 mile west of the Proposed Project area. The property had underground storage tanks, which resulted in soil contamination on site. The contaminants of concern were total petroleum hydrocarbons. The on-site soils were excavated and disposed of offsite. The property owner worked with the Water Board and Napa County on groundwater issues. On May 10, 1994, the Board informed DTSC that no further action was required.

Power lines are also in the Proposed Project area and may require relocation for construction of the Proposed Project. These lines could include old transformers containing polychlorinated biphenyls (PCBs) or PCB-contaminated material.

Impact Analysis

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

The Proposed Project would involve the use of common construction materials such as fuel, oil, grease, and surfactants. Construction disturbance, including disturbance near and within surface waters, has the potential to result in the accidental release of fuel and other construction material to the environment. However, with the implementation of an SWPPP for the Proposed Project, BMPs would be used to control erosion and sedimentation into surface waters and to prescribe good housekeeping practices to reduce the extent of potential spills or releases of hazardous materials into the environment.

Organics, trash, and demolished material would be hauled off site, and some fill, aggregate base, and rock revetment would be imported. The Proposed Project would comply with all relevant federal, state, and local statutes and regulations related to transport, use (including material storage procedures), or disposal of hazardous materials. BMPs, such as the SWPPP (as required by federal, state and local regulations), would minimize hazards resulting from routine transport, use, or disposal of hazardous materials. Therefore, impacts related to transport, use, or disposal of hazardous materials would be less than significant, and no mitigation is required.

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

Hazardous materials database listings near the Proposed Project area include 3011 Soscol Avenue, a Volunteer Agreement site 0.25 mile from the Proposed Project area, and 750 Randean Way, an Evaluation site 0.10 mile from the Proposed Project area. Both sites are not in the Proposed Project area and would be avoided during project construction.

Vehicle fueling and operating and storing construction equipment in the Proposed Project area could affect water quality through the accidental or inadvertent release of oil, grease, or fuel into adjacent waterways. However, spill-prevention measures would be included in the construction plans and monitored in the SWPPP for the proposed improvements to address the accidental or inadvertent release of oil, grease, or fuel into adjacent waterways. Such measures would include rules requiring the storage of reserve fuel and the refueling of construction equipment within designated secondary containment in construction areas and staging areas, and inspection of vehicles for oil and fuel leaks. Additionally, with the implementation of an SWPPP for the Proposed Project, BMPs would be used to control erosion and sedimentation into surface waters and to prescribe practices to reduce the extent of potential spills or release of hazardous materials into the environment.

Despite all attempts to identify contaminated areas, there is a chance that additional soil or groundwater contamination may be discovered during construction. This is especially true during excavation required for constructing the floodwalls. Additionally, power lines are in the Proposed Project area and may require relocation for construction of the Proposed Project. These lines could include old transformers containing PCBs or PCB-contaminated material. Demolished materials could contain asbestos-containing materials and lead-based paint. Release of any of these contaminants during construction of the Proposed Project would result in a significant impact.

Implementation of Mitigation Measures Haz-2a, Haz-2b, Haz-2c, Haz-3, Haz-4a, and Haz-5 from the 1999 Final SEIS/EIR would minimize or avoid impacts related to the release of hazardous materials into the environment (Napa County Flood Control and Water Conservation District and US Army Corps of Engineers 1999). Therefore, with implementation of mitigation measures, impacts from the release of hazardous materials into the environment during construction would be less than significant.

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

There are no public or private schools within 0.25 mile of the Proposed Project area. The nearest schools are located approximately 0.50 mile west of the Proposed Project area. Operation of construction vehicles and equipment would emit hazardous emissions. However, construction would be temporary and would occur over a relatively short duration compared to the operational lifetime of the Proposed Project. Operation of construction equipment would occur intermittently throughout the course of a day rather than continuously at any one location. All construction equipment and

operation of that equipment would be regulated per ARB's regulations for heavy-duty diesel vehicles. Furthermore, required compliance with applicable BAAQMD rules would limit exposure of sensitive receptors to hazardous emissions. Additionally, with the implementation of an SWPPP for the Proposed Project, BMPs would be used to reduce the extent of potential spills or release of hazardous materials into the environment. Therefore, through compliance with applicable regulations and the implementation of BMPs, impacts from emitting hazardous emissions or handling hazardous materials near schools would be less than significant, and no mitigation would be required.

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

The Proposed Project is not on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. As discussed in item (b), the two hazardous materials sites identified within 0.25 mile of the Proposed Project area (3011 Soscol Avenue and 750 Randean Way) would not pose a threat to the Proposed Project area during construction or operations. Therefore, no impact would occur, and no mitigation is required.

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

There are no public use airports within 2 miles of the Proposed Project area. The Proposed Project is not located within an airport land use plan. Therefore, no impact would occur, and no mitigation is required.

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

The Proposed Project area is in evacuation zones NAP-EO32 and NAP-EO26 (Napa County 2023a). Where possible, a 50-foot-wide construction corridor would be used for access and staging for construction work. The floodwall would be constructed in several-hundred-foot segments at a time as it progresses along the alignment. Construction activities would be coordinated with the local law enforcement and emergency service providers prior to the start of construction and would not impede emergency access routes. Long-term operations of the Proposed Project would not change access routes to or within the Proposed Project area or result in inadequate emergency access. Therefore, the Proposed Project would have a less-than-significant impact, and no mitigation is required.

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

The Proposed Project area is in an LRA outside a Very High Fire Hazard Severity Zone (CAL FIRE 2022). The Proposed Project would not add any new land uses that could create a greater fire risk than what currently exists. Fire-suppression equipment, including fire extinguishers, would be kept on site during construction in accordance with local fire codes and standards. In addition, construction activities that could generate sparks would be conducted in the staging areas, under appropriate conditions, with safety measures in place. Therefore, there would be no direct or indirect exposure of people or property to significant fire hazards. The Proposed Project would have a less-than-significant impact, and no mitigation is required.

Hydrology and Water Quality

Environmental Issue Area:	1999 Final SEIS/EIR Impact Conclusion	Potentially Significant Impact after Mitigation	Potentially Significant Unless Mitigation Incorporated	Less-than-Significant Impact	No Impact
<i>Would the project:</i>					
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	Less than Significant with Mitigation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:					
i. result in substantial erosion or siltation on- or off-site;	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	Less than Significant with Mitigation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii. create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	Less than Significant with Mitigation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv. impede or redirect flood flows?	No Impact	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The Proposed Project is located along the Napa River in the Napa River watershed in the Napa Valley. The Napa River forms the trunk of a simple dendritic (“treelike”) river system with its tributaries and varies erratically in width, depth, and capacity throughout its length. Upstream from the city of Napa, the channel varies in width from 50 to 300 feet and in depth to 10 to 20 feet. In many stretches, the streambed of the river consists of erosion-resistant materials, such as heavy clay formations, which result in well-stabilized channel gradients (Napa County Flood Control and Water Conservation District and US Army Corps of Engineers 1999). The channel slope decreases as the lower reaches are approached. Streamflow in the Napa River changes enormously from season to season; flows are higher from December through March and are reduced during the summer and early fall. Yearly variations are significant, and consecutive dry years with reduced flows are not uncommon. During the dry season, much of the river recharges groundwater, which migrates underground through alluvial gravel deposits.

Flood hazard conditions exist along the entire length of the Napa River through the city of Napa. The flood hazard area extends well into developed areas and follows the banks of several tributary creeks. The City of Napa regulates development in the flood hazard area in accordance with standards and regulations for flood zones. The Proposed Project is in the Regulatory Floodway/Zone AE subject to the 1-percent-annual-chance flood (FEMA 2010). Records of damaging floods in the Napa River Basin date back to 1862, but only recently have comprehensive data on the extent of damages been obtained. Major floods were recorded in 1955, 1958, 1963, and 1986.

Impact Analysis

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

The Proposed Project would be consistent with all water quality standards and existing waste discharge requirement order 99-074, which was issued for the Napa River/Napa Creek Flood Protection Project in September 1999. Although some erosion would occur during construction, an SWPPP would be implemented to reduce sedimentation and pollution in surface water and groundwater. Therefore, the Proposed Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. Impacts would be less than significant, and no mitigation is required.

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

The floodwalls are intended to increase the freeboard capacity of the Napa River channel and to provide a 100-year level of flood protection for the area. The floodwalls are not designed to prevent water movement under the concrete “T” walls or sheet pile “I” walls. Deeper portions of the walls are designed for structural stability on steep slopes and would still allow groundwater to flow under the walls. Therefore, the Proposed Project would not interfere with groundwater recharge or impede groundwater movement. Impacts would be less than significant, and no mitigation is required.

c-i) *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious*

surfaces, in a manner which would: result in substantial erosion or siltation on- or off-site?

The only in-water work associated with the Proposed Project is to place rock riprap as scour protection under the Lincoln Avenue bridge. Some water diversions might be constructed to place the scour protection, but no dewatering would take place. Any diversions would be within the existing river channel, would be temporary, and would not permanently alter the course of the Napa River. An SWPPP would be implemented to reduce pollution, erosion, and sedimentation resulting from construction. Therefore, the Proposed Project would have no impact on existing drainage patterns that would result in substantial erosion or siltation on or offsite, and no mitigation is required.

c-ii) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

The proposed floodwalls would vary in height, would be less than 2 feet wide, and would add negligible new impervious surface to the Proposed Project area. After construction work, previously paved areas would be repaved, and previously unpaved areas would be returned to their preconstruction condition. Therefore, the Proposed Project would have no impact on existing drainage patterns that would substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site. No mitigation is required.

c-iii) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Negligible new impervious surfaces would be created by the proposed floodwalls, and no new sources of polluted runoff would be created as a result of the Proposed Project. Therefore, the Proposed Project would have no impact on existing drainage patterns that would create or contribute runoff that would exceed the capacity of stormwater drainage systems or provide substantial additional sources of polluted runoff. No mitigation is required.

c-iv) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: impede or redirect flood flows?

The purpose of the Proposed Project is to impede and redirect flood flows from the Napa River away from existing homes and businesses in Napa along the Napa River area in the flood zone. This would be considered a beneficial improvement. Therefore, the Proposed Project would not have a negative impact on existing drainage patterns that would impede or redirect flood flows. No mitigation is required.

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

The Proposed Project is in the flood zone along the Napa River and currently risks the release of pollutants from vehicles, businesses, or construction equipment if a flood were to inundate the Proposed Project area. After construction of the Proposed Project, the risk of the release of pollutants due to inundation in the Proposed Project area would be remedied by the floodwalls.

Therefore, the Proposed Project would have a less-than-significant impact on releasing pollutants due to project inundation in a flood hazard zone. No mitigation is required.

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

The Proposed Project would be consistent with all water quality control plans and sustainable groundwater management plans for the area. The Proposed Project would comply with the existing waste discharge requirements. After construction, there would be no long-term point sources of pollution to the Napa River or the surrounding groundwater basin. Therefore, the Proposed Project would have no impact on the implementation of a water quality control plan or sustainable groundwater management plan. No mitigation is required.

Land Use and Planning

Environmental Issue Area:	1999 Final SEIS/EIR Impact Conclusion	Potentially Significant Impact after Mitigation	Potentially Significant Unless Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:					
a) Physically divide an established community?	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	Less than Significant with Mitigation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

Napa County and the City of Napa govern land uses and zoning in the Proposed Project area. According to the Napa County General Plan (Napa County 2008), the Proposed Project is located within the Urban Residential land use designation. The urban residential designated land includes a full range of residential uses as well as both planned development and commercial uses. The Proposed Project area consists mainly of open space and the public trail along the west bank of the Napa River but also includes residential and commercial properties.

Impact Analysis

a) Physically divide an established community?

The Proposed Project would reduce the risk of floods by continuing the construction of floodwalls along a segment of the Napa River. Gates and access points would be built into the proposed floodwalls to allow access on either side of the floodwalls, and these gates and access points would not physically divide or affect established communities. The Proposed Project would require the use of Lincoln Avenue, Shoreline Drive, Trout Way, Wall Street, the RiverPointe property, and potentially other areas for project site access. Existing roads are wide enough to accommodate all construction equipment and would not require road widening or improvements. Although Lincoln Avenue may require traffic control for project construction, traffic control would occur only temporarily. All construction traffic and access would be coordinated with local landowners prior to construction. Construction would occur close to residential uses but would occur only temporarily. Therefore, there would be no impact, and no mitigation is required.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

As a result of project construction, property would be acquired in the RiverPointe property and up to 16 tiny vacation rental homes in the RiverPointe property would be removed. These homes are not permanent residences. They are moved out of the floodway during the winter typically due to the risk of flooding at this site. Burrows Court in the RiverPointe property may be realigned to accommodate the floodwalls, and some tiny vacation rental homes could be reinstalled depending on the remaining space available. The Proposed Project could require other minor acquisitions of property for flood

easements in the Proposed Project area. All property acquisitions will abide by applicable federal and state laws. The Proposed Project would not require additional housing or construction of housing. The Proposed Project would not conflict with any land use plan, policy, or other regulations. Therefore, the Proposed Project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, a less-than-significant impact would occur, and no mitigation is required.

Mineral Resources

Environmental Issue Area:	1999 Final SEIS/EIR Impact Conclusion	Potentially Significant Impact after Mitigation	Potentially Significant Unless Mitigation Incorporated	Less-than-Significant Impact	No Impact
<i>Would the project:</i>					
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Although Napa County has been the site for historic mining activities, the Napa County General Plan states that the current geological opportunities for future mineral extraction are unknown (Napa County 2008). State mineral resource zone (MRZ) maps indicate that most of the county is not evaluated for mineral resources. The chief minerals currently mined in the county are aggregate and basalt rock used for concrete aggregate (Napa County 2008). The State Department of Conservation, Office of Mine Reclamation has specified Napa Quarry, Pope Creek Quarry, and American Canyon Quarry as active mines. The Proposed Project area is not near any of the three active mines. The closest active mine, Napa Quarry, is approximately 4 miles from the Proposed Project area (DOC 2016).

Impact Analysis

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

The chief minerals currently mined in Napa County are aggregate and basalt rock. According to the Office of Mine Reclamation, no MRZ or gas fields are in the Proposed Project area (DOC 2016). Therefore, the Proposed Project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state. As a result, no impact would occur, and no mitigation is required.

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

The Proposed Project is not in an area known to contain mineral resources (DOC 2016). No locally important mineral resource recovery sites are in the Proposed Project area. Therefore, the Proposed Project would not result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. As a result, no impact would occur, and no mitigation is required.

Noise

Environmental Issue Area:	1999 Final SEIS/EIR Impact Conclusion	Potentially Significant Impact after Mitigation	Potentially Significant Unless Mitigation Incorporated	Less-than-Significant Impact	No Impact
<i>Would the project result in:</i>					
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Significant Unavoidable	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	NA	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Noise and Groundborne Vibration

Noise is generally defined as unwanted sound. The sound pressure level is the most common descriptor used to characterize the loudness (or amplitude) of an ambient sound, and the decibel (dB) scale is used to quantify sound intensity. Because the human ear does not perceive every sound frequency with equal loudness, sounds are often adjusted in a process called “A-weighting.” The A-weighted decibel or dBA refers to a scale of noise measurement that approximates the range of sensitivity of the human ear to sounds of different frequencies.

Vibrating objects in contact with the ground radiate vibration waves through various soil and rock strata to the foundations of nearby buildings. As the vibration propagates from the foundation throughout the remainder of the building, the vibration of floors and walls can cause perceptible vibration from the rattling of windows or a rumbling noise. The rumbling sound caused by the vibration of room surfaces is called groundborne noise.

When assessing annoyance from groundborne noise, vibration is typically expressed as root mean square (RMS) velocity in units of decibels of 1 microinch per second. To distinguish vibration levels from noise levels, the unit is written as VdB. Annoyance due to frequent vibration in residential settings occurs at vibration levels above 70 VdB (California Department of Transportation 2006; FTA 2018). In extreme cases, excessive groundborne vibration can cause structural damage to buildings. The damage threshold for buildings starts at 100 VdB (FTA 2018).

Existing Noise Environment

Noise sources that affect the baseline noise levels throughout Napa County include vehicle traffic, aircraft, trains, and stationary sources. Stationary noise sources in Napa County include farming, mining, industry and food processing, and construction. Existing ambient noise levels in the Proposed Project area are expected to be moderate due to its urban location.

Existing sources of noise in the Proposed Project area include vehicle traffic on surrounding streets, residential uses, and recreationists using the Napa River Trail.

Noise Sensitive Receptors

Certain land uses are considered more sensitive to noise than others. Examples of more sensitive types of land uses are residential areas, educational facilities, hospitals, childcare facilities, and senior housing. There are residences near the north section of the Proposed Project. Approximately 30 residences are within 25 feet of the work areas along Shoreline Drive, Pike Drive, and Trout Way.

Noise Standards

Napa County and the City of Napa each have established policies and standards that aim to minimize the effects of noise on people through prescriptive construction standards, zoning restrictions, hours of operation, and suppression techniques. The applicable noise standards and policies are summarized below.

Napa County (Napa County 2023b)

Where technically and economically feasible, construction activities will be conducted in such a manner that the maximum noise levels at affected properties would not exceed those listed in the following schedule (Table 3).

Table 3. Noise Limits for Construction Activities

Time	Residential	Commercial	Industrial
Daily: 7 a.m. to 7 p.m.	75 dBA	80 dBA	85 dBA
Daily: 7 p.m. to 7 a.m.	60 dBA	65 dBA	70 dBA

City of Napa (City of Napa 2022b)

Any person engaged in construction activity, other than construction activity on an existing residential unit which such person owns or rents, pursuant to any provision of this code, shall limit said construction activity as follows:

- A. Construction activities throughout the entire duration of the project shall be limited to the hours of 7:00 a.m. to 7:00 p.m., Monday through Friday. There would be no start-up of machines nor equipment prior to 8:00 a.m., Monday through Friday; no delivery of materials nor equipment prior to 7:30 a.m. nor past 5:00 p.m., Monday through Friday; no cleaning of machines nor equipment past 6:00 p.m., Monday through Friday; no servicing of equipment past 6:45 p.m., Monday through Friday; and construction on weekends or legal holidays shall be limited to the hours of 8:00 a.m. to 4:00 p.m., unless a permit shall first have been secured from the City Manager, or designee, pursuant to Section 8.08.050 of this code. The City Manager, or designee, shall grant such permit:

1. For emergency work;
 2. Other work, if work and equipment will not create noise that may be unreasonably offensive to neighbors as to constitute a nuisance; or
 3. If necessary to protect the public health, safety, and welfare.
- B. All muffler systems on construction equipment shall be properly maintained.
- C. All construction equipment shall not be placed adjacent to developed areas unless said equipment is provided with acoustical shielding.
- D. All construction and grading equipment shall be shut down when not actively in use.
- E. Construction activity by or on behalf of a public agency, which is necessary to avoid a disruption of a public project or to protect the public health, safety, and welfare, shall be exempt from the time limitations of this section.
- F. As a separate, distinct, and cumulative remedy established for a violation of this section, the Police and/or the Code Enforcement Officer may issue a stop work order for violation of this section. Such order shall become effective immediately upon posting of the notice. After service of the stop work order, no person shall perform any act with respect to the subject property in violation of any of the terms of the stop work order, except such actions the city determines are reasonably necessary to render the subject property safe and/or secure until the violation has been corrected. (O93-026)

Impact Analysis

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

Construction activities would temporarily increase noise levels in the Proposed Project area from the use of construction equipment and construction traffic. Construction equipment noise varies with the type of equipment. The typical noise levels by equipment, as measured at a standard of 25 feet, are listed in Table 4. Construction equipment noise levels decrease by about 6 dBA per doubling of distance from the source because of geometric divergence (that is, the spreading of noise from a source) alone, provided there is a clear line of sight to the equipment (FTA 2018).

Table 4. Typical Construction Equipment Noise Levels

Equipment	Typical Noise Level (dBA) at 25 feet from Source
Air Compressor	86
Backhoe	86
Compactor	88
Concrete Mixer	91
Crane, Mobile	89
Dozer	91
Grader	91
Jack Hammer	94
Loader	86

Equipment	Typical Noise Level (dBA) at 25 feet from Source
Paver	91
Pile Driver (impact)	107
Pile Driver (sonic)	101
Pump	83
Roller	91
Saw	82
Scraper	91
Truck	90

Source: FTA 2018

Based on Table 4, typical construction equipment that may be associated with the Proposed Project could generate noise levels of up to 107 dBA at a distance of 25 feet. As previously noted, the nearest noise-sensitive receptors to construction equipment would be the residences on Shoreline Drive, Pike Drive, and Trout Way, approximately 25 feet from the limits of the construction area. As noted earlier, Napa County has a comprehensive noise ordinance that sets specific noise levels for different zoning districts and for different land uses. The Proposed Project area is mainly residential. Therefore, the established noise level threshold for construction projects is 75 dBA between 7 a.m. and 7 p.m. Thus, temporary increases in the ambient noise levels in the Proposed Project area are anticipated during construction, and construction noise levels would be above acceptable established thresholds. Implementation of Mitigation Measures NOISE-1a through 1e from the 1999 Final SEIS/EIR would minimize impacts related to construction noise levels (Napa County Flood Control and Water Conservation District and US Army Corps of Engineers 1999). Additional mitigation measures to further reduce construction noise levels may be required. Once constructed, the Proposed Project would not result in any long-term noise impacts. Therefore, with implementation of mitigation measures, construction noise impacts would be reduced to a less-than-significant level.

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

Construction-related vibration is normally associated with impact equipment such as pile drivers and jackhammers and the operation of some heavy-duty construction equipment, such as bulldozers and trucks. The typical vibration levels by equipment, as measured at a distance of 25 feet, are listed in Table 5. Vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance.

Table 5. Typical Construction Equipment Vibration Levels

Equipment	Typical Vibration Level (VdB) at 25 feet from Source
Pile Driver (impact) – upper range	112
Pile Driver (impact) – typical	104
Pile Driver (sonic) – upper range	105
Pile Driver (sonic) – typical	93
Clam Shovel Drop (slurry wall)	94
Hydromill (slurry wall) – in soil	66

Equipment	Typical Vibration Level (VdB) at 25 feet from Source
Hydromill (slurry wall) – in rock	75
Vibratory Roller	94
Hoe Ram	87
Large Bulldozer	87
Caisson Drilling	87
Loaded Trucks	86
Jackhammer	79
Small Bulldozer	58

Source: FTA 2018

Project construction is anticipated to use equipment such as pile drivers and trucks that could cause groundborne vibrations. Based on Table 5, construction equipment associated with the Proposed Project could generate vibration levels of up to 112 VdB at a distance of 25 feet. As previously noted, the nearest noise-sensitive receptors to construction activities are the residences on Shoreline Drive, Pike Drive, and Trout Way, approximately 25 feet from the limits of the construction area. The vibration level at the nearest sensitive receptor is calculated using the following formula from the *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018):

$$L_{V,distance} = L_{V,reference} - 30 \log (D/25)$$

Where:

$L_{V,distance}$ = the RMS velocity level adjusted for distance (VdB),

$L_{V,reference}$ = the source reference vibration level at 25 feet (VdB), and

D = distance from the equipment to the receiver (feet)

Using this equation, the groundborne vibration level at 25 feet from construction associated with the Proposed Project would be 112 VdB. This level is within the threshold for structural damage and exceeds the annoyance threshold of 70 VdB for residential uses (FTA 2018).

Mitigation Measure Cultural-1b from the 1999 Final SEIS/EIR would be implemented for pile driving near the residences on Shoreline Drive, Pike Drive, and Trout Way, even though they are not historic buildings. A licensed engineer will be present onsite to monitor for perceptible levels of vibration in the buildings whenever pile driving occurs (Napa County Flood Control and Water Conservation District and US Army Corps of Engineers 1999). Additional mitigation measures may be required to further reduce vibration impacts. Potential additional mitigation measures including preconstruction surveys would be conducted on the foundations of nearby sensitive receptors to determine baseline standards and identify pre-existing fractures. A postconstruction survey would be used to determine any potential impacts as a result of the Proposed Project. Additionally, a soil assessment could be conducted to determine the potential for propagating vibration in the area. Once constructed, the Proposed Project would not generate additional groundborne vibrations.

Although, the Proposed Project would generate a substantial temporary increase in groundborne vibration or groundborne noise levels in the Proposed Project area in excess of applicable standards of other agencies, with implementation of mitigation measures, impacts due to groundborne vibrations would be less than significant.

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

There are no private airstrips or public airports within 2 miles of the Proposed Project area. The nearest public airport to the Proposed Project area is the Napa County Airport, approximately 7 miles south of the Proposed Project area. Therefore, the Proposed Project would not expose people residing or working in the area of an airport to excessive noise levels. As a result, no impact would occur, and no mitigation is required.

Population and Housing

Environmental Issue Area:	1999 Final SEIS/EIR Impact Conclusion	Potentially Significant Impact after Mitigation	Potentially Significant Unless Mitigation Incorporated	Less-than-Significant Impact	No Impact
<i>Would the project:</i>					
a) Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	No Impact	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	No Impact	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The Proposed Project area is in the city of Napa in Napa County. The city of Napa has a total population of 79,246, and Napa County has a total population of 138,319 (US Census Bureau 2022a). The Proposed Project area is within Napa County's census tract 2005.03/2005.05 block group 2/2 (CT 114 BG 3). This block group has a total population of 2,729 (US Census Bureau 2022a). Napa County has a total of 55,448 housing units, 49,738 of which are occupied (US Census Bureau 2022b). The city of Napa has a total of 31,071 housing units, 29,356 of which are occupied. Census tract 2005.03 BG 2 has a total of 234 housing units, 212 of which are occupied. Census tract 2005.05 BG 2 has a total of 425 housing units, 403 of which are occupied (US Census Bureau 2022b).

Impact Analysis

a) Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?

The Proposed Project would not create any new homes or businesses or expand existing roads or other infrastructure that could induce substantial unplanned population growth either directly or indirectly. Construction activities, and associated jobs, would be short term, would be temporary, and would not induce growth due to a need for worker housing. The District and USACE anticipate that construction workers would commute to and from the Proposed Project area from nearby cities. The Proposed Project would meet the long-term objectives of USACE, the City of Napa, Napa County, and the District to provide increased flood protection along the Napa River. Therefore, no impact would occur, and no mitigation is required.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

As a result of project construction, property would be acquired in the RiverPointe property and up to 16 tiny vacation rental homes in the RiverPointe property would be removed. These homes are not permanent residences. They are moved out of the floodway during the winter typically due to the risk of flooding at this site. Burrows Court in the RiverPointe property may be realigned to accommodate the floodwalls, and some tiny vacation rental homes could be reinstalled depending on the remaining space available. The Proposed Project could require other minor acquisitions of property for flood easements in the Proposed Project area. All property acquisitions will abide by applicable federal and state laws. Therefore, the Proposed Project would not displace existing people or permanent housing that would require constructing replacement housing. No impact would occur, and no mitigation is required.

Public Services

Environmental Issue Area:	1999 Final SEIS/EIR Impact Conclusion	Potentially Significant Impact after Mitigation	Potentially Significant Unless Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:					
i. Fire Protection?	No Impact	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii. Police Protection?	No Impact	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii. Schools?	No Impact	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv. Parks?	No Impact	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
v. Other public facilities?	No Impact	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The Proposed Project area is served by the City of Napa Police and Fire Departments (Napa County 2016). California Highway Patrol also provides law enforcement on public roads in the area. There are no schools, parks, or public facilities in the Proposed Project area. The closest school is approximately 0.5 mile west of the Proposed Project area. The closest public recreational facility (Lake Park) is approximately 0.4 mile west of the Proposed Project area.

Impact Analysis

a-i) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: Fire Protection?

No new government buildings or facilities would be created as a result of the Proposed Project. Construction of the Proposed Project would be short term. Therefore, there is no need for increased fire protection. Proposed Project construction-related truck trips would not close roads; therefore, no detour routes are needed to manage traffic in the event of a fire. Additionally, the district and USACE anticipate that roads used to access construction sites would be wide enough to accommodate construction trucks or emergency response vehicles. All vehicle parking, equipment, and materials would be located and stockpiled at designated staging areas and would not block any access roads.

After construction, fire response times would remain consistent with current response times. Therefore, fire protection response times would not be affected. The Proposed Project would not induce population growth that would require additional fire protection services to maintain the current service ratios (Napa County Flood Control and Water Conservation District and US Army Corps of Engineers 1999). No government facilities would be altered or required as a result of the Proposed Project. Therefore, the impact on fire protection would be less than significant, and no mitigation is required.

a-ii) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: Police Protection?

No new buildings or facilities would be created as a result of the Proposed Project; therefore, there is no need for increased police protection. Project work would be short term, and emergency response routes would be maintained during construction of the Proposed Project. Full road closures and detours would not be required for the Proposed Project. After construction, police response times would remain consistent with current response times. Additionally, all vehicle parking, equipment, and materials would be located and stockpiled at designated staging areas and would not block any access roads. The Proposed Project would not induce population growth that would require additional police protection services to maintain the current service ratios. Therefore, no impact to police protection would occur, and no mitigation is required.

a-iii) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: Schools?

There are no schools in the Proposed Project area. Therefore, the Proposed Project would not result in substantial adverse physical impacts on schools. Furthermore, no new housing would be created as a result of the Proposed Project, so no additional school capacity would be required. Therefore, no impact to schools would occur, and no mitigation is required.

a-iv) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: Parks?

There are no parks in the Proposed Project area and no parks in adjacent communities would be affected by the Proposed Project. The Proposed Project would also not generate an increase in population that would affect parks. The Napa River Trail runs through the Proposed Project area and would be temporarily disturbed and closed during construction. Potential impacts to the trail are discussed further in the Recreation section. Therefore, the Proposed Project would not result in substantial adverse physical impacts on parks. No impact would occur, and no mitigation is required.

a-v) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: Other public facilities?

There are no public facilities in the Proposed Project area. Additionally, the Proposed Project would not construct housing or create general increases in population or service requirements. Therefore, the Proposed Project would not result in substantial adverse physical impacts on public facilities. No impact would occur, and no mitigation is required.

Recreation

Environmental Issue Area:	1999 Final SEIS/EIR Impact Conclusion	Potentially Significant Impact after Mitigation	Potentially Significant Unless Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:					
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

The Napa River Trail is a multi-use recreational trail that runs along the west bank of the Napa River. In addition to the paved Napa River Trail, unimproved dirt trails also allow access along the Napa River. These trails are used by walkers and bikers, and as access for fishing and boating in the Napa River.

Impact Analysis

a) *Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*

During construction of the Proposed Project, a segment of the Napa River Trail and unimproved recreational trail in the Proposed Project area would be closed to public use because project construction would require the trail to be removed to allow the floodwalls to be built. A trail detour would be established, and signs would be provided to state the location and duration of the detour. After the floodwalls are constructed, the trail would be rebuilt in its same general location and would be in newer condition than it currently is. Additionally, a new segment of trail would be constructed and paved between the River Terrace Inn and Wall Street. Therefore, the Proposed Project would not increase the use of existing neighborhood and regional recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. No impact would occur, and no mitigation is required.

b) *Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?*

As stated above, the Napa River Trail and unimproved recreational trail in the Proposed Project area would need to be closed and a detour would be provided during construction of the floodwalls. The

trail would be rebuilt in its same general location after construction, and a new segment of the trail would be constructed and paved. Reconstructing the trail is part of the Proposed Project. Therefore, any impacts related to reconstructing the trail in the Proposed Project area are already considered as part of this Draft Initial Study. After construction, the trail would be in newer condition than it currently is. Therefore, the Proposed Project would have no adverse physical effect on the environment due to the construction of recreational facilities. Impacts would be less than significant, and no mitigation is required.

Transportation

Environmental Issue Area:	1999 Final SEIS/EIR Impact Conclusion	Potentially Significant Impact after Mitigation	Potentially Significant Unless Mitigation Incorporated	Less-than-Significant Impact	No Impact
<i>Would the project:</i>					
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in inadequate emergency access?	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Major roads in the Proposed Project area and vicinity include First Street, Lincoln Avenue, the Silverado Trail, and Soscol Avenue.

- First Street is a two-lane arterial street, with one lane in each direction east of Main Street and two lanes westbound between Main Street and California Boulevard. Between Jefferson Street and Soscol Avenue the posted speed limit is 25 mph.
- Lincoln Avenue is a four-lane arterial street with a posted speed limit of 35 mph. There are two lanes in each direction. The Lincoln Avenue bridge traverses the Napa River and is a continuous reinforced concrete T girder bridge on big pier walls and a 40-degree skew. The bridge carries two traffic lanes, a bicycle lane, and a sidewalk in each direction.
- Silverado Trail (State Route 121) bounds the Proposed Project area to the east. State Route 121 is a two-lane arterial street that runs between the cities of Napa and Calistoga. It has one lane in each direction, and the posted speed limit is 35 mph.
- Soscol Avenue is a four-lane arterial street with a posted speed limit of 40 miles per hour (mph). There are two lanes each direction, and raised median islands separate northbound and southbound traffic between First and Third Streets. There are striped bike lanes in both directions on Soscol Avenue.

Bicycle traffic in the Proposed Project area primarily uses the travel lane along with vehicle traffic. However, there are marked bike lanes on Soscol Avenue throughout the Proposed Project area and on Third Street between Soscol Avenue and Silverado Trail. Pedestrian facilities in the Proposed

Project area consist predominantly of sidewalks on both sides of the street. The Napa River Trail along the west bank of the Napa River is a pedestrian and bicycle route.

In the Proposed Project area, the City of Napa maintains several public parking lots as well as some areas where parking is allowed on-street.

Impact Analysis

a) *Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?*

The Proposed Project would not result in permanent or long-term increases in traffic that would alter the performance of the existing circulation system. However, the Proposed Project could have temporary, short-term impacts on transportation and circulation in the Proposed Project area and surrounding area during construction. Haul and dump trucks and highway haul trucks would be used to transport materials to and from the construction site. The public would be notified before any short-term road closures during construction. An existing trail would be excavated to construct the floodwalls south of Lincoln Avenue, and work would occur along the existing trail over the duration of the construction period. Trail detours would be provided; however, access to the trail would remain open at various locations during construction depending on the sequence of construction. Once the Proposed Project is complete, the trail would be repaved and would be in better condition than before. Impacts on traffic would be minimal because the construction-related traffic would be temporary, would be spread over the duration of the construction schedule, and would not result in any long-term increases in traffic that could reduce the performance of the existing circulation system. Therefore, the Proposed Project would not conflict with a program plan, ordinance, or policy addressing the circulation system, including transit, roadway, and bicyclist and pedestrian facilities. As a result, this impact would be less than significant, and no mitigation is required.

b) *Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?*

During construction, the Proposed Project would increase the number of vehicle-miles traveled (VMT) due to worker commute trips and haul truck trips. The District and USACE anticipate that construction workers and haul trucks would travel from the local area or from the greater Napa County area. Although the construction traffic a slightly increase in VMT, the increase would be temporary and short term and all worker commute and haul truck trips would stop once construction is complete.

The *Technical Advisory on Evaluating Transportation Impacts in CEQA* published by the Governor's Office of Planning and Research (OPR) in December 2018 (OPR 2018) provides recommendations regarding VMT evaluation methodology, significance thresholds, and screening thresholds for projects. OPR defines screening thresholds for small projects but does not define screening thresholds for construction projects. The screening threshold for small projects is defined as follows: "Absent substantial evidence indicating that a project would generate a potentially significant level of vehicle-miles traveled, or inconsistency with a Sustainable Communities Strategy or general plan, projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact" (OPR 2018).

The Proposed Project is considered a small project given the duration and understanding of the construction work. The District and USACE do not anticipate that the Proposed Project would generate more than 110 daily round trips. Thus, the number of trips with the Proposed Project would be less than OPR's screening threshold. Therefore, the Proposed Project would not conflict with or

be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). As a result, the Proposed Project would have a less-than-significant impact, and no mitigation is required.

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

Constructing the floodwalls could diminish or alter sight lines for cars and bicycles along Lincoln Avenue near the Ace & Vine Cardroom and Restaurant and the Napa River Pet Hospital, creating potentially hazardous conditions. However, the Proposed Project design of the floodwall in these locations would allow the floodwall to be set back, and ample space would be provided in the shoulder right-of-way to accommodate vehicles and bikes that are making turning movements into or out of these properties. Signs would also be provided along Lincoln Avenue to notify travelers of the entry points into these properties. Therefore, impacts from substantially increasing hazards due to a geometric design feature or incompatible use would be less than significant, and no mitigation is required.

d) *Result in inadequate emergency access?*

The Proposed Project area is in evacuation zones NAP-EO32 and NAP-EO26 (Napa County 2023a). Where possible, a 50-foot-wide construction corridor would be used for access and staging for construction work. The floodwall would be constructed in several-hundred-foot-long segments at a time as it progresses along the alignment. Construction activities would be coordinated with the local law enforcement and emergency service providers before the start of construction and would not impede emergency access routes. Long-term operation of the Proposed Project would not change access routes to or within the Proposed Project area or result in inadequate emergency access because gates in the floodwall would be included in the project design and construction. Therefore, the Proposed Project would have a less-than-significant impact, and no mitigation is required.

Tribal Cultural Resources

Environmental Issue Area:	1999 Final SEIS/EIR Impact Conclusion	Potentially Significant Impact after Mitigation	Potentially Significant Unless Mitigation Incorporated	Less-than-Significant Impact	No Impact
<i>Would the project cause a substantial adverse change in the significance of a tribal cultural resource defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:</i>					
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	NA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	NA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

According to the 1999 Final SEIS/EIR, two tribes participated in previous consultation for the Proposed Project: the Suscol Intertribal Council and the Mishewal-Wappo Tribe (Napa Flood Control and Water Conservation District and US Army Corps of Engineers 1999). In accordance with AB 52, tribes in the area would be contacted regarding the Proposed Project. Interested tribes would then participate in consultation with the District to determine whether tribal cultural resources (TCRs) are present in the Proposed Project area and whether they would be affected. USACE will also comply with Section 106 of the National Historic Preservation Act and will participate in tribal consultation during that compliance.

Impact Analysis

- a) ***Would the project cause a substantial adverse change in the significance of a tribal cultural resource defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: listed or eligible for listing in the California Register of Historical***

Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

As of the publication of this Draft Initial Study, it is not known whether TCRs are present in the Proposed Project area and whether they would be significantly impacted by the Proposed Project. AB 52 consultation with interested tribes will take place while the Proposed Project is developed and before the Proposed Project is constructed. The District and USACE anticipate that the Proposed Project would impact archaeological resources at CA-NAP-261 (River Glen site), which is eligible for listing in both the National Register of Historic Places and the California Register of Historical Resources. Pile driving to construct the sheet pile floodwall would be hammered through this known site. Although it is not known at this time whether CA-NAP-261 is a TCR or contains TCRs, based on historic documentation it is reasonable to assume that the tribal community will identify this site as a TCR. If CA-NAP-261 is deemed a TCR by the tribal community and the District and USACE determine that the site would be impacted by the Proposed Project, then measures would need to be implemented to minimize or reduce project effects. Mitigation Measure Cultural-7 from the 1999 Final SEIS/EIR would be implemented, and data extraction would be required before construction according to the Programmatic Agreement established for the Proposed Project (Napa Flood Control and Water Conservation District and US Army Corps of Engineers 1999).

Even if the aforementioned mitigation measures are implemented, the anticipated project impacts to TCRs in the Proposed Project area would remain significant since the known and eligible site would be adversely impacted. Consultation with the tribal community will determine whether any additional measures can be taken to further offset project effects. In addition, unknown TCRs could be encountered during project construction. Additional mitigation measures would be necessary and would need to be implemented if unknown TCRs are discovered during construction. Therefore, at this time, the District and USACE assume that the Proposed Project would have a substantial adverse change in the significance of a TCR that is eligible for listing in the California Register of Historical Resources or in a local register of historical resources, and impacts would remain significant after mitigation measures are implemented.

b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

As described above, although TCRs have not been formally identified in the Proposed Project area, the CA-NAP-261 site is likely to be considered a significant TCR by the tribal community. This site would be severely impacted during construction of the Proposed Project, and mitigation measures would need to be implemented. However, despite implementation of mitigation measures, the anticipated project impacts to identified TCRs and unidentified TCRs in the Proposed Project area would remain significant since the District and USACE presume at this time that project construction would adversely impact them. Therefore, the Proposed Project would cause a substantial adverse change in the significance of a TCR that is considered a significant resource to a California Native American tribe, and impacts would remain significant after mitigation measures are implemented.

Utilities and Service Systems

Environmental Issue Area:	1999 Final SEIS/EIR Impact Conclusion	Potentially Significant Impact after Mitigation	Potentially Significant Unless Mitigation Incorporated	Less-than-Significant Impact	No Impact
<i>Would the project:</i>					
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	No Impact	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	No Impact	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	No Impact	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	No Impact	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	No Impact	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

PG&E is the main electrical provider in Napa County. Napa County has a solid waste landfill approximately 7.7 miles from the Proposed Project area. This landfill also provides electronic waste disposal and recycling services. Hazardous waste disposal is provided by Napa-Vallejo Household Hazardous Waste Collection Facility, a separate facility approximately 4.7 miles from the Proposed Project area.

The City of Napa uses a community wastewater system that is managed by the Napa Sanitation District (NapaSan). The wastewater treatment facility is south of the Proposed Project area along the Napa River. There are four ponds linked together by gate valves, with a total area of 342 acres and a capacity of about 665 million gallons (NapaSan 2023).

On the northern portion of the Proposed Project alignment along Trout Lane an existing 72-inch-diameter storm drain outfall and a 36-inch-diameter steel waterline cross beneath the Napa River Trail. The two would intersect in the Proposed Project construction area.

Impact Analysis

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

Utilities, including a 36-inch-diameter water line running through the Proposed Project area, would need to be relocated in order to construct the Proposed Project. The affected portion of the water line would be partially excavated, removed, partially filled, capped in place, and replaced in kind in the same vicinity in coordination with construction of the floodwall. Relocating the water line would further disturb the known CA-NAP-261 site. Although TCRs are still being identified in the Proposed Project area through coordination with the local tribes, the known site is likely to be considered significant by the tribal community as a TCR. Significant disturbance to a cultural resource or a TCR would be a significant environmental effect; this effect is discussed further in the Cultural Resources and Tribal Cultural Resources sections and therefore is not accounted for again in this section.

Mitigation Measure Cultural-7 from the 1999 Final SEIS/EIR would be implemented, and data extraction would be completed before construction. No other utility relocations or impacts are anticipated, and no additional environmental effects would occur. Therefore, although the Proposed Project would cause a potentially significant environmental impact from the relocation of a water line, other utility related impacts are not anticipated. Impacts would be less than significant, and no mitigation is required.

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

The Proposed Project would not need a water supply in order to operate over the long term. If water for construction activities is not available on site, it would be trucked to the site, and any use of water during construction would be temporary. Therefore, the Proposed Project would not be impacted by available water supplies during future normal, dry, or multiple dry years, and no mitigation is required.

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

The District and USACE anticipate that the Proposed Project would generate a small amount of wastewater during construction. However, all wastewater generated during construction would be hauled off site and disposed of at an approved facility that is permitted to receive wastewater. Additionally, the Proposed Project would not add any new businesses or residences that would increase wastewater volumes, so there would be no change in the capacity needs of a wastewater provider. Wastewater would not be generated once construction is complete. Therefore, there would be no impact, and no mitigation is required.

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

The Proposed Project would generate a minor amount of solid waste during construction that would require disposal. However, solid waste generated during construction would be limited and would not impair solid waste reduction goals for the region or state. Any hazardous soil encountered by the Proposed Project would be disposed of off site at an approved facility with adequate capacity. The Proposed Project would comply with both state and local solid waste standards during construction and operation. Additionally, long-term project operations would not generate solid waste. Therefore, the Proposed Project would have a less-than-significant impact on the generation of solid waste in excess of state or local standards or infrastructure capacity, and no mitigation is required.

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

The Proposed Project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. Construction-generated solid waste would be limited and temporary and would be transported to an approved landfill facility with adequate capacity. Any hazardous construction waste generated would be handled and transported according to state and local regulations; thus, no on-site waste discharge permit would be required for the Proposed Project. Therefore, the Proposed Project would have no impact on compliance with solid waste regulations, and no mitigation is required.

Wildfire

Environmental Issue Area:	1999 Final SEIS/EIR Impact Conclusion	Potentially Significant Impact after Mitigation	Potentially Significant Unless Mitigation Incorporated	Less-than-Significant Impact	No Impact
<i>If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:</i>					
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The Proposed Project is in a Local Responsibility Area (LRA) and is not in a very high fire hazard severity zone (CAL FIRE 2022). An LRA is an area where local agencies rather than the State are responsible for fire suppression. The Proposed Project is also in an area that is considered low in landslide susceptibility due to the predominantly flat topography. In 2016, Napa County partnered with CAL FIRE to develop the Napa County Fire's Strategic Plan. The Plan focuses on fire prevention, natural resource management, and fire-suppression efforts including the following strategic initiatives:

1. Develop a Comprehensive Succession Management and Professional Development Workforce Plan.
2. Develop and maintain a Standards of Cover Document.
3. Identify, evaluate, and implement best industry practices.
4. Develop a comprehensive Marketing and Communications Plan.

5. Refine, embrace, and be the values of the Napa County Fire Department (NCFD).
6. Develop a Fixed Assets, Apparatus, Equipment, and Capital Improvement Plan.
7. Develop a comprehensive strategic approach to technology.
8. Develop and implement an effective communication process and system.
9. Maintain an up-to-date Emergency Operations Plan (EOP) consistent with County Office Emergency Services (OES), Cal OES, and FEMA guidelines.
10. Develop, implement, and maintain an Emergency Communications Center/Dispatch (ECC) Plan.

Impact Analysis

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

The Proposed Project is in an LRA (CAL FIRE 2022). Although wildfire risk is not high in the Proposed Project area, if an evacuation were to occur, emergency evacuation routes and response plans would not be impaired by construction because traffic detours would not be required. Additionally, the construction contractor would implement fire-protection measures on site to reduce the risk of fire hazards. Therefore, the Proposed Project would not substantially impair an adopted emergency response plan or emergency evacuation plan, and no mitigation is required.

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

The Proposed Project is not in an area with steep slopes. Constructing and operating the Proposed Project would not change wind conditions or available fuels in the Napa Valley. Constructing the Proposed Project would involve using motorized vehicles and equipment, and it has been documented that equipment use is one of the top causes of fire in California (CAL FIRE 2019). However, the construction contractor would implement fire-protection measures on site to reduce the risk of fire hazards. Therefore, impacts from the Proposed Project related to exacerbation of wildfire risks or the exposure of occupants to increased pollutant concentrations of uncontrolled wildfire would be less than significant, and no mitigation is required.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

There are power lines in the Proposed Project area, and underground utilities would need to be relocated to construct the Proposed Project. However, the contractor would implement fire-protection measures on site to reduce the risk of fire hazards. Furthermore, the long-term impact of utility relocations as part of the Proposed Project would not be significant because PG&E conducts routine maintenance, such as vegetation thinning and trimming under and near power lines, to reduce the risk of fire near its existing facilities. Therefore, although the Proposed Project would require the installation or maintenance of associated infrastructure that could exacerbate fire risk or that might result in temporary or ongoing impacts to the environment, the impact would be less than significant, and no mitigation is required.

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

The Proposed Project is in an LRA (CAL FIRE 2022). The Proposed Project is not in an area with steep slopes. The proposed floodwall improvements would provide better flood protection for the surrounding areas. The construction contractor would implement fire-protection measures on site to reduce the risk of fire hazards. Therefore, the Proposed Project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes, and no mitigation is required.

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Appendix C. Project Construction Details

Appendix C – Project Construction Details

Construction Schedule

Construction of the Proposed Project is expected to begin in the fall of 2025 and end in 2028. In water work at the Lincoln Avenue Bridge is anticipated to last occur in one 4-month construction season, during allowable work windows for aquatic species (June 1 through October 31). Work hours would be Monday through Friday for 10 hours per day. The sequence and duration of construction activities is shown in **Table C-1** below.

Table C-1. Anticipated sequence of construction activity

Construction Activity	2025	2026				2027				2028
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
North of Lincoln Ave										
Trail Closure, Lincoln Ave										
Tree Clearing, Lincoln Ave										
Floodwalls, RiverPointe										
Floodwalls, Lake Park										
Floodwalls, River Glen										
Water Main, Lake Park										
Landscaping, Lincoln Ave										
Bridge Protection, Lincoln Ave										
South of Lincoln Ave										
Tree Clearing, Lincoln Ave										
Floodwalls, Wall St										
Roadwork & Utilities, Wall St										
Floodwalls, Wall St										
Utilities, Lincoln Ave										
Floodwalls, Lincoln Ave										
Bridge Protection, Lincoln Ave										
Dry Bypass Floodwall and Structures										
Landscaping, Lincoln Ave										

Site Preparation

Site preparation would consist of mobilization and delivery of equipment, followed by installation of traffic control and sediment control measures. Because no road closures are anticipated for construction traffic, K-rail would be installed along public roadways that are shared with public traffic. Due to construction work on the Napa River Trail, a trail detour would be coordinated with the City of Napa along Soscol Avenue for recreational trail users. Clearing and grubbing as well as topsoil stripping would be completed prior to excavation and construction of the floodwalls.

Construction Methods

Where possible, a 35-foot-wide temporary construction corridor would be provided for access and staging for the construction work of the floodwall. This corridor includes a 15-foot-wide future O&M corridor on the land side of the floodwall alignment. Relocating the 36-inch diameter steel water pipe in the Lake Park subdivision would be addressed early in construction, followed by constructing the floodwall and in-water work associated with the Lincoln Avenue bridge, as permitted. The floodwall will be constructed in segments as it progresses. The “T” wall can be constructed at approximately a production rate of 15 linear feet per day, and the “I” wall is estimated at around 340 square feet each day. Approximately 25 trees would need to be removed and replaced in the Proposed Project Area to allow construction and equipment clearance.

As construction progresses along the alignment, suitable excavated material would be side-cast and reused as backfill. Any unsuitable material discovered during construction would be removed and hauled off to the main staging area. The material would be balanced on-site to the extent possible. Organics, trash, contaminated, and demolished material would be off-hauled and disposed of at facilities within 30 miles of the Proposed Project Area. In some areas, backfill material would have to be imported from a commercial source; no local borrow site would be required. During the pouring of concrete, concrete trucks with pumps would be transported to the site.

Staging activities would generally include stockpiling, material and equipment staging, construction parking, BMP storage, field office, and miscellaneous items. Staging areas are included in the Proposed Project Area shown in Figures 2-2a-e.

Temporary construction entrances and exits would be provided to prevent construction equipment or vehicles from tracking mud, concrete, and dirt onto public and private roads within the Proposed Project Area. In addition, water trucks would be used daily to prevent dust by watering the staging and work zones. No nighttime work or installation of lighting is anticipated or analyzed.

After construction, the realigned trail would serve as a maintenance corridor and would be repaved in areas that were previously paved. A new crosswalk at Lincoln Avenue would be installed. The concrete wall could be covered with aesthetic treatments to improve the appearance and gate closure structures would be installed. Disturbed areas would be seeded and restored after construction. A combination of native and adaptive drought tolerant plant varieties would be used along the trail network. Disturbed areas would be seeded to minimize erosion from construction impacts, stabilize soil, and maximize usable recreational space along the trail.

Vegetation would be kept to a minimum within 15 feet from the floodwall and low growing grasses and perennials requiring minimal maintenance would be used in this area to satisfy USACE standards. Between the 15-foot zone of minimal vegetation and the riparian zone, native California shrubs would be planted to increase screening, habitat functionality, and stabilize slopes. City of Napa–approved trees and hardy and herbaceous perennials would be planted along disturbed

roadways to match the planting seen along the southwest side of Lincoln Avenue. Along the riparian corridor, planting would include native trees and shrubs near the top of bank and herbaceous perennials and wattles with live stake plantings near the ordinary high-water line. Compost, soil amendments, mulching, erosion control blankets, and straw wattles may be used in all planting areas impacted by construction to facilitate vegetation growth.

Construction Equipment and Materials

The following construction equipment in **Table C-2** and materials in **Table C-3** are anticipated for use during construction of the Proposed Project. There would be daily deliveries of equipment and materials including concrete, aggregate, rebar, asphalt, pipe, and sheet piles. Construction traffic would utilize the Proposed Project Area and paved roads, as identified. Construction traffic would flow throughout the respective work areas – north of Lincoln Ave and south of Lincoln Ave and between staging areas. It is anticipated that a maximum of 30 workers, and personal vehicles, would be at the construction site at a given time. The anticipated area of disturbance associated with the Proposed Project is 14.37 acres in construction work areas and 5.39 acres in staging areas.

Table C-2. Construction equipment

Equipment	Quantity
Haul Truck	3
Forklift	1
Dozer	1
Loader	1
Water Truck	1
Dump Truck	16
Excavator	1
Crane	1
Concrete Truck	1
Pump	1
Pile Driver	1
Vibratory Compactor	1
Motor Grader	1
Asphalt Paver	1
Hydroseed Truck	1
Backhoe	1
Man-lift	1
Marooka Tracked Carrier	1
Striping Truck/ Equipment	1
Scraper	1
Pickup Truck	1

Table C-3. Construction materials

Material	Quantity
Clearing and Grubbing	14.2 acres
Topsoil Stripping	5,800 cubic yards
Foundation Excavation/Structural Backfill	22,500 cubic yards/14,100 cubic yards
Concrete	6,790 cubic yards
Rebar Reinforcement	660 tons
Sheetpile Wall	20,900 square feet
Floodwall Closure Gates	5
Aggregate Base	8,000 tons
Asphalt	1,000 tons
Drain Rock	260 tons
Erosion Control Seeding	13.9 acres
PVC Water Pipe	60 linear feet
Storm Drain Pipe	10 linear feet
Sanitary Sewer Pipe	360 linear feet
2-Inch Water Service Line	60 linear feet
36-Inch Cement Lined Steel Pipe	820 linear feet
Channel Excavation	4,830 cubic yards
Granular Filter	107 cubic yards
Filter Fabric	2,430 square yards
Rock Scour Protection	3,980 tons / 2,400 cubic yards

Utilities

Construction of the Proposed Project would require the removal and relocation of some utilities in the Proposed Project Area. Utility conflicts north of Lincoln Avenue would include 4 waterlines (including the 36-inch waterline described in Section 2.2.2), 3 storm drains, and 1 electrical line. Utility conflicts south of Lincoln Avenue would include 8 waterlines, 4 storm drains, 1 fire hydrant, 8 electrical lines, 3 sewer lines, 1 sewer cleanout, 1 backflow protector, 3 gas lines. Utilities would either be protected in place, demolished and removed, abandoned in place, relocated, or maintained through the proposed floodwall.

Operations and Maintenance

After construction, all O&M activities would be undertaken by the District indefinitely, for as long as the Overall Flood Protection Project remains authorized, as part of law applicable to the Overall Flood Protection Project/Proposed Project and the District's areawide O&M activities. The 15-foot-wide O&M corridor on the land side of the floodwall and the existing Napa River Trail on the water side of the floodwall would serve as maintenance corridors. The reconstructed and realigned Napa River Trail, north and south of Lincoln Avenue would serve as a maintenance corridor.. Ongoing maintenance activities for the Proposed Project include routine inspections and minor vegetation trimming.

Appendix D. Regulatory Framework

Appendix D – Regulatory Framework

Regulatory Framework for Environmental Resources

The regulatory framework related to the Chapter 3 environmental resources sections is listed below, titled in accordance with their respective section number in the SEIR.

3.3 Aesthetics/Visual Resources

Federal

National Scenic Byways Program

The Federal Highway Administration (FHWA) administers the National Scenic Byways Program that recognizes roads with “intrinsic qualities” that includes archeological, cultural, historic, natural, recreational, and scenic. These roads are recognized by the U.S. Department of Transportation.

Wild and Scenic Rivers Act

The Wild and Scenic Rivers Act of 1968 was enacted to “protect selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural or other similar values.” Protected rivers are designated as wild, scenic, or recreational rivers and segments of a given river may be designated with one or all these classifications. As noted in Chapter 3, Section 3.3.1., the Napa River is not a designated wild and scenic river and, as a result, regulation under the Wild and Scenic Rivers Act does not apply to the Proposed Project.

National Trails Systems Act

The National Trails System Act of 1968 (as amended) allows Congress to establish national historic trails to identify and protect routes of travel with national historic importance. National historic trails connect sites of interest related to a significant historical event, often crossing multiple jurisdictions and land uses, and permitting auto traffic where roads overlap the historic trail route.

As described in the National Park Service’s Reference Manual #45 (DOI NPS 2019), one of the route selection criteria for a national historic trail relates to tour route quality that optimizes visitor experience by directing views to landscapes and features that might have been viewed by historic trail travelers. This criterion further encourages local projects to avoid design features that would inhibit an appreciation of the adjacent landscape values when alternatives exist. As noted in Chapter 3, Section 3.3.1., no national trails exist in the Proposed Project, as a result, regulation under the National Trails Systems Act does not apply to the Proposed Project.

State

California Wild and Scenic Rivers Act

The California Wild and Scenic Rivers Act states that “certain rivers which possess extraordinary scenic, recreational, fishery, or wildlife values shall be preserved in their free-flowing state, together with their immediate environments, for the benefit and enjoyment of the people of the state.” Those rivers or segments of rivers are classified as wild, scenic, or recreational rivers.

California State Scenic Roadways and Highways

The California Scenic Highway Program was established in 1963 through Senate Bill (SB) 1467 with the purpose of protecting and enhancing the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. The California Department of Transportation (Caltrans) manages the State Scenic Highway Program. Caltrans defines a scenic corridor as the “land that is visible from, adjacent to, and outside the highway ROW and is comprised primarily of scenic and natural features. Topography, vegetation, viewing distance, and/or jurisdictional lines determine the corridor boundaries.” Designated scenic corridors are subject to protection, including regulations regarding land use, site planning, advertising, earthmoving, landscaping, and the design and appearance of structures and equipment.

Regional/Local

The following goals and policies of the Napa County General Plan (Napa County 2008) Community Character Element are applicable to the Proposed Action:

- **Goal CC-1:** Preserve, improve, and provide visual access to the beauty of Napa County.
- **Goal CC-2:** Continue to promote the diverse beauty of the entire county since this beauty is intricately linked to the continued economic vitality of the region and benefits residents, businesses and visitors.
 - **Policy CC-1:** The County will retain the character and natural beauty of Napa County through the preservation of open space.
 - **Policy CC-4:** Consistent with current regulations regarding road setbacks and fences, the County shall preserve the existing significant natural features by requiring all development to retain the visually open, rural character of the County and by allowing solid sound walls only in unique circumstances and where acceptable noise levels are exceeded.
 - **Policy CC-6:** The grading of building sites, vineyards, and other uses shall incorporate techniques to retain as much as possible a natural landform appearance. Examples include:
 - The overall shape, height, and grade of any cut or fill slope shall be designed to simulate the existing natural contours and scale of the natural terrain of the site.
 - The angle of the graded slope shall be gradually adjusted to the angle of the natural terrain.
 - Sharp, angular forms shall be rounded and smoothed to blend with the natural terrain.
 - **Policy CC-12:** Development projects on County-owned sites within the incorporated cities/town shall be designed to be visually compatible with their surroundings in terms of use, scale, and materials.
 - **Policy CC-9:** The County may consider pursuing formal scenic highway designation by the State of California for some roadways, provided that in each case the benefits of the designation are found to outweigh any costs.

- **Policy CC-10:** Consistent with the County's Viewshed Protection Program, new developments in hillside areas should be designed to minimize their visibility from the County's scenic roadways and discourage new encroachments on natural ridgelines. The County shall continue implementation of the Viewshed Protection Program and shall apply the protective provisions of the program to all public projects.
- **Policy CC-13:** The County's roadway construction and maintenance standards and other practices shall be designed to enhance the attractiveness of all roadways and in particular scenic roadways. New roadway construction or expansion shall retain the current landscape characteristics of County-designated scenic roadways, including retention of existing trees to the extent feasible and required re-vegetation and re-contouring of disturbed areas. In addition: a) The development of hiking trails and bicycle lanes should be coordinated, when possible, with scenic roadway corridors and should provide access for the elderly and disabled in accordance with the Americans with Disabilities Act. b) A program to replant trees and shrubbery should be implemented in cases where they are removed during new roadway alignment. c) Opportunities should be explored for joint public/private participation in developing locations for roadside rests, picnic areas and vista points. d) Installation of landscaping shall be required in conjunction with major roadway improvements where necessary to screen existing residences from glare generated by vehicle headlights.
- **Policy CC-14:** To the extent allowed by law, telecommunications facilities and transmission lines shall not be located within view of any scenic roadway unless they are sited and designed so as to be virtually invisible to the naked eye from the roadway, are designed to appear as a natural feature of the environment and do not block views or disrupt scenic vistas, or are so well architecturally-integrated into an existing building as to effectively be unnoticeable.
- **Policy CC-16:** Adjacent to scenic roadways, utilities shall be placed underground where possible.

City of Napa 2040 General Plan

The following goals and policies of the City of Napa 2040 General Plan (City of Napa 2022) Land Use and Community Design Element are applicable to the Proposed Project:

- **Goal LUCD-3:** Enhance Napa's community character by promoting walkability, inclusivity, and connections between neighborhoods, key centers, and the Napa River.
 - **Policy LUCD 3-2:** Promote the community's river orientation by incorporating open spaces as part of flood-improvement projects and supporting development that is oriented toward the river. Limit blank facades, parking garages, parking lots, or imposing fencing along the river.
 - **Policy LUCD 3-3:** Enhance public access to the river through trails and linkages to neighborhoods and provide adequate setbacks from the top of the riverbank to allow pedestrian/bike paths and landscaping.
 - **LUCD 3-4:** Support development of public amenities such as parks, plazas, and trails along the Napa riverfront.

2001 Viewshed Protection Ordinance

This ordinance sets forth hillside development standards to minimize the impact of man-made structures and grading on views from designated public roads in the County. The ordinance is intended to preserve the unique scenic quality of the County and protect the ridgelines and hillsides of the County from intensive development.

3.4 Air Quality

Federal

Federal Clean Act and National Ambient Air Quality Standards

The Federal Clean Air Act (FCAA) is the primary federal law governing air quality. The FCAA is regulated by USEPA, which sets standards for the concentration of pollutants in the air. At the federal level, these standards are called NAAQS. NAAQS have been established for six criteria air pollutants that have been linked to potential health concerns: O₃, PM₁₀, PM_{2.5}, CO, NO₂, and SO₂. Additionally, national standards exist for Pb. The NAAQS are set at levels that protect public health with a margin of safety and are subject to periodic review and revision. The federal regulatory schemes also cover TACs.

The FCAA requires USEPA to designate areas as attainment, nonattainment, or maintenance (an area that was previously nonattainment and is currently attainment) for each criteria pollutant based on whether the NAAQS have been achieved. The federal standards are summarized in **Table D-1**.

The FCAA requires each state to prepare an air quality control plan referred to as the State Implementation Plan (SIP). USEPA is responsible for implementing the programs established under the FCAA, programs such as establishing and reviewing the federal ambient air quality standards and judging the adequacy of SIPs. If a state contains areas that violate the national standards, the FCAA requires the State to revise its SIP to incorporate additional control measures to reduce air pollution. USEPA has authorized States such as California with air programs that meet or exceed federal standards to implement many of the federal programs while retaining an oversight role.

Table D-1. National and California Ambient Air Quality Standards

Pollutant	Averaging Time	National Standards ¹		California Standards ²
		Primary ³	Secondary ⁴	
O ₃	1 hour	-	Same as Primary Standard	0.09 ppm
	8 hour	0.07 ppm		0.07 ppm
PM ₁₀	24 hour	150 µg/m ³	Same as Primary Standard	50 µg/m ³
	Annual	-		20 µg/m ³
PM _{2.5}	24 hour	35 µg/m ³	Same as Primary Standard	-
	Annual Arithmetic Mean	12 µg/m ³	15 µg/m ³	12 µg/m ³

Pollutant	Averaging Time	National Standards ¹		California Standards ²
		Primary ³	Secondary ⁴	
CO	1 hour	35 ppm	-	20 ppm
	8 hour	9 ppm	-	9 ppm
	8 hour (Lake Tahoe)	-	-	6 ppm
NO ₂	1 hour	100 ppb	-	0.18 ppm
	Annual Arithmetic Mean	0.053 ppm	Same as Primary Standard	0.03 ppm
SO ₂	1 hour	75 ppb	-	0.25 ppm
	3 hour	-	0.5 ppm	-
	24 hour	0.14 ppm	-	0.04 ppm
	Annual Arithmetic Mean	0.03 ppm	-	-
Pb	30-day Average	-	-	1.5 µg/m ³
	Calendar Quarter	1.5 µg/m ³	Same as Primary Standard	-
	Rolling 3-month Average	0.15 µg/m ³		-
Visibility Reducing Particles	8 hour	No National Standards		-. ⁵
Sulfates	24 hour	No National Standards		25 µg/m ³
Hydrogen Sulfide	1 hour	No National Standards		0.03 ppm
Vinyl Chloride	24 hour	No National Standards		0.01 ppm

Source: CARB 2016

Notes: O₃ = ozone; PM₁₀ = particles of 10 micrometers and smaller; PM_{2.5} = particles of 2.5 micrometers and smaller; CO = carbon monoxide; NO₂ = nitrogen dioxide; SO₂ = sulfur dioxide; Pb = lead; ppm = parts per million; µg/m³ = micrograms per cubic meter; ppb = parts per billion

1. National standards (other than O₃, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The O₃ standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM_{2.5}, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact USEPA for further clarification and current national policies.

2. California standards for O₃, CO (except 8-hour Lake Tahoe), SO₂ (1 and 24 hour), NO₂, and particulate matter (PM₁₀, PM_{2.5}, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

3. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

4. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

5. In 1989, CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

General Conformity Rule

USEPA enacted the General Conformity rule (40 CFR Parts 5, 51, and 93) in 1993. Established under the CAA (section 176(c)(4)), the purpose of the General Conformity rule is to ensure that federal actions do not generate emissions that interfere with state and local agencies' SIPs and emission-reduction strategies to ensure attainment of the NAAQS.

Emission Standards for Non-Road Diesel Engines

USEPA has adopted multiple tiers of emission standards for non-road (or off-road) diesel engines. The non-road standards cover mobile non-road diesel engines of all sizes used in a wide range of construction, agricultural and industrial equipment. The first federal standards, Tier 1, were adopted in 1994. Tier 2 standards were adopted in 2001, Tier 3 in 2006, and final Tier 4 standards in 2014. The federal emission standards for non-road diesel engines are established in advancing tiers that progressively become more stringent (i.e., the higher the tier, the lower the emissions). Currently, the most stringent is Tier 4. The Tier 4 emissions standards have more stringent NO_x, particulate matter, and hydrocarbon limits than the lower tiers. The CO emission limits for Tier 4 standards remain unchanged from the Tier 2 and Tier 3 standards.

On-Road Diesel Fuel Rule

On December 20, 2022, USEPA adopted the *Control of Air Pollution from New Motor Vehicles: Heavy-Duty Engine and Vehicle Standards* (USEPA 2023) that set stronger emissions standards to lower emissions of NO_x, CO, and PM_{2.5} from heavy-duty vehicles and engines starting in model year 2027. Under this rule, NO_x emissions from heavy-duty vehicles would be reduced by 44 percent in 2040 and by 48 percent in 2045. PM_{2.5} emissions from heavy-duty vehicles are estimated to decrease by 7 percent in 2040 and by 8 percent in 2045. Emissions of CO from heavy-duty vehicles are estimated to decrease by 16 percent in 2040 and by 18 percent in 2045 (USEPA 2023).

National Emission Standards for Hazardous Air Pollutants

National Emission Standards for Hazardous Air Pollutants are stationary source standards for hazardous air pollutants (40 CFR 63). Hazardous air pollutants are those pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects (USEPA 2022). As noted in Chapter 3, section 3.4.1., no stationary sources are in the Proposed Project Area and the Proposed Project would not create a new stationary source of air pollutants, as a result, regulation under the National Emission Standards does not apply to the Proposed Project.

State

California Clean Air Act and California Ambient Air Quality Standards

The California Clean Air Act (CCAA), signed into law in 1988, requires all areas of the state to achieve and maintain the CAAQS by the earliest practical date. The CAAQS incorporate additional standards for most of the criteria pollutants and set standards for other pollutants recognized by the state. In general, the California standards are more health protective (stringent) than the corresponding NAAQS. California has also set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. The California standards are summarized in Table 3.43.

The CCAA is administered by CARB at the state level and by the air quality management districts and air pollution control districts (air districts) at the regional and local levels. CARB and local air

districts bear responsibility for achieving California's air quality standards, which are to be achieved through air district-level air quality management plans that would be incorporated into the SIP. In California, USEPA has delegated authority to prepare SIPs to CARB, which, in turn, has delegated that authority to individual air districts. CARB is responsible for establishing state air quality standards, maintaining oversight authority in air quality planning, developing programs for reducing emissions from motor vehicles, developing air emission inventories, collecting air quality and meteorological data, and approving SIPs.

The CCAA requires that CARB designate areas in California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data show that a state standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events are not considered violations of a state standard and are not used as a basis for designating areas as nonattainment.

California Air Toxics Program

California has a comprehensive and effective air toxics program. Several pieces of legislation form the basis for CARB to identify and control air toxics from a multitude of sources, inform the public of significant toxic exposures and provide ways to reduce risks from these exposures. California regulates TACs primarily through Assembly Bill (AB) 1807, Toxic Air Contaminant Identification and Control Act (also known as the Tanner Act), and AB 2588, Air Toxics "Hot Spots" Information and Assessment Act of 1987.

The Tanner Act (AB 1807) created California's program to reduce exposure to air toxics. The Tanner Act sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an "airborne toxics control measure" for sources that emit designated TACs. If there is a safe threshold for a substance (a point below which there is no toxic effect), the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate best available toxics control technology to minimize emissions.

The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588) supplements the AB 1807 program by requiring a statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High-priority facilities are required to perform a health risk assessment and, if specific thresholds are exceeded, are required to communicate the results to the public in the form of notices and public meetings.

Advanced Clean Cars Program

The Advanced Clean Cars Program combines several regulations into one package including the Low-Emission Vehicle criteria and greenhouse gas regulations and the zero-emission vehicle regulation. The Advanced Clean Cars I regulations were first adopted by CARB in January 2012 for model years 2017 through 2025.

In 2022, CARB adopted the Advanced Clean Cars II regulations. These regulations will rapidly scale down emissions of light-duty passenger cars, pickup trucks, and SUVs for model years 2026 through 2035 and require an increased number of zero-emission vehicles to meet air quality and climate change emissions goals.

In-Use Off-Road and On-Road Diesel Fueled Fleets Regulation

On July 26, 2007, CARB adopted a regulation to reduce DPM and NO_x emissions from in-use (existing), off-road, heavy-duty diesel vehicles in California. All self-propelled off-road diesel vehicles 25 horsepower or greater used in California (such as bulldozers, loaders, backhoes, and off-highway trucks) and most two-engine vehicles (except on-road two-engine sweepers) are subject to this regulation. This regulation is designed to reduce DPM and NO_x emissions from off-road diesel vehicles by retiring, replacing, or repowering older engines, or installing diesel exhaust retrofits. Vehicles or engines subject to this regulation must limit idling to five minutes. The idling requirements are specified in Title 13 of the California Code of Regulations.

Furthermore, Title 13 CCR Chapter 10 § 2485 Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling, restricts on-road diesel-powered commercial motor vehicles with a gross vehicle weight of greater than 10,000 pounds from idling more than five minutes.

Truck and Bus Regulation

CARB's Truck and Bus Regulation requires all on-road and off-road diesel vehicles that operate in California to reduce TAC emissions from exhaust. The Truck and Bus Regulation affects individuals, private companies, and federal agencies that own diesel vehicles with a Gross Vehicle Weight Rating greater than 14,000 pounds. By January 1, 2023, all trucks and buses will be required to have 2010 or newer model year engines to reduce particulate matter and NO_x emissions. To help ensure that the benefits of this regulation are achieved, starting January 1, 2020, only vehicles compliant with this regulation will be registered by the California Department of Motor Vehicles.

Health Impacts of Regional Criteria Air Pollutants

In December 2018, the California Supreme Court released a decision in *Sierra Club v. County of Fresno*, 6 Cal. 5th 502, also known as the Friant Ranch Case, finding that CEQA requires that a connection be drawn between project emissions and human health impacts.

As explained in the amicus curiae brief submitted by the San Joaquin Valley Air Pollution Control District for the Friant Ranch case, air district significance thresholds were set at emissions levels tied to the region's attainment status; they are emissions levels at which stationary pollution sources permitted by air districts must offset their emissions and CEQA projects must use feasible mitigation measures, and they are not intended to indicate any localized human health impact that a project may have. Therefore, a project's exceedance of the air district's mass regional emission thresholds does not necessarily indicate that the project would cause or contribute to the exposure of sensitive receptors to ground-level concentrations of ozone greater than health-protective levels.

As suggested in the amicus curiae brief submitted for the Friant Ranch case, given the complexity of ozone formation and the current state of environmental science modeling, it is infeasible to determine whether, or the extent to which, a single project's emissions of precursors (NO_x and ROG) would result in the formation of secondary ground-level ozone, and to identify the geographic and temporal distribution of such secondary formed emissions. Furthermore, available models today are designed to determine regional, population-wide health impacts, and cannot accurately quantify ozone-related health impacts caused by project-related NO_x or ROG emissions on the local (project) level. Therefore, it is infeasible to connect ozone precursor emissions at a project level to ozone-related health impacts.

Regional/Local

Bay Area Air Quality Management District

BAAQMD is the primary agency responsible for assuring that the NAAQS and CAAQS are attained and maintained in the SFBAAB, including Napa County. BAAQMD's responsibilities related to improving air quality in the region include preparing plans for attaining and maintaining air quality standards, adopting and enforcing rules and regulations, issuing permits for stationary sources of air pollutants, inspecting stationary sources and responding to citizen complaints, monitoring air quality and meteorological conditions, awarding grants to reduce mobile emissions, implementing public outreach campaigns, working with overburdened and impacted communities to reduce local sources of emissions, and assisting local governments in reducing GHG emissions.

REGULATIONS AND RULES

BAAQMD has adopted regulations and rules to improve public health, air quality, and the global climate. BAAQMD rules and regulations relevant to the Proposed Project include, but are not limited to the following:

- **Regulation 2, Rule 2 New Source Review:** This rule contains requirements for Best Available Control Technology and emission offsets.
- **Regulation 2, Rule 5 New Source Review of Toxic Air Contaminants:** This rule applies preconstruction permit review to new and modified sources of TACs and contains project health risk limits and requirements for Toxics Best Available Control Technology.
- **Regulation 6, Rule 1 Particulate Matter General Requirements:** This rule limits the quantity of particulate matter in the atmosphere by controlling emission rates, concentration, visible emissions, and opacity.
- **Regulation 7 Odorous Substances:** This regulation establishes general limitations on odorous substances and specific emission limitations on certain odorous compounds.
- **Regulation 8, Rule 3 Architectural Coatings:** This rule limits the quantity of ROG in architectural coatings.
- **Regulation 9, Rule 8 Nitrogen Oxides and Carbon Monoxide from Stationary Internal Combustion Engines:** This rule limits emissions of NO_x and CO from stationary internal combustion engines of more than 50 horsepower.
- **Regulation 11, Rule 2 Asbestos Demolition, Renovation and Manufacturing:** This rule controls emissions of asbestos to the atmosphere during demolition, renovation, milling and manufacturing and establishes appropriate waste disposal procedures.

AIR QUALITY MANAGEMENT PLAN

BAAQMD's most recently adopted plan is the *Bay Area 2017 Clean Air Plan* (2017 CAP) (BAAQMD 2017). The 2017 CAP is a multi-pollutant plan that focused on protecting public health and protecting the climate. To protect public health, the 2017 CAP describes how BAAQMD will continue its progress toward attaining state and federal air quality standards and eliminating health risk disparities from exposure to air pollution among Bay Area communities. To protect the climate, the 2017 CAP defines a vision for transitioning the region to a post-carbon economy needed to achieve ambitious greenhouse gas reduction targets for 2030 and 2050 and provides a regional climate protection strategy that will put the Bay Area on a pathway to achieve those GHG reduction targets.

The 2017 CAP includes a wide range of control measures designed to decrease emissions of the air pollutants that are most harmful to Bay Area residents, such as particulate matter, O₃, and TACs; to reduce emissions of methane and other “super-greenhouse gases” that are potent climate pollutants in the near-term; and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.

BAAQMD CEQA GUIDELINES

BAAQMD adopted the *2022 California Environmental Quality Act Guidelines* (2022 CEQA Guidelines) (BAAQMD 2023) in April 2023. The 2022 CEQA Guidelines supersede BAAQMD’s 2017 CEQA Air Quality Guidelines. The 2022 CEQA Guidelines were developed to assist lead agencies in evaluating potential air quality and climate impacts from land use projects and plans in the SFBAAB, consistent with CEQA requirements. The 2022 CEQA Guidelines include recommended thresholds of significance for air quality and climate impacts. The thresholds of significance for air quality impacts have remained unchanged from those adopted by BAAQMD in 2017.

Table D-2 summarizes BAAQMD’s air quality thresholds of significance.

Table D-2. BAAQMD Air Quality Thresholds of Significance

	Construction	Operational	
Criteria Air Pollutants and Precursors			
Pollutant	Average Daily Emissions (lb/day)	Average Daily Emissions (lb/day)	Maximum Annual Emissions (tpy)
ROG	54	54	10
NO _x	54	54	10
PM ₁₀	82 (exhaust)	82	15
PM _{2.5}	54 (exhaust)	54	10
CO	None	9.0 ppm (8-hour average), 20.0 ppm (1-hour average)	
Local Risks and Hazards			
Risks and hazards for new sources and receptors (individual project)	Same as operational thresholds	Increased Cancer Risk >10.0 in a million Increased Non-cancer Risk > 1.0 Hazard Index (chronic or acute) PM _{2.5} increase: > 0.3 µg/m ³ annual average OR Compliance with Qualified Community Risk Reduction Plan	
Risks and hazards for new sources and receptors (cumulative threshold)	Same as operational thresholds	Increased Cancer Risk >100.0 in a million (from all local sources) Increased Non-cancer Risk > 10.0 Hazard Index (chronic, from all local sources) PM _{2.5} increase: > 0.8 µg/m ³ annual average (from all local sources) OR Compliance with Qualified Community Risk Reduction Plan	
Odors			
	None	Five confirmed complaints per year averaged over 3 years	

Source: BAAQMD 2023

Notes: ROG = reactive organic gases; NO_x = nitrogen oxides; PM₁₀ = particles of 10 micrometers and smaller; PM_{2.5} = particles of 2.5 micrometers and smaller; CO = carbon monoxide; lb = pounds; tpy = tons per year; ppm = parts per million; µg/m³ = micrograms per cubic meter

If a project's emissions (daily average or annual) of construction and/or operational criteria air pollutants or precursors would exceed any applicable threshold of significance listed in Table 3.4-4, the Proposed Project would result in a cumulatively significant impact.

City of Napa General Plan

The Natural Resources Conservation Element and the Public Health and Equity Element of the *City of Napa 2040 General Plan* (City of Napa 2022) contain the following goals and policies that are relevant to the Proposed Project:

- **Goal NRC-5:** Protect air quality within the City and support efforts for enhanced regional air quality.
 - **Policy NRC 5-2:** Require that development projects incorporate BAAQMD's Basic Construction Mitigation Measures to reduce construction and operational emissions for reactive organic gases (ROG), nitrogen oxides (NO_x), and particulate matter (PM₁₀ and PM_{2.5}).
 - **Policy NRC 5-3:** Require contractors to use best management practices (BMPs)—including regular materials and vehicle tire watering, covering of stockpiles, phasing or extension of grading operations, suspension of grading during high wind periods, and revegetation of graded areas—to reduce particulate emissions (including PM₁₀ and PM_{2.5}) and dust associated with construction activities.
 - **Policy NRC 5-4:** Require all construction equipment to be maintained and tuned to meet appropriate USEPA and CARB emission requirements, including use of Tier 4 engines in off-road equipment and cleaner heavy-duty trucks to reduce NO_x and PM exhaust emission levels.
- **Goal PHE 3:** Promote clean air and water, a healthy natural environment, and pollution-free neighborhoods to reduce disparate health impacts resulting from environmental pollutants in vulnerable communities.
 - **Policy PHE 3-1:** Protect sensitive receptors such as schools, childcare centers, senior living facilities, and residences from the impacts of stationary and non-stationary sources of pollution by ensuring adequate buffers or mitigation measures.

3.5 Cultural Resources

Federal

Section 106 of the National Historic Preservation Act (NHPA) of 1966

Section 106 of the National Historic Preservation Act (NHPA) of 1966 (16 U.S.C. § 470f), requires any federal agency having direct or indirect jurisdiction over a proposed federal or federally assisted undertaking to “take into account the effects of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in” the National Register of Historic Places (NRHP) that the Secretary of the Interior is authorized to expand and maintain under Section 101(a)(1)(A) of the NHPA (16 U.S.C. § 470a(a)(1)(A)).

The regulations implementing the NHPA are in 36 Code of Federal Regulations (C.F.R.) Part 800. Section 800.4(a)(1) of 36 C.F.R. requires the federal agency whose proposed undertaking is subject to the NHPA determine and document the “area of potential effects” and 36 C.F.R. Section

800.16(d) defines this area as “the geographic area within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist.” This regulation also provides that the “area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.” Section 800.16(y) defines “undertaking” as “a project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a federal agency, including those carried out by or on behalf of a federal agency; those carried out with federal financial assistance; and those requiring a federal permit, license or approval.” Historic properties are any prehistoric or historic district, site, building, structure, object, or traditional cultural property (TCP) included in or eligible for inclusion in the NRHP maintained by the Secretary of the Interior (36 C.F.R. § 800.16(l)(1)). In most cases, cultural resources less than 50 years old are not considered eligible for the NRHP; however, a property achieving significance within the past 50 years is eligible if it is of exceptional importance. Cultural resources also must retain their integrities (i.e., the ability to convey their significance) to qualify for listing in the NRHP. For example, dilapidated structures or heavily disturbed archeological sites may not retain enough integrity to relay information relative to the context in which the resource is considered to be important and, therefore, may not be eligible for listing on the NRHP.

The quality of significance in American history, architecture, archaeology, engineering, and culture must be present in districts, sites, buildings, structures, and objects that possess integrity of design, setting, materials, workmanship, feeling, and association. They must also meet one or more of the four following criteria for inclusion on the NRHP:

- Criterion A, Association with events that have made a significant contribution to the broad patterns of history;
- Criterion B, Association with the lives of persons significant in the past;
- Criterion C, Embodiment of distinctive characteristics of a type, period, or method of construction, the work of a master, high artistic values, or a significant and distinguishable entity whose components may lack individual distinction; or
- Criterion D, History of yielding, or the potential to yield, information important in prehistory or history.

If a cultural resources professional meeting the Secretary of Interior’s Qualification Standards determines a particular resource meets one of these criteria, it is considered as an eligible historic property for listing in the NRHP. Among other criteria considerations, a property that has achieved significance within the last 50 years is not considered eligible for inclusion in the NRHP unless certain exceptional conditions are met

Under the NHPA Section 106 process, federal agencies and their representatives are required to participate in consultation on any findings and determinations regarding an undertaking’s effect on historic properties (36 C.F.R. § 800.2(a)(4)). Consulting parties include: 1) the State Historic Preservation Officer (SHPO); 2) Native American tribes; 3) local governments; and 4) individuals and organizations with a demonstrated interest in the project. Section 106 requires that federal agencies seek concurrence from the SHPO on any determinations of NRHP eligibility and findings of effect to historic properties and notify the Advisory Council on Historic Preservation on any finding of adverse effects. Additionally, federal agencies must make a reasonable and good faith effort to identify Native American tribes and other consulting parties that might attach religious and cultural significance to historic properties that may be affected by the undertaking (36 C.F.R. § 800.3(f)(2)), and gather information to assist in the identification of such properties (36 C.F.R. § 800.4(a)(3),(4)).

Native American Graves Protection and Repatriation Act of 1990 (PL 101-601; 25 U.S.C. 3001)

Under the Native American Graves Protection and Repatriation Act (NAGPRA) (25 U.S.C. 3001) and implementing regulations 43 C.F.R § 10, federal agencies are responsible for the protection of Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony that are discovered on lands under the agency's jurisdiction. All human remains and potential human remains must be treated with respect and dignity at all times.

Archaeological Resources Protection Act (ARPA) of 1974 (16 U.S.C. 470)

The Archaeological Resources Protection Act (ARPA) of 1974 (16 U.S.C. 470) and implementing regulations 43 C.F.R. § 3 and 43 C.F.R. § 7, specify that archaeological resources excavated on public or Indian land remain the property of the federal government or Indian tribe, respectively. ARPA further specifies that location of archaeological resources remain confidential.

American Indian Religious Freedom Act (AIRFA) of 1978 (42 USC 1996 and 1996a)

The American Indian Religious Freedom Act of 1978 (AIRFA; 42 U.S.C. 1996 and 1996a) protects the rights of Native Americans to exercise their traditional religions by ensuring access to sites, use and possession of sacred objects, and the freedom to worship through ceremonials and traditional rites.

American Antiquities Act of 1906 (16 U.S.C. 431-433)

The American Antiquities Act of 1906 (16 U.S.C. 431-433) protects cultural property owned or managed by the U.S. government, authorizes the President of the United States to designate cultural resources and resources of scientific interests situated on public land as national monuments, enables the Secretaries of the Interior, Army, and Agriculture to issue permits for the study of archaeological sites, and grants the aforementioned secretaries to issue regulations to enforce the American Antiquities Act.

Executive Order 13007 (Indian Sacred Sites) of 1996 (Federal Register Vol. 61, No. 104:26771-26772)

Under Executive Order 13007 (Indian Sacred Sites) of 1996, federal agencies with the responsibility for managing federal land are to accommodate access by tribal members to Indian sacred sites on federal land.

Executive Order 11593 (Protection and Enhancement of the Cultural Environment) of 1971 (16 U.S.C. 470)

Under Executive Order 11593 (Protection and Enhancement of the Cultural Environment) of 1971, federal agencies shall administer cultural resources under their management in such a way that preserves these resources for future generations, initiate measures to maintain and preserve cultural resources under their management, and consult with the Advisory Council of Historic Preservation to enact procedures so that federal actions contribute to the preservation of non-federally owned or managed resources of historical or archaeological significance.

State

California Environmental Quality Act

The Proposed Project is subject to compliance under CEQA, which mandates that public agencies determine whether a project will have a significant impact on important historical or prehistoric resources and to appropriately mitigate any such impacts. In accordance with CEQA Guidelines (California 2023), cultural resources investigations are necessary to identify historical resources (i.e., any prehistoric or historical site, building, structure, or object that may be listed in, or determined eligible for listing in, the California Register of Historical Resources (CRHR) or local register of historical resources. The steps routinely implemented in a cultural resources investigation for CEQA compliance are:

- Identify cultural resources in the project area,
- Evaluate the significance of resources,
- Evaluate the effects of the project on all resources, and
- Develop and implement measures to mitigate project effects on historical resources (i.e., significant cultural resources listed on or eligible for listing on the CRHR).

The CEQA Guidelines define a historical resource as one that is listed or eligible for listing on the CRHR (Public Resources Code [PRC] 5024.1). A historical resource may be eligible for inclusion in the CRHR if it:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage (Criterion 1);
- Is associated with the lives of persons important in our past (Criterion 2);
- Embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of an important creative individual or possesses high artistic values (Criterion 3); or
- Has yielded, or may be likely to yield, information important in prehistory or history (Criterion 4).

The CEQA Guidelines (14 California Code of Regulations [CCR] 15064.5[c]) state that the lead agency must treat an archaeological resource that meets the definition of a historical resource according to the provisions of PRC 21084.1, 14 CCR 15064.5, and 14 CCR 15126.4. If an archaeological resource does not meet the definition of a historical resource but does meet the definition of a unique archaeological resource, the lead agency is obligated to treat the resource according to the provisions of PRC 21083.2 (14 CCR 15064.5[c][3]). According to CEQA, a project may have a significant impact on the environment if it could cause a substantial adverse change in the significance of a historical resource (14 CCR 15064.5[b]). CEQA further states that a substantial adverse change in the significance of a historical resource means the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be materially impaired. Actions that would materially impair the significance of historical resources are any actions that would demolish or significantly alter the physical characteristics of historical resources that convey their historical significance and qualify it for inclusion in the CRHR or in a local register that meet the requirements of PRC 5020.01(k) and 5024.1(g).

California Register of Historical Resources (PRC 5024, 5024.1, and 5024.5)

The PRC 5024.1 establishes a California Register of Historical Resources and specifies criteria for listing on the register as well as the resource types that can be listed on the register. Under PRC 5024 and 5024.5, state agencies are required to consult with the SHPO regarding projects with the potential to affect historical resources.

Unique Archaeological Resources (PRC 21083.2)

The PRC also requires the Lead Agency to determine whether or not a project would have a significant effect on unique archaeological resources (PRC Section 21083.2[a]).

The PRC defines a unique archaeological resource as follows.

- An archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:
- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person (PRC Section 21083.2).

In most situations, resources that meet the definition of a unique archaeological resource also meet the definition of a historical resource. As a result, it is current professional practice to evaluate cultural resources for significance based on their eligibility for listing in the CRHR.

Assembly Bill 52 (Chapter 532, California Statutes of 2014)

Under Assembly Bill 52 and PRC §§ 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, 21084.3, and 5097.94(m), the lead agency for CEQA is responsible for consultation with Native American tribes regarding the potential for a project to impact TCRs, pursuant to Assembly Bill 52 and PRC §§ 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, 21084.3, and 5097.94(m). Assembly Bill 52 recognizes that "...tribes may have expertise with regard to their tribal history and practices, which concern the tribal cultural resources with which they are traditionally and culturally affiliated..." and that consultation will occur between a lead agency and Native American tribes for covered projects.

PRC §21080.3.1 (a) and Government Code §65352.4 define consultation as "the meaningful and timely process of seeking, discussing, and considering carefully the views of others, in a manner that is cognizant of all parties' cultural values and, where feasible, seeking agreement. Consultation between government agencies and Native American tribes shall be conducted in a way that is mutually respectful of each party's sovereignty. Consultation shall also recognize the tribes' potential needs for confidentiality with respect to places that have traditional tribal cultural significance."

A project may induce a significant impact to a historical resource, unique archaeological resource, or a TCR if it causes a substantial adverse change (i.e., physical demolition, destruction, relocation, or alteration) to the resource or immediate surroundings (14 CCR 15064.5[b]), thereby demolishing or significantly altering the physical characteristics that qualify it for listing on the CRHR or local registers (PRC §§ 5020.01[k] and 5024.1[g]). A project that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment (PRC §

21084.2). A lead agency shall establish measures to avoid impacts that would alter significant characteristics of a TCR, when feasible (PRC §21084.3).

California Health and Safety Code (CHSC)

Regarding the discovery of human remains on non-federal lands, Section 7050.5 of the California Health and Safety Code (CHSC) states the following:

Every person who knowingly mutilates or disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law is guilty of a misdemeanor, except as provided in Section 5097.99 of the [PRC]. The provisions of this subdivision shall not apply to any person carrying out an agreement developed pursuant to subdivision (l) of Section 5097.94 of the [PRC] or to any person authorized to implement Section 5097.98 of the [PRC].

In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the California Government Code [CGC], that the remains are not subject to the provisions of Section 27491 of the CGC or any other related provisions of law concerning investigation of the circumstances, manner and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the PRC. The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or his or her authorized representative, notifies the coroner of the discovery or recognition of the human remains.

If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission (NAHC) (CHSC Section 7050.5).

Of particular note, after notification, NAHC would follow the procedures outlined in PRC Section 5097.98, which include notification of most likely descendants (MLD), if possible, and recommendations for treatment of the remains. The MLD would have 24 hours after notification by the NAHC to make their recommendation (PRC Section 5097.98). In addition, knowing or willful possession of Native American human remains or artifacts taken from a grave or cairn is a felony under State law (PRC Section 5097.99).

California Native American Graves Protection and Repatriation Act of 2001

The California Native American Graves Protection and Repatriation Act of 2001 (CALNAGPRA) requires all state agencies and museums that receive state funding and that have possession or control over collections of human remains or cultural items to provide a process for the identification and repatriation of these items to the appropriate tribes. It is the intent of the Act to do all of the following:

- Provide a seamless and consistent state policy to ensure that all California Indian human remains and cultural items be treated with dignity and respect.

- Apply the state’s repatriation policy consistently with the provisions of the NAGPRA (25 U.S.C. Sec. 3001 et seq.), which was enacted in 1990.
- Facilitate the implementation of the provisions of NAGPRA with respect to publicly funded agencies and museums in California.
- Encourage voluntary disclosure and return of remains and cultural items by an agency or museum.
- Provide a mechanism whereby lineal descendants and culturally affiliated California Indian tribes that file repatriation claims for human remains and cultural items under the NAGPRA (25 U.S.C. Sec. 3001 et seq.) or under this chapter with California state agencies and museums may request assistance from the commission in ensuring that state agencies and museums are responding to those claims in a timely manner and in facilitating the resolution of disputes regarding those claims.
- Provide a mechanism whereby California tribes that are not federally recognized may file claims with agencies and museums for repatriation of human remains and cultural items.

Regional/Local

Napa County General Plan

The Napa County General Plan details two Cultural Resources Goals (Goal CC-4 and Goal CC-5) aligning Napa County’s efforts to identify, protect, and preserve important prehistoric and historic resources and encourage the continuing use and rehabilitation of historic buildings (Napa County 2008). Implementation of these policies is codified through five Action Items (CC-19.1, 19.2, 23.1, 23.2, 28.1) and 15 Policies (CC-17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 26.5, 27, 28, 29, 30), which detail Napa County’s programs and initiatives to identify, avoid, and mitigate (if necessary) cultural resources. This process is consistent with the state and federal processes outlined above.

City of Napa 2040 General Plan

Chapter 5 of the City of Napa’s 2040 General Plan enumerates 16 goals for the preservation of historic and cultural resources:

- **HCR 1.** To preserve and enhance historic resources and encourage the rehabilitation and reuse of historic resources.
- **HCR 2.** To continue the City’s preservation program by identifying resources and landscapes that provide visible reminders of Napa’s history.
- **HCR 3.** To encourage efforts to designate and recognize properties and districts for local, CRHR and NRHP listing.
- **HCR 4.** To promote educational initiative that foster community awareness of Napa’s historic and cultural resources.
- **HCR 5.** To increase the economic viability of historic and cultural resources through preservation incentives.
- **HCR 6.** To encourage the original use of historic structures.
- **HCR 7.** To balance the preservation of historic buildings with strategies to increase energy efficiency.

- **HCR 8.** To publicly promote the economic benefits of historic preservation.
- **HCR 9.** To structure the development of the city center to reflect its historic form with a mix of old and new buildings.
- **HCR 10.** To work across the community to promote the historic resources of Napa's downtown as contributors to the experience of tourists.
- **HCR 11.** To protect cultural resources during the development of public parking spaces within Napa's downtown.
- **HCR 12.** To preserve historic neighborhoods and the historic character of Napa's built environment.
- **HCR 13.** To develop ADU design standards that retain the historic character of properties and districts.
- **HCR 14.** To protect and preserve important archaeological resources.
- **HCR 15.** To recognize the Tribal Nations who first lived in Napa and preserve their cultural resources.
- **HCR 16.** To recognize the cultural identity and heritage of Napa's diverse communities.

3.6 Fisheries and Aquatic Biological Resources

Federal

Federal Endangered Species Act

Pursuant to FESA, USFWS and NMFS have authority over Actions that may result in take of a species listed as threatened or endangered under the act. Take is defined under the FESA, in part, as killing, harming, or harassing. Under federal regulations, take is further defined to include habitat modification or degradation that results, or is reasonably expected to result, in death or injury to wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. If a likelihood exists that an Action would result in take of a federally listed species, either an incidental take permit, under Section 10(a) of FESA, or a federal interagency consultation, under Section 7 of FESA, is required to avoid take liability.

The USFWS and NMFS maintain areas of critical habitat for federally regulated species to safeguard the continued existence of such species by restricting the type and extent of activities proposed under Section 7 of FESA. Section 7 of FESA requires federal agencies to consult with USFWS and/or NMFS for actions that may take a listed species or their habitat. Federal agency actions include activities that are on federal land, conducted by a federal agency, funded by a federal agency, or authorized by a federal agency (including issuance of federal permits and licenses).

Under Section 7, the federal agency conducting, funding, or permitting an action—the federal lead agency—must consult with USFWS and/or NMFS, as appropriate, to ensure that the proposed action will not jeopardize endangered or threatened species or destroy or adversely modify designated critical habitat. If a proposed action “may affect” a listed species or designated critical habitat, the lead agency is required to prepare a biological assessment (BA), evaluating the nature and severity of the expected effect. In response, USFWS and/or NMFS issues a biological opinion (BO), with a determination that the proposed action results in one of the following.

- Jeopardize the continued existence of one or more listed species (jeopardy finding) or result in the destruction or adverse modification of critical habitat (adverse modification finding)
- Not jeopardize the continued existence of any listed species (no jeopardy finding) or result in adverse modification of critical habitat (no adverse modification finding).

The BO issued by USFWS and/or NMFS may stipulate discretionary “reasonable and prudent” conservation measures. If the proposed action would not jeopardize a listed species, USFWS and/or NMFS will issue an incidental take statement to authorize the proposed activity.

For construction of the Proposed Project, Section 7 consultation may be initiated by the USACE, who would be the lead federal agency, and would complete the consultation under Section 7 related to permits for Action elements that affect wetland or waters within their jurisdiction.

Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (FWCA), as amended in 1964, was enacted to protect fish and wildlife when federal actions result in the control or modification of a natural stream or body of water. The statute requires federal agencies to take into consideration the effect that water-related Actions would have on fish and wildlife resources. Consultation and coordination with USFWS and CDFW are required to address ways to prevent loss of and damage to fish and wildlife resources, and to further develop and improve these resources.

Magnuson-Stevens Fishery Conservation and Management Act

The MSA establishes a management system for national marine and estuarine fishery resources. This legislation requires that all federal agencies consult with NMFS regarding all actions or proposed actions permitted, funded, or undertaken that may adversely affect EFH for those species regulated under a federal fisheries management plan. The consultation process includes preparing an EFH assessment to determine whether a proposed action “may adversely affect” designated EFH for relevant commercial, federally managed fisheries species within the Proposed Project Area. It also describes conservation measures proposed to avoid, minimize, or otherwise offset potential adverse effects on designated EFH resulting from the proposed action.

The phrase *adversely affect* refers to the creation of any effect that reduces the quality or quantity of EFH. Federal activities that occur outside EFH but may nonetheless influence EFH waters and substrate must also be considered in the consultation process.

The MSA states that consultation regarding EFH should be consolidated, where appropriate, with the interagency consultation, coordination, and environmental review procedures required by other federal statutes, such as the NEPA, FWCA, the CWA, and FESA. EFH consultation requirements can be satisfied through concurrent environmental compliance if the lead agency provides NMFS with timely notification of actions that may adversely affect EFH, and the notification meets requirements for EFH assessments.

Clean Water Act

The Clean Water Act (CWA) is the primary federal law that protects the quality of the nation’s surface waters, including lakes, rivers, and coastal wetlands. The CWA directs states to establish water quality standards for all “waters of the United States” and to review and update such standards on a triennial basis. The U.S. Environmental Protection Agency (EPA) has delegated responsibility for implementation of portions of the CWA, including water quality control planning and control programs, such as the NPDES program (discussed below), to the SWRCB and the RWQCBs. The

SWRCB establishes statewide policies and regulations for the implementation of water quality control programs mandated by federal and state water quality statutes and regulations.

State

California Endangered Species Act

CESA (California Fish and Game Code Sections 2050–2116) states that all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants and their habitats that are threatened with extinction and those experiencing a significant decline that, if not halted, would lead to a threatened or endangered designation will be protected or preserved.

Under Section 2081 of the California Fish and Game Code, a permit from CDFW is required for Actions that could result in the take of a species that is state listed as threatened or endangered. Under CESA, take is defined as an activity that would directly or indirectly kill an individual of a species. The definition does not include harm or harass, as does the definition of take under FESA. Consequently, the threshold for take under CESA is higher than that under FESA. For example, habitat modification is not necessarily considered take under CESA. CESA does, however, require that impacts be fully mitigated (California Fish and Game Code Section 2081[b]; California Code of Regulations, Title 14, Sections 783.2–783.8).

California Fish and Game Code

Sections 1600 through 1616 of the California Fish and Game Code require that a Lake and Streambed Alteration (LSA) notification must be submitted to the CDFW for “any activity that may substantially divert or obstruct the natural flow of, or substantially change or use materials from the bed, channel, or bank of any river, stream, or lake.” CDFW reviews the notification package and, if necessary, submits to the applicant a draft LSAA that includes measures to protect affected fish and wildlife resources.

Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Act, waters of the state fall under jurisdiction of the nine Regional Water Quality Control Boards (Regional Boards). Under this act, each Regional Board must prepare and periodically update water quality control basin plans. Each basin plan sets forth water quality standards for surface water and groundwater, as well as actions to control nonpoint and point sources of pollution. Actions that affect wetlands or waters must meet the waste discharge requirements of the Regional Board. Pursuant to CWA Sections 401, an applicant for a Section 404 permit to conduct any activity that may result in discharge into navigable waters must provide a certification from the Regional Board that such discharge would comply with state water quality standards. As part of the wetlands permitting process under Section 404, an Action applicant would be required to obtain a water quality certification from the applicable Regional Board.

Section 13050 of the Porter-Cologne Act (California Water Code, Division 7) authorizes the State Water Resources Control Board and the relevant Regional Water Quality Control Board (in this case, the Central Coast Regional Board) to regulate biological pollutants. The California Water Code generally regulates more substances contained in discharges and defines discharges to receiving waters more broadly than the CWA does.

Regional

Napa County General Plan

The County of Napa's General Plan (Napa County 2008) includes the following Natural Resources Goals and Policies that are relevant to the Proposed Project:

- **Goal CON-2:** Maintain and enhance the existing level of biodiversity.
- **Goal CON-3:** Protect the continued presence of special-status species, including special-status plants, special-status wildlife, and their habitats, and comply with all applicable state, federal, or local laws or regulations.
- **Goal CON-4:** Conserve, protect, and improve plant, wildlife, and fishery habitats for all native species in Napa County.
 - **Policy CON-10:** The County shall conserve and improve fisheries and wildlife habitat in cooperation with governmental agencies, private associations and individuals in Napa County.
 - **Policy CON-13:** The County shall require that all discretionary residential, commercial, industrial, recreational, agricultural, and water development Actions consider and address impacts to wildlife habitat and avoid impacts to fisheries and habitat supporting special-status species to the extent feasible. Where impacts to wildlife and special-status species cannot be avoided, Actions shall include effective mitigation measures and management plans including provisions to:
 - a) Maintain the following essentials for fish and wildlife resources:
 - 1) Sufficient dissolved oxygen in the water.
 - 2) Adequate amounts of proper food.
 - 3) Adequate amounts of feeding, escape, and nesting habitat.
 - 4) Proper temperature through maintenance and enhancement of streamside vegetation, volume of flows, and velocity of water.
 - b) Ensure that water development Actions provide an adequate release flow of water to preserve fish populations.
 - c) Employ supplemental planting and maintenance of grasses, shrubs and trees of like quality and quantity to provide adequate vegetation cover to enhance water quality, minimize sedimentation and soil transport, and provide adequate shelter and food for wildlife and special-status species and maintain the watersheds, especially stream side areas, in good condition.
 - d) Provide protection for habitat supporting special-status species through buffering or other means.
 - e) Provide replacement habitat of like quantity and quality on- or off-site for special-status species to mitigate impacts to special-status species.
 - f) Enhance existing habitat values, particularly for special-status species, through restoration and replanting of native plant species as part of discretionary permit review and approval.

- g) Require temporary or permanent buffers of adequate size (based on the requirements of the subject special-status species) to avoid nest abandonment by birds and raptors associated with construction and site development activities.
- h) Demonstrate compliance with applicable provisions and regulations of recovery plans for federal special-status species.
- **Policy CON-14:** To offset possible losses of fishery and riparian habitat due to discretionary development Actions, developers shall be responsible for mitigation when avoidance of impacts is determined to be infeasible. Such mitigation measures may include providing and permanently maintaining similar quality and quantity habitat within Napa County, enhancing existing riparian habitat, or paying in-kind funds to an approved fishery and riparian habitat improvement and acquisition fund. Replacement habitat may occur either on-site or at approved off-site locations, but preference shall be given to on-site replacement.
- **Policy CON-16:** The County shall require a biological resources evaluation for discretionary Actions in areas identified to contain or potentially contain special-status species based upon data provided in the Baseline Data Report (BDR), California Natural Diversity Database (CNDDDB), or other technical materials. This evaluation shall be conducted prior to the approval of any earthmoving activities. The County shall also encourage the development of programs to protect special-status species and disseminate updated information to state and federal resource agencies.
- **Policy CON-26:** Consistent with Napa County's Conservation Regulations, natural vegetation retention areas along perennial and intermittent streams shall vary in width with steepness of the terrain, the nature of the undercover, and type of soil. The design and management of natural vegetation areas shall consider habitat and water quality needs, including the needs of native fish and special status species and flood protection where appropriate. Site-specific setbacks shall be established in coordination with Regional Water Quality Control Boards, California Department of Fish and Game, U.S. Fish and Wildlife Service, National Oceanic and Atmospheric Administration National Marine Fisheries Service, and other coordinating resource agencies that identify essential stream and stream reaches necessary for the health of populations of native fisheries and other sensitive aquatic organisms within the County's watersheds. Where avoidance of impacts to riparian habitat is infeasible along stream reaches, appropriate measures will be undertaken to ensure that protection, restoration, and enhancement activities will occur within these identified stream reaches that support or could support native fisheries and other sensitive aquatic organisms to ensure a no net loss of aquatic habitat functions and values within the county's watersheds.
- **Policy CON-30:** All public and private Actions shall avoid impacts to wetlands to the extent feasible. If avoidance is not feasible, Actions shall mitigate impacts to wetlands consistent with state and federal policies providing for no net loss of wetland function.
- **Policy CON-31:** The County shall maintain and improve marshland habitat in the southern part of the county through a variety of appropriate measures.

- **Policy CON-32:** The County shall maintain and improve slough and tidal mudflats habitat with appropriate measures.

City of Napa General Plan

The City of Napa 2040 General Plan (City of Napa 2022) includes a Natural Resources Conservation (NRC) Element with the following Goals and Policies that are relevant to the Proposed Project:

- **GOAL NRC-1:** Manage natural resources, including riparian corridors, wetlands, and open space areas in and around the city to preserve and enhance plant and wildlife habitats
 - **NRC 1-2:** Review future waterway improvement Actions (e.g., flood control, dredging, private development), as well as all development adjacent to the waterways, to protect and minimize effects on the riparian and aquatic habitats.
 - **NRC 1-8** Require development Actions to provide protection for significant on-site natural habitat whenever feasible and protect significant species and groves or clusters of trees on Action sites.
- **GOAL NRC-2:** Recognize and support the preservation of rare, endangered, and threatened species.
 - **NRC 2-1** Continue to consult with, and refer development proposals in sensitive areas to, State and federal wildlife agencies for review and comment.
 - **NRC 2-2** As part of development review on sites with sensitive species, require Action proponents to either conserve any habitat areas, or identify any feasible means of avoiding any net loss of habitat or habitat value for endangered, threatened, and rare species. Establish programs that provide for the use of off-site mitigation when in the best interest of the public.

3.7 Geology and Soils

Federal

Earthquake Hazards Reduction Act

In October 1977, the United States Congress passed the Earthquake Hazards Reduction Act to reduce the risks to life and property from future earthquakes in the United States. The Earthquake Hazards Reduction Act established the National Earthquake Hazard Reduction Program. The purpose of this program is to reduce the risks to life and property in the United States from earthquakes through the establishment and maintenance of an effective national earthquake risk reduction program. Member agencies in the National Earthquake Hazard Reduction Program are the USGS, the National Science Foundation, FEMA, and the National Institute of Standards and Technology.

Paleontological Resources Preservation Act

The Paleontological Resources Preservation Act was passed on March 30, 2009. The Paleontological Resources Preservation Act is intended to preserve, manage, and protect paleontological resources on lands administered by the Bureau of Land Management, the Bureau of Reclamation, the National Parks Service, and the USFWS. As noted in Chapter 2, the Proposed

Project Area is not administered by the above-listed agencies and, as a result, regulation under the Paleontological Resources Preservation Act does not apply to the Proposed Project.

State

California Building Code and California Health and Safety Code

California provides minimum standards for building design through the California Building Code (CBC, CCR, Title 24). The state earthquake protection law (California Health and Safety Code Section 19100 et seq.) requires that structures be designed to resist stresses produced by lateral forces caused by wind and earthquakes. The CBC identifies seismic factors that must be considered in structural design, as well as regulates the excavation of foundations and retaining walls, construction on unstable soils, such as expansive soils and areas subject to liquefaction, and regulates grading activities, including drainage and erosion control.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (PRC Sections 2621 to 2630) was enacted in 1972 to reduce the hazard of surface faulting to structures designed for human occupancy. The act requires the State Geologist to establish regulatory zones known as Earthquake Fault Zones around the surface traces of active faults and issue appropriate maps, which are distributed to all affected cities, counties, and state agencies for their use in planning efforts. Before a project can be permitted in a designated Alquist-Priolo Earthquake Fault Zone, the permitting agency must require a geologic investigation to demonstrate that buildings intended for human habitation would not be constructed on active faults.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (PRC Sections 2690 to 2699.6) directs the DOC to identify and map areas prone to earthquake liquefaction hazards, earthquake-induced landslides, and amplified ground shaking. The act requires the State Geologist to establish regulatory zones (Zones of Required Investigation) and to issue appropriate maps (Seismic Hazard Zone maps). These maps are distributed to all affected cities, counties, and state agencies for their use in planning and controlling construction and development.

General Permit for Construction Activities

Under the National Pollutant Discharge Elimination System (NPDES), the State of California adopted the Construction General Permit (CGP), Order No. 2022-0057-DWQ, on September 8, 2022 and effective September 1, 2023. The CGP regulates construction site stormwater management. Dischargers whose projects disturb 1 or more acres of soil, or whose projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the general permit for discharges of stormwater associated with construction activity.

Permit applicants are required to submit a Notice of Intent to the State Water Resources Control Board (SWRCB) and to prepare a stormwater pollution prevention plan (SWPPP). The SWPPP identifies best management practices (BMPs) that must be implemented to reduce construction effects on receiving water quality based on pollutants. The BMPs identified are directed at implementing both sediment and erosion control measures and other 'good housekeeping' measures to control chemical contaminants.

Paleontological Resources

CEQA includes in its definition of historical resources "...any object [or] site ...that has yielded or may be likely to yield information important in prehistory..." (14 California Code of Regulations [CCR] Section 15064.5[a][3]), which is typically interpreted as including fossils and other paleontological resources. More specifically, destruction of a "...unique paleontological resource or site or unique geologic feature..." constitutes a significant impact under CEQA pursuant to CEQA Guidelines in Appendix G. Treatment of paleontological resources under CEQA is generally similar to treatment of cultural resources, requiring evaluation of resources in the project; assessment of potential impacts on significant or unique resources; and development of mitigation measures for potentially significant impacts, which may include monitoring, data recovery excavation, and/or avoidance.

Public Resources Code Section 5097.5

PRC Section 5097.5 states that no person will knowingly and willfully excavate upon, or remove, destroy, injure, or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological, or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands.

Society of Vertebrate Paleontology

The Society of Vertebrate Paleontology has guidance for assessing and mitigating paleontological resources that could potentially be impacted from land development. This guidance is included in the Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources (Society of Vertebrate Paleontology 2010). As part of the assessment process for paleontological resources, the Society of Vertebrate Paleontology's guidance groups rock units into a high, undetermined, low, or no potential category for containing significant paleontological resources. These categories then determine the level of mitigation required, or further assessment prior to construction, for adequate protection or salvage of paleontological resources within a project area.

Regional/Local

Napa County Code of Ordinances Chapter 18.108 – Conservation Regulations

Since 1991, Napa County's Conservation Regulations (Chapter 18.108) restricted the construction of main or accessory structures, earthmoving activity, grading or removal of vegetation, or agricultural uses of land within required stream setbacks. "Earthmoving or earth-disturbing activity" means any activity that involves vegetation clearing, grading, excavation, compaction of the soil, or the creation of fills and embankments to prepare a site for the construction of roads, structures, landscaping, new planting, and other improvements (including agricultural roads, and vineyard avenues or tractor turnaround areas necessary for ongoing agricultural operations). It also means excavations, fills or grading which of themselves constitute engineered works or improvements (Napa County 2023).

Only the following uses shall be permitted within the required stream setbacks, unless exempt pursuant to Section 18.108.050 or specifically authorized by the Planning Commission through a use permit:

- 1) Maintenance of existing legal vineyards or other agricultural crop, including the prudent use of fertilizers and such pesticides, herbicides, insecticides, fungicides or other techniques for the control of insects, weeds, diseases and pests that are necessary to maintain the productivity of croplands;

- 2) Use and maintenance of existing tractor turnaround areas, agricultural roads, recreational roads, trails and crossings;
- 3) Activities which are consistent with agricultural practices in the area and which are intended to protect the security and safety of the surrounding area including, but not limited to, fire, flood protection and bank stabilization, weed control, trespass, and nuisance protection;
- 4) Development and maintenance of those water resources, including pumps, that are necessary for agricultural and domestic purposes;
- 5) Maintenance and replacement of existing public works facilities such as pipes, cables, culverts and the like;
- 6) Maintenance of existing or restoration of previously dredged depths in existing flood control projects and navigational channels authorized by a permit issued by the director of public works pursuant to Title 16;
- 7) Maintenance of existing or restoration of previously dredged depths in existing flood control projects and navigational channels authorized by a permit issued by the director of public works pursuant to Title 16;
- 8) Construction of new public works projects such as drainage culverts, stream crossings when such projects are specifically authorized and permitted by existing state, federal or local law;
- 9) Construction of new public works projects such as drainage culverts, stream crossings when such projects are specifically authorized and permitted by existing state, federal or local law;
- 10) Construction of new public works projects such as drainage culverts, stream crossings when such projects are specifically authorized and permitted by existing state, federal or local law;
- 11) Construction of new public works projects such as drainage culverts, stream crossings when such projects are specifically authorized and permitted by existing state, federal or local law;
- 12) Installation of stream crossings, recreational roads, and equestrian and nonmotorized trails in accordance with appropriate permits from other state, federal and local use permit requirements when it can be determined by the director that the least environmentally damaging alternative has been selected as a part of an approved project.

These regulations have been set forth with the intention to protect the public health, safety and community welfare, and to otherwise preserve the natural resources of the county of Napa. To ensure the continued long-term viability of county agricultural resources, the purpose of these regulations is to protect county lands from excessive soil loss which if unprotected could threaten local water quality and quantity and lead ultimately to loss of economic productivity. These Conservation regulations are also implemented with the purpose of providing greater environmental protection for natural environmental resources, particularly agricultural lands, forests, wildlife habitat, and water- (Napa County 2023).

Napa County General Plan

The following goals and policies of the *Napa County General Plan* are applicable to the Proposed Project:

Community Character Element

- **Policy CC-23:** The County supports continued research into and documentation of the county's history and prehistory and shall protect significant cultural resources from inadvertent damage during grading, excavation, and construction activities.
 - **Action Item CC-23.2:** Impose the following conditions on all discretionary projects in areas which do not have a significant potential for containing archaeological or paleontological resources:
 - "The Planning Department shall be notified immediately if any prehistoric, archaeologic, or paleontologic artifact is uncovered during construction. All construction must stop and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology shall be retained to evaluate the finds and recommend appropriate action."

Conservation Element

- **Policy CON-6:** The County shall impose conditions on discretionary projects which limit development in environmentally sensitive areas such as those adjacent to rivers or streamside areas and physically hazardous areas.
- **Policy CON-50:** The County will take appropriate steps to protect surface water quality and quantity, including the following:
 - (e): In conformance with National Pollution Discharge Elimination System (NPDES) requirements, prohibit grading and excavation unless it can be demonstrated that such activities will not result in significant soil erosion, silting of lower slopes or waterways, slide damage, flooding problems, or damage to wildlife and fishery habitats.
 - (g): Address potential soil erosion by maintaining sections of the County Code that require all construction-related activities to have protective measures in place or installed by the grading deadlines established in the Conservation Regulations. In addition, the County shall ensure enforceable fines are levied upon code violators and shall require violators to perform all necessary remediation activities

Safety Element

- **Goal SAF-2:** To the extent reasonable, protect residents and businesses in the unincorporated area from hazards created by earthquakes, landslides, and other geologic hazards.
 - **Policy SAF-8:** Consistent with County ordinances, require a geotechnical study for new projects and modifications of existing projects or structures located in or near known geologic hazard areas, and restrict new development atop or astride identified active seismic faults in order to prevent catastrophic damage caused by movement along the fault. Geologic studies shall identify site design (such as setbacks from active faults and avoidance of on-site soil-geologic conditions that could become unstable or fail during a seismic event) and structural measures to prevent injury, death and catastrophic damage to structures and infrastructure improvements (such as pipelines, roadways and water surface impoundments not subject to regulation by

the Division of Safety of Dams of the California Department of Water Resources) from seismic events or failure from other natural circumstances.

- **Policy SAF-9:** As part of the review and approval of development and public works projects, planting of vegetation on unstable slopes shall be incorporated into project designs when this technique will protect structures at lower elevations and minimize the potential for erosion or landslides. Native plants should be considered for this purpose, since they can reduce the need for supplemental watering which can promote earth movement.
- **Policy SAF-10:** No extensive grading shall be permitted on slopes over 15 percent where landslides or other geologic hazards are present unless the hazard(s) are eliminated or reduced to a safe level.
- **Policy SAF-43:** Consistent with state and federal requirements, critical facilities should be provided with additional earthquake resistance and damage control to allow such facilities to remain operative after a disaster.

City of Napa 2040 General Plan

The following goals and policies of the *City of Napa 2040 General Plan – Safety and Noise Element* are applicable to the Proposed Project:

- **GOAL SN-1:** Minimize the risk to life and property caused by seismic activity, soil erosion, and landslides.
 - **SN 1-1:** Investigate and mitigate geologic and seismic hazards or establish regulations to provide for appropriate setbacks from such hazards, in order to preserve life and protect property, especially in areas that are prone to earthquakes and landslides, such as along the West Napa fault zone.
 - **SN 1-2:** Work with State agencies and property developers to identify the location of faults where these are not known.
 - **SN 1-4:** Maintain and update the Napa Hillside Overlay Development Guidelines as needed and use this as the guide for regulating development in the hillsides.

3.8 Greenhouse Gas Emissions and Climate Change

Federal

United States Environmental Protection Agency (USEPA)

On April 2, 2007, in *Massachusetts v. Environmental Protection Agency*, 549 U.S. 497, the U.S. Supreme Court found that GHGs are air pollutants covered by the FCAA. The Supreme Court held that USEPA must determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. To regulate GHGs from passenger vehicles, the USEPA issued an endangerment finding on December 7, 2009. The finding identifies emissions of six key GHGs — CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆ — that threaten the public health and welfare of current and future generations.

Mandatory Reporting of Greenhouse Gases Rule

On September 22, 2009, the USEPA issued a final rule for the mandatory reporting of GHG data and other relevant information from large sources in the United States (Code of Federal Regulations Title 40, Part 98). This comprehensive, nationwide emissions data is intended to provide a better understanding of the sources of GHGs and guide development of policies and programs to reduce emissions. The mandatory reporting rule applies to direct GHG emitting sources; suppliers of fossil fuel, industrial gas, and other products that would result in GHG emissions if released, combusted, or oxidized; and facilities that inject carbon dioxide underground for geologic sequestration or other reasons. In general, facilities that emit 25,000 MT CO₂e or more per year of GHGs are required to submit annual reports to the USEPA.

Corporate Average Fuel Economy Standards

The Corporate Average Fuel Economy (CAFE) standards were first introduced by Congress in 1975 to help reduce the country's dependence on foreign oil. CAFE standards are regulated by the United States Department of Transportation's (USDOT) National Highway Traffic and Safety Administration (NHTSA). NHTSA sets and enforces the CAFE standards, while the USEPA calculates average fuel economy levels for manufacturers, and also sets related GHG standards. The regulations have become more stringent over time. The regulations at first applied only to passenger cars in 1978, then included light duty trucks up to 6,000 pounds in 1980, and finally increased to all vehicles up to 8,500 pounds the next year. Regulations varied during the 1980s for both cars and trucks before reaching a steady target for cars in 1990 through 2010, with trucks moderately increasing during the period from 20 to 21 miles per gallon (mpg) through 2005, then reaching 23.5 mpg by 2010.

On April 1, 2010, the USEPA and the NHTSA announced a joint final rule establishing a national program that would reduce GHG emissions and improve fuel economy for new cars and trucks sold in the United States. The first phase of the national program applied to passenger cars, light-duty trucks, and medium-duty passenger vehicles for model years 2012 through 2016. This phase required these vehicles to meet a fuel economy standard of 35.5 mpg. The second phase applied to passenger cars, light-duty trucks, and medium-duty passenger vehicles for model years 2017 through 2025. This phase required these vehicles to meet an estimated fuel economy standard of 54.5 mpg.

On September 15, 2011, the USEPA and NHTSA issued a final rule for the first national standards to improve fuel efficiency of medium- and heavy-duty trucks and buses, model years 2014 through 2018 by up to 20 percent.

On October 25, 2016, the USEPA and NHTSA issued Phase 2 of the national standards to improve fuel efficiency standards for medium- and heavy-duty trucks and buses for model years 2021 through 2027 to achieve vehicle fuel savings as high as 25 percent, depending on the vehicle category.

On March 31, 2020, the USEPA and NHTSA, issued the Safer Affordable Fuel Efficient (SAFE) Vehicles Rule. The SAFE Vehicles Rule set new CAFE targets and tailpipe CO₂ emissions standards for passenger cars and lights trucks that increase 1.5 percent in stringency each year from model years 2021 through 2026.

On January 20, 2021, President Biden signed Executive Order (EO) 13990, which directed the NHTSA to suspend, revise, or rescind the SAFE Vehicles Rule. On December 21, 2021, NHTSA finalized the CAFE Preemption rulemaking to withdraw the SAFE Vehicles Rule.

On March 31, 2022, NHTSA finalized CAFE standards for model years 2024-2026. The final rule establishes standards that would require an industry-wide fleet average of approximately 49 mpg for

passenger cars and light trucks in model year 2026, by increasing fuel efficiency by 8 percent annually for model years 2024-2025, and 10 percent annually for model year 2026 (USDOT 2022).

On July 28, 2023, the NHTSA proposed new CAFE standards for passenger cars and light trucks built in model years 2027-2032, and new fuel efficiency standards for heavy-duty pickup trucks and vans built in model years 2030-2035 (NHTSA 2023). If finalized, the proposal would require an industry fleet-wide average of approximately 58 mpg for passenger cars and light trucks in model year 2032, by increasing fuel economy by 2 percent year over year for passenger cars and by 4 percent year over year for light trucks (NHTSA 2023). For heavy-duty pickup trucks and vans, the proposal would increase fuel efficiency by 10 percent year over year. At the time of preparation of this EIR/EIS, the new CAFE standards have not been adopted.

National Environmental Policy Act (NEPA) Guidance on Consideration of Greenhouse Gas Emissions and Climate Change

On January 9, 2023, the Council on Environmental Quality (CEQ) issued the interim *National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change* (Interim Guidance) to assist federal agencies in assessing the GHG emissions and climate change effects of their proposed actions under NEPA. The Interim Guidance encourages federal agencies to quantify the reasonably foreseeable direct and indirect GHG emissions of a proposed action and its alternatives, including the no action alternative. The Interim Guidance recommends that the NEPA document disclose best estimates of lifetime and annual GHG emissions associated with an action and each alternative, including gross GHG emissions increases and decreases as well as the net change.

Once GHG emissions have been quantified for each alternative, the Interim Guidance recommends that the NEPA document should, if possible, also provide the best available estimate of the Social Cost of GHGs (SC-GHG) for the proposed action and each alternative. The SC-GHG translates climate impacts into the more accessible metric of dollars, thereby allowing decisionmakers and the public to compare alternatives and better understand the tradeoffs associated with an action and its alternatives.

State

Executive Order S-3-05

In June 2005, Governor Schwarzenegger issued EO S-3-05, which established the following GHG emissions reduction targets: 1) reduce GHG emissions to 2000 levels by 2010, 2) reduce GHG emissions to 1990 levels by 2020, and 3) reduce GHG emissions to 80 percent below 1990 levels by 2050.

Assembly Bill 32

In September 2006, the California State Legislature enacted the California Global Warming Solutions Act of 2006, also known as AB 32, which required that statewide GHG emissions be reduced to 1990 levels by 2020. California met its 2020 reduction goal in 2018.

Executive Order B-30-15

On April 20, 2015, Governor Brown signed EO B-30-15 to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. California's emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal of reducing emissions 80

percent below 1990 levels by 2050. This is in line with the scientifically established levels needed in the United States to limit global warming below 2 degrees Celsius, the warming threshold at which there will likely be major climate disruptions such as super droughts and rising sea levels.

Senate Bill 32

Senate Bill (SB) 32 was signed into law on September 8, 2016. SB 32 expands upon AB 32 to reduce GHG emissions. SB 32 sets into law the mandated GHG emissions target of 40 percent below 1990 levels by 2030 written into EO B-30-15.

Assembly Bill 1279

In September 2022, Governor Newsom signed into law the California Climate Crisis Act, also known as AB 1279. AB 1279 requires the state to achieve net zero GHG emissions as soon as possible, but no later than 2045, and to achieve and maintain net negative greenhouse gas emissions thereafter. The bill also requires California to reduce statewide anthropogenic GHG emissions by 85 percent compared to 1990 levels and directs CARB to work with relevant state agencies to achieve these goals.

Climate Change Scoping Plans

In December 2008, CARB adopted the *Climate Change Scoping Plan* (2008 Scoping Plan) to achieve the goals outlined in AB 32. The 2008 Scoping Plan, developed by CARB in coordination with the Climate Action Team, proposed a comprehensive set of actions designed to reduce overall GHG emissions in California, improve the environment, reduce dependence on oil, diversify the state's energy sources, save energy, create new jobs, and enhance public health. According to the 2008 Scoping Plan, California would implement strategies to achieve a reduction of approximately 118 MMT CO₂e, or approximately 22 percent from the state's projected 2020 emission level of 545 MMT CO₂e under a business-as-usual scenario. This is a reduction of 47 MMT CO₂e, or almost 10 percent, from 2008 emissions (CARB 2008). CARB's original 2020 projection was 596 MMT CO₂e, but this revised 2020 projection considered the economic downturn that occurred in 2008.

The *First Update to the Climate Change Scoping Plan* (2014 Scoping Plan) was approved by CARB in May 2014 and built upon the 2008 Scoping Plan with new strategies and recommendations. The 2014 Scoping Plan contained the main strategies California will implement to achieve a reduction of 80 MMT CO₂e emissions, or approximately 16 percent, from the state's projected 2020 emission level of 507 MMT CO₂e under the business-as-usual scenario defined in the 2014 Scoping Plan (CARB 2014). The 2014 Scoping Plan also included a breakdown of the amount of GHG reductions CARB recommended for each emissions sector of the state's GHG inventory. Several strategies to reduce GHG emissions were included: Low Carbon Fuel Standard, Pavley Rule, Advanced Clean Cars program, Renewable Portfolio Standard, and Sustainable Communities Strategy.

In 2016, the Legislature passed SB 32, which codified a 2030 GHG emissions reduction target of 40 percent below 1990 levels. With the passage of SB 32, the Legislature passed companion legislation AB 197, which provided additional direction for developing the Scoping Plan. CARB adopted *California's 2017 Climate Change Scoping Plan* (2017 Scoping Plan) in November 2017. The 2017 Scoping Plan represents a second update to the scoping plan to reflect the 2030 target as codified by SB 32. According to the 2017 Scoping Plan, the 2030 target of 260 MMT CO₂e requires the reduction of 129 MMT CO₂e, or approximately 33.2 percent, from the state's projected 2030 business-as-usual scenario emissions level of 389 MMT of CO₂e (CARB 2017).

The *2022 Scoping for Achieving Carbon Neutrality* (2022 Scoping Plan) (CARB 2022) was adopted by CARB in November 2022. The 2022 Scoping Plan lays out a path for California to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045, as directed by AB 1279. The actions and outcomes in the plan will achieve significant reductions in fossil fuel combustion by deploying clean technologies and fuels, further reductions in short-lived climate pollutants, support for sustainable development, increased action on natural and working lands to reduce emissions and sequester carbon, and the capture and storage of carbon.

Assembly Bill 1493

AB 1493 of 2002 (Pavley Bill) requires CARB to develop and adopt regulations that achieve “the maximum feasible reduction of GHGs emitted by passenger vehicles and light duty truck and other vehicles determined by CARB to be vehicles whose primary use is non-commercial personal transportation in the state.” In September 2004, pursuant to this directive, CARB approved regulations to reduce GHG emissions from new motor vehicles beginning with the 2009 model year. These regulations created the Pavley standards. In September 2009, CARB adopted amendments to the Pavley standards to reduce GHG emissions from new motor vehicles through the 2016 model year. These regulations created the Pavley II standards.

Advanced Clean Cars Program

In January 2012, CARB approved a new emissions control program for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero emission vehicles into a single packet of standards called Advanced Clean Cars. The Advanced Clean Cars Program includes the Zero Emission Vehicle Program, which is designed to achieve California’s long-term emission reduction goals by requiring manufacturers to offer for sale specific numbers of zero-emission vehicles, which include battery electric, fuel cell, and plug-in hybrid electric vehicles.

Low Carbon Fuel Standard

CARB approved the Low Carbon Fuel Standard (LCFS) in 2009 and began implementation in 2011. The LCFS is a key part of a comprehensive set of programs in California to cut GHG emissions and other smog-forming and toxic air pollutants by improving vehicle technology, reducing fuel consumption, and increasing transportation mobility options. The LCFS is designed to decrease the carbon intensity of California’s transportation fuels and provide an increasing range of low-carbon and renewable alternatives, which reduce petroleum dependency and achieve air quality benefits.

In 2018, CARB approved amendments to the LCFS regulation, which included strengthening and smoothing the carbon intensity benchmarks through 2030 in-line with California’s 2030 GHG emission reduction target enacted through SB 32. CARB adopted a LCFS target of 20 percent reduction in carbon intensity of transportation fuels by 2030.

Senate Bill 375

SB 375, also known as the Sustainable Communities and Climate Protection Act, was adopted In September 2008. SB 375 provides for a new planning process that coordinates land use planning, regional transportation plans (RTPs), and funding priorities, to help California meet the GHG reduction goals established in AB 32. Under SB 375, CARB is required to set regional targets for GHG emission reductions from passenger vehicles. SB 375 requires metropolitan planning

organizations (MPOs) to develop RTPs and incorporate a sustainable communities strategy (SCS) to demonstrate achievement of CARB's targets. The goal of the SCS is to reduce regional vehicle miles traveled (VMT) through land use planning and consequent transportation patterns.

The Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) are jointly responsible for regional planning of the nine county San Francisco Bay Area (Bay Area), including Napa County. CARB's regional GHG emissions targets for ABAG/MTC include a 10 percent per capita reduction in 2020 relative to 2005 levels and a 19 percent per capita reduction in 2035 from 2005 levels (CARB 2023).

Regional/Local

Plan Bay Area 2050

On October 21, 2021, the ABAG and the MTC jointly adopted *Plan Bay Area 2050* (ABAG and MTC 2021). *Plan Bay Area 2050* is a 30-year plan that charts the course for a Bay Area that is affordable, connected, diverse, healthy and vibrant for all residents through 2050 and beyond. The plan includes 35 strategies to improve housing, the economy, transportation, and the environment across the Bay Area. In the short term, the Implementation Plan identifies more than 80 specific actions for MTC, ABAG and partner organizations to take over the next five years to make headway on each of the 35 strategies. The plan projects that the Bay Area would meet the state mandate of a 19 percent reduction in per capita emissions by 2035 if all strategies are implemented (ABAG and MTC 2021).

Bay Area Air Quality Management District (BAAQMD)

BAAQMD has local jurisdiction over air quality in the SFBAAB, including all of Napa County. BAAQMD adopted the 2022 CEQA Guidelines in April 2023 (BAAQMD 2023). The 2022 CEQA Guidelines were developed to assist lead agencies in evaluating potential air quality and climate impacts from land use projects and plans in the SFBAAB, consistent with CEQA requirements.

BAAQMD does not have an adopted threshold of significance for construction-related GHG emissions. The 2022 CEQA Guidelines state that GHG emissions from construction represent a very small portion of a project's lifetime GHG emissions. BAAQMD has identified thresholds for GHG emissions during project operation. A proposed land use development project would not have a significant GHG impact, if operation of the project would meet one of the following thresholds presented in Table 3-2 of the 2022 CEQA Guidelines. Because the Proposed Project is not a land use development project, BAAQMD's operational GHG thresholds do not apply to the Proposed Project.

City of Napa General Plan

The Climate Change and Sustainability Element of the *City of Napa 2040 General Plan* (City of Napa 2022) contains the following goals that are relevant to the Proposed Project:

- **Goal CCS-1:** Further the City's sustainability initiatives to reduce the community's GHG emissions, and foster green development patterns – including buildings, sites, and landscapes.
- **Goal CCS-3:** Promote cost-effective, natural methods to improve the City's infrastructure and resilience to climate change, while furthering Napa's goal of a healthier and more sustainable urban environment.

City of Napa Sustainability Plan

The City adopted the *City of Napa Sustainability Plan* (City of Napa 2012) in July 2012 to meet GHG emissions reduction targets for 2020 set by AB 32. The plan includes 95 initiatives to promote sustainability within the Napa community and within the City's internal government operations. The plan is arranged into focus areas that are the key components of community and City government operations. City government focus areas in the plan include energy, transportation, recycling and waste, water, and planning and land use. Community focus areas in the plan include energy, mobility and transportation, recycling and waste, natural and built environment, community connectedness, local business and economy, and local food.

The City's Sustainability Plan is not a qualified GHG reduction strategy and cannot be used for tiering and streamlining under Section 15183.5(b) of the CEQA Guidelines.

3.9 Hazards and Hazardous Materials

Federal

Hazardous Waste Management

The Federal Toxic Substances Control Act of 1976 and the Resource Conservation and Recovery Act of 1976 established a program administered by the USEPA for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste.

Asbestos National Emission Standards for Hazardous Air Pollutants

The USEPA's Asbestos National Emission Standards for Hazardous Air Pollutants regulations specify work practices for asbestos to be followed during demolition and renovation of all structures, installations, and buildings (excluding residential buildings that have four or fewer dwelling units).

Universal Waste Management

40 CFR Part 273 governs the collection and management of widely generated waste, including batteries, pesticides, mercury-containing equipment, and bulbs. This regulation streamlines the hazardous waste management standards and ensures that such waste is diverted to the appropriate treatment or recycling facility.

US Department of Labor, Occupational Safety and Health Administration

29 CFR Part 1910, Occupational Safety and Health Standards, requires facilities that use, store, manufacture, handle, process, or move hazardous materials to conduct employee safety training; inventory safety equipment relevant to potential hazards; have knowledge on safety equipment use; prepare an illness prevention program; provide hazardous substance exposure warnings; prepare an emergency response plan, and prepare a fire prevention plan. 29 CFR Part 1926 establishes similar safety and health regulations for construction.

U.S. Department of Transportation

Transportation of hazardous materials is regulated by the US Department of Transportation's Office of Hazardous Materials Safety. The office formulates, issues, and revises hazardous materials regulations under the Federal Hazardous Materials Transportation Law.

State

California Hazardous Waste Control Law

The California Hazardous Waste Control Law is administered by the California Environmental Protection Agency to regulate hazardous wastes. The California Hazardous Waste Control Law lists 791 chemicals and about 300 common materials that may be hazardous; establishes criteria for identifying, packaging, and labeling hazardous wastes; prescribes management controls; establishes permit requirements for treatment, storage, disposal and transportation; and identifies some wastes that cannot be disposed of in landfills.

California Occupational Safety and Health Administration

The California Occupational Safety and Health Administration is the primary agency responsible for worker safety in the handling and use of chemicals in the workplace.

Field Act

Under the Field Act, the Department of General Services is required to supervise the design and construction, reconstruction, or alteration of any school buildings to ensure that the plans and specifications comply with adopted rules, regulations, and building standards for the protection of life and property.

Lead-Based Paint

The California Department of Public Health enforces lead laws and regulations related to the prevention of lead poisoning in children, prevention of lead poisoning in occupational workers, accreditation and training for construction-related activities, lead exposure screening and reporting, disclosures, and limitations on the amount of lead found in products. Accredited lead specialists are required to find and abate lead hazards in a construction project and to perform lead-related construction work in an effective and safe manner. Specific regulations include:

- California Health & Safety Code Section 105250: Establishes a program to accredit lead-related construction training providers and certify individuals to conduct lead-related construction activities.
- California Civil Code Sections 1102 to 1102.16: Requires the disclosure of known lead-based paint hazards upon sale of a property.
- California Labor Code Sections 6716 to 6717: Provides for the establishment of standards that protect the health and safety of employees who engage in lead-related construction work, including construction, demolition, renovation, and repair.
- California Health & Safety Code Sections 105185 to 105197: Establishes an occupational lead poisoning prevention program to register and monitor laboratory reports of adult lead toxicity cases, monitor reported cases of occupational lead poisoning to ascertain lead poisoning sources, conduct investigations of take-home exposure cases, train employees and health professionals regarding occupational lead poisoning prevention, and recommended means for lead poisoning prevention.

State Water Resources Control Board

The SWRCB protects water quality in California by setting statewide policy. The SWRCB supports the nine Regional Water Quality Control Boards, which, within their areas of jurisdiction, protect

surface and groundwater from pollutants discharged or threatened to be discharged to the waters of the state.

California Health and Safety Code – Handling and Storage of Hazardous Waste

In California, the handling and storage of hazardous materials is regulated by Chapter 6.95 of the California Health and Safety Code. Under Sections 25500–25543.3, facilities handling hazardous materials are required to prepare a Hazardous Materials Business Plan.

California Health and Safety Code – Transportation of Hazardous Waste

In California, transportation of hazardous waste is regulated under Chapter 6.5 of the California Health and Safety Code. Under Section 21560, hazardous waste generators must complete a manifest for the waste before it is transported or offered for transportation.

Emergency Response/Evacuation Plans

The state of California passed legislation authorizing the Office of Emergency Services to prepare a Standard Emergency Management System program, which sets forth measures by which a jurisdiction should handle emergency disasters.

California Disaster and Civil Defense Master Mutual Aid Agreement

The California Disaster and Civil Defense Master Mutual Aid Agreement states that all resources and facilities of the state, including all political subdivisions, shall voluntarily aid and assist each other in the event of a disaster by the interchange of services, including rescue, relief, evacuation, rehabilitation, and reconstruction (California Office of Emergency Services 1950).

Regional/Local

Napa County Environmental Health Division

The Napa County Division of Environmental Health (DEH) is the Certified Unified Program Agency (CUPA) for Napa County, including all cities.

San Francisco Bay Regional Water Quality Control Board

The Proposed Project Area is regulated by the San Francisco Bay Regional Water Quality Control Board. 23 CCR charges the nine RWQCBs with responsibility for overseeing water quality control. The RWQCBs are responsible for protecting actual or potential beneficial uses of water, including municipal, industrial, and agricultural water supplies and recreation. Each RWQCB has authority to supervise hazardous waste cleanup at sites referred by local agencies and in cases where water quality is affected or threatened. Either the DTSC or the RWQCB may be responsible for cleanup of sites of significant contamination by hazardous wastes. The two agencies often work together to ensure that their requirements are consistent and are implemented as intended.

Napa Operational Area Hazard Mitigation Plan

Napa County updated the Napa Operational Area Hazard Mitigation Plan (NAOHMP) in 2020. The plan was prepared in cooperation with the Cities of American Canyon, Calistoga, Napa and St. Helena, and the Town of Yountville. The NAOHMP addresses a wide variety of disasters that could affect Napa County and provides plans for reducing or mitigating these threats.

Napa County Area Plan

The Area Plan program was established in 1986 as a planning tool for government agencies to respond to and minimize the impacts from a release or threatened release of a hazardous material. Above other responsibilities, the Area Plan identifies the hazardous materials which pose a threat to the community; develops procedures and protocols for emergency response; provides for notification and coordination of emergency response personnel; and provides for public safety including notification and evacuation.

Napa County General Plan

The following goals and policies of the Napa County General Plan Safety Element (Napa County 2008) are applicable to the Proposed Project:

- **Goal SAF-1:** Safety considerations will be part of the County's education, outreach, planning, and operations in order to reduce loss of life, injuries, damage to property, and economic and social dislocation resulting from fire, flood, geologic, and other hazards.
 - **Policy SAF-1:** The County supports and will promote intergovernmental cooperation among local, state and federal public agencies to reduce known hazards and further define uncertain hazards. In particular, the County will work to develop cooperative working relationships with agencies having responsibility for flood and fire protection.
- **Goal SAF-3:** It is the goal of Napa County to effectively manage forests and watersheds, and to protect homes and businesses from fire and wildfire and minimize potential losses of life and property.
 - **Policy SAF-16:** Consistent with building and fire codes, development in high wildland fire hazard areas shall be designed to minimize hazards to life and property.
 - **Policy SAF-20:** All new development shall comply with established fire safety standards. Design plans shall be referred to the appropriate fire agency for comment as to: 1) Adequacy of water supply; 2) Site design for fire department access in and around structures; 3) Ability for a safe and efficient fire department response; 4) Traffic flow and ingress/egress for residents and emergency vehicles; 5) Site-specific built-in fire protection; 6) Potential impacts to emergency services and fire department response.
- **Goal SAF-5:** To protect residents and businesses from hazards caused by human activities.
 - **Policy SAF-29:** The County shall seek to be part of the decision-making process for the location of new or relocated electrical transmission lines in order to ensure that line locations are coordinated with the County's land use plans and aesthetic policies.
 - **Policy SAF-30:** Potential hazards resulting from the release of liquids (wine, water, petroleum products, etc.) from the possible rupture or collapse of aboveground tanks should be considered as part of the review and permitting of these projects.
 - **Policy SAF-31:** All development projects proposed on sites that are suspected or known to be contaminated by hazardous materials and/or are identified in a hazardous material/ waste search shall be reviewed, tested, and remediated for potential hazardous materials in accordance with all local, state, and federal regulations.

- **Policy SAF-33:** For maximum safety, all land uses and zoning within airport areas shall be reviewed for compatibility with the adopted plans for the Napa County Airport, Angwin Airport, and other general aviation facilities in the county.
- **Goal SAF-6:** The County will be able to respond in the event of a disaster to protect residents and businesses from further harm and begin reconstruction as soon as reasonable.
 - **Policy SAF-38:** The County will continue to implement the Napa Operational Area Hazard Mitigation Plan (NOAHMP), which is incorporated here by reference, in the planning and operations of the County to achieve the goals, objectives, and actions of the NOAHMP, including:
 - Promoting a flood safer community.
 - Promoting an earthquake safer community.
 - Promoting a fire safer community.
 - Promoting a technological and biological safer community.
 - Reducing impacts from flooding.
 - Reducing impacts of earthquakes.
 - Minimizing the risk of wildfire at the urban interface.
 - Improving the County's ability to mitigate technological hazards and agricultural threats.

City of Napa 2040 General Plan

The following goals and policies in the City of Napa 2040 General Plan (City of Napa 2022) Transportation Element, Safety and Noise Element, and Public Health and Equity Element are applicable to the Proposed Project.

- **Goal TE-9:** Provide safe evacuation routes in case of emergencies and natural disasters, including flooding, earthquake, and fire.
- **Goal PHE-3:** Promote clean air and water, a healthy natural environment, and pollution-free neighborhoods to reduce disparate health impacts resulting from environmental pollutants in vulnerable communities.
 - **Policy PHE 3-1:** Protect sensitive receptors such as schools, childcare centers, senior living facilities, and residences from the impacts of stationary and non-stationary sources of pollution by ensuring adequate buffers or mitigation measures.
- **Goal SN-2:** Protect Napa residents from health and safety impacts related to the use, storage, manufacture, and transport of hazardous materials.
 - **Policy SN 2-1:** Promote cleanup of hazardous sites and safe disposal of hazardous materials.
- **Goal SN-5:** Work to prevent urban fires and exposure to wildfires, as well as protect life and property from fire dangers.
 - **Policy SN 5-1:** Implement best practices to address wildfire prevention on open space land within and around the City.

- **Policy SN 5-4:** Ensure that future development plans provide adequate evacuation routes, vegetation management policies, and fire-reduction design measures, as appropriate.
- **Goal NRC-6:** Help prepare for and mitigate various hazards that affect the Napa community.

3.10 Hydrology and Water Quality

Federal

Clean Water Act

The Federal Water Pollution Control Act of 1948 was the first major United States law to address water pollution. Amended in 1972, the law became commonly known as the Clean Water Act (CWA) (33 USC Section 1251). The CWA established the structure for regulating discharge of pollutants into waters of the United States and regulating quality standards for surface waters.

CWA Section 404 (33 USC Section 1344) enables regulation of the discharge of dredged or fill material into waters of the United States, including wetlands. To comply with CWA Section 404, a permittee must document the measures taken to avoid and minimize impacts on waters of the United States and provide compensatory mitigation for any unavoidable impacts.

Under CWA Section 401 (33 USC Section 1341), federal agencies are not authorized to issue a permit or license for any activity that may result in discharges to waters of the United States, unless a state or tribe where the discharge originates either grants, waives or denies CWA Section 401 certification. Decisions made by states or tribes are based on the Proposed Project's compliance with USEPA water quality standards as well as applicable effluent limitations guidelines, new source performance standards, toxic pollutant restrictions, and any other appropriate requirements of state or tribal law. In California, the State Water Resources Control Board (SWRCB) is the primary regulatory authority for CWA Section 401 requirements.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit was established in the CWA to regulate municipal and industrial discharges to surface waters of the US. The ultimate objective of the CWA is zero pollutant discharge, but it recognizes the need for a system to regulate non-zero pollutant discharges until the zero-pollutant objective is feasible. CWA Section 402 established NPDES for this purpose. The NPDES regulates all pollutant discharges, particularly point source discharges, to the waters of the US.

Construction General Permit

Also established through the CWA Section 402 NPDES program, the California Construction General Permit (CGP) (NPDES No. CAS000002, SWRCB Order No. 2009-0009-DWQ as amended by 2010-0014-DWQ and 2012-0006-DWQ) authorizes the discharge of stormwater (and certain unauthorized non-stormwater discharges) from construction sites that disturb 1 acre or more of land, and from smaller sites that are part of a larger, common plan of development. For all projects subject to the CGP, the applicant is required to hire a qualified developer and practitioner to develop and implement an effective Stormwater Pollution Prevention Plan (SWPPP). All project registration documents, including the SWPPP, are required to be uploaded into the SWRCB's online Stormwater Multiple Application and Report Tracking System prior to ground disturbing activities.

Section 14 of the Rivers and Harbors Appropriation Act of 1899, Section 408

Under Section 408 (33 USC Section 408), any use or alteration of a Civil Works project is subject to the approval of USACE. This requirement was established in Section 14 of the Rivers and Harbors Act of 1899. Section 408 provides that USACE may grant permission for another party to alter a Civil Works project upon a determination that the alteration proposed will not be injurious to the public interest and will not impair the usefulness of the Civil Works project.

State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1966 (California Water Code Section 13000 et seq.; CCR Title 23, Chapter 3, Subchapter 15) is the primary state regulation that addresses water quality. The requirements of the act are implemented by the SWRCB at the state level and the regional water boards within the nine regions designated. The regional water boards carry out planning, permitting, and enforcement activities related to water quality in California. The regional water boards are responsible for controlling discharges to surface waters of the state by issuing waste discharge requirements or conditional waivers to waste discharge requirements. Waste discharge requirements are required by the regional water boards for activities that may affect water quality.

Clean Water Act Section 401 Water Quality Certification

A CWA Section 401 water quality certification is required for activities that require CWA Section 404 permits issued by USACE. As mentioned above, the SWRCB has primary regulatory authority for CWA Section 401 requirements for protecting water resources. Enforcement of these requirements is also handled by the nine regional water boards depending upon location of the potential impacts. The RWQCB will be responsible for CWA Section 401 for this Proposed Project.

Delegated Permit Authority

California has been delegated permit authority for the NPDES permit program, including storm water permits for all areas except tribal lands. Issuance of CWA Section 404 permits remains the responsibility of USACE; however, the state actively uses its CWA Section 401 certification authority to safeguard that CWA Section 404 permits will comply with state water quality standards.

State Definition of Covered Waters

Under California state law, waters of the state refer to “any surface water or groundwater, including saline waters, within the boundaries of the state” (California Water Code Section 13050). Therefore, water quality laws apply to both surface water and groundwater. After the United States Supreme Court decision in *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers*, the Office of Chief Counsel of the SWRCB released a legal memorandum confirming the state’s jurisdiction over isolated wetlands. In general, the SWRCB regulates discharges to isolated waters in much the same way as they do for waters of the United States, but the regulation is via Porter-Cologne Water Quality Control Act rather than the CWA.

Central Valley Flood Protection Board

The Central Valley Flood Protection Board exercises regulatory authority within its jurisdiction to maintain the integrity of the existing flood control system and designated floodways by issuing

permits for encroachments. The jurisdiction of the Central Valley Flood Protection Board includes the Central Valley, including all tributaries and distributaries of the Sacramento River, the San Joaquin River, and designated floodways (23 CCR Section 2). Projects that encroach in a designated floodway or regulated stream, or within 10 feet of the toe of a state-federal flood control structure (levee), require an encroachment permit and the submission of an associated application, including an environmental assessment questionnaire. A project must demonstrate that it will not reduce the channel flow capacity and that it will comply with channel and levee safety requirements. In cooperation with USACE, the Central Valley Flood Protection Board enforces standards for the construction, maintenance, and protection of adopted flood control plans that will protect public lands from floods.

State Water Resources Control Board and Regional Water Quality Control Boards

The SWRCB adjudicates water rights, sets water pollution control policy, issues water board orders on matters of statewide application, and oversees water quality functions throughout the state by approving Basin Plans, TMDLs, and NPDES permits. The RWQCBs are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility. The San Francisco Bay RWQCB regulates surface water and groundwater quality in the San Francisco Bay Hydrologic Region.

Sustainable Groundwater Management Act (2014)

The Sustainable Groundwater Management Act (SGMA) enacted in 2014, established a new statewide framework for groundwater sustainability. SGMA added a new definition of sustainable groundwater management to the California Water Code and requires the implementation of sustainable groundwater management for groundwater basins or subbasins delineated and designated by the California Department of Water Resources (DWR) as medium priority or high priority. For most medium priority and high priority basins, SGMA requires that one or more local agencies form groundwater sustainability agencies (GSAs) and that those GSAs adopt Groundwater Sustainability Plans (GSPs) by January 31, 2022.

Regional/Local

Water Quality Control Plan (Basin Plan)

The Proposed Project is under the jurisdiction of the San Francisco Bay RWQCB. The San Francisco Bay RWQCB implements the Water Quality Control Plan (Basin Plan) for the San Francisco Bay Basin (RWQCB 2023) to regulate surface and groundwater quality in the region. The Basin Plan covers the entire San Francisco Bay Estuary and waters from the Central Valley draining to it from counties, including Napa County. The Basin Plan lists beneficial uses and water quality objectives to protect those uses.

Napa County Stormwater Management Plan

The Napa County Stormwater Management Program (SWMP) was developed by Napa County in conjunction with Yolo County agencies. The SWMP analyzes various activities in urbanized areas that are sources of pollutants in stormwater and identifies Best Management Practices to reduce their levels. The SWMP responds to the issues and regulations of the 1987 Clean Water Act.

Napa Storm Water Quality Control Ordinance

The Storm Water Quality Control Ordinance was developed by the City of Napa. The purposes of this ordinance are to protect the public health, safety and general welfare; to protect water resources and to improve storm water quality within the MS4 and receiving waters; to cause the use of management practices by the city (and its residents, businesses, and property owners) that will reduce the adverse effects of polluted runoff discharges on waters of the state; to secure benefits from the use of storm water as a resource; and to ensure the city is compliant with applicable state and federal law.

Napa Valley Subbasin Groundwater Sustainability Plan

The Groundwater Sustainability Plan (GSP) has been developed by the Napa County Groundwater Sustainability Agency (NCGSA) in order to fulfill the requirements of the SGMA for the Napa Valley Groundwater Subbasin. The GSP is a 20-year plan to ensure that groundwater is managed sustainably within the groundwater basin. One of the primary objectives of the GSP is to define a framework for sustainable groundwater management with consideration of the physical setting and beneficial uses and users of groundwater, consistent with the requirements of SGMA.

Napa County General Plan

The following goals and policies of the Napa County General Plan (Napa County 2008) are applicable to the Proposed Project:

- **Goal CON-8:** Reduce or eliminate groundwater and surface water contamination from known sources (e.g., underground tanks, chemical spills, landfills, livestock grazing, and other dispersed sources such as septic systems).
- **Goal CON-9:** Control urban and rural storm water runoff and related non-point source pollutants, reducing to acceptable levels pollutant discharges from land-based activities throughout the county.
- **Goal CON-10:** Conserve, enhance and manage water resources on a sustainable basis to attempt to ensure that sufficient amounts of water will be available for the uses allowed by this General Plan, for the natural environment, and for future generations.
- **Goal CON-11:** Prioritize the use of available groundwater for agricultural and rural residential uses rather than for urbanized areas and ensure that land use decisions recognize the long-term availability and value of water resources in Napa County.
 - **Policy CON-41:** The County will work to protect Napa County's watersheds and public and private water reservoirs to provide for the following purposes: a) Clean drinking water for public health and safety; b) Municipal uses, including commercial, industrial and domestic uses; c) Support of the eco-systems; d) Agricultural water supply; e) Recreation and open space; and f) Scenic beauty.
 - **Policy CON-42:** The County shall work to improve and maintain the vitality and health of its watersheds. Specifically, the County shall: a) Use all available sources of assistance to protect and enhance the Napa River and its tributaries and watershed to meet or exceed water quality standards imposed by state and federal authorities (e.g., pursue grants and other funding opportunities to assist in the identification, testing, and improvement of individual septic as well as community waste disposal systems, and to support watershed monitoring/sampling and scientific understanding

to inform and develop effective and targeted management options in an adaptive and locally driven manner). b) Reduce water pollutants through education, monitoring, and pollutant elimination programs (e.g., watershed education and monitoring programs identified in the Watershed Information Center and Conservancy (WICC) Strategic Plan and Napa County/Resource Conservation District (RCD) Watershed Programs, and pollution reduction goals outlined in Napa County's Phase II National Pollution Discharge Elimination System (NPDES) General Permit from the State Water Board). c) Support voluntary cooperative efforts in watershed planning to identify and establish habitat enhancement goals on various reaches of the Napa River and its tributaries, including, but not limited to, the development of localized watershed management plans, project identification, implementation and monitoring to support adaptive management (e.g., Napa Green Certified Land/Fish Friendly Farming, Rutherford Dust Restoration Team, Resource Conservation District's Stewardship Program, on- and off-site habitat protection and mitigation programs, and dozens of other active efforts currently planned or now underway). d) Support environmentally sustainable agricultural techniques and best management practices (BMPs) that protect surface water and groundwater quality and quantity (e.g., cover crop management, integrated pest management, informed surface water withdrawals and groundwater use). e) Promote and support the use of recycled water wherever feasible, including the use of tertiary treated water, to help improve supply reliability and enhance groundwater recharge. f) Support completion of the federal, state, and local government flood control projects that contribute to the health of Napa County's watersheds. g) Recognize that unmanaged forests and watersheds can have unintended adverse environmental consequences such as increasing the threat and intensity of wild land fires, which could lead to widespread erosion and degradation of water quality. Support voluntary efforts by landowners to reduce fuel loads in forests and watersheds to reduce this threat. h) Recognize that efforts to protect and preserve water for wildlife habitat and watershed health in Napa County can have long term benefits related to adequate water supplies and water quality. [Implemented by Action Items CON WR-1, 4, and 7].

- **Policy CON-43:** Pursuant to the Open Space and Conservation goals and policies that conserve open space and recreational resources, the County shall protect and enhance watershed lands, including the downstream delivery of essential watershed resources and benefits from headwater channels. The County's efforts shall include: a) Preserving and where economically feasible restoring the density and diversity of water dependent species and continuous riparian habitats based on sound ecological principles; and b) Supporting the acquisition, development, maintenance and restoration of habitat lands for wildlife and watershed enhancement where clearly consistent with General Plan policies.
- **Policy CON-44:** The County shall identify, improve, and conserve Napa County's surface water resources through the following measures: a) Evaluate and develop land use policies resulting in the appropriate density and mix of impervious surface and stable vegetation cover to improve water quality and reduce surface water pollution and siltation within domestic water supply watersheds. b) Encourage public agencies and private individuals to explore environmentally sensitive ways to store winter runoff in consultation with the State Department of Water Resources and other regulatory agencies. c) Promote a balanced approach to managing reservoir

outflows, particularly municipal supply reservoirs, through coordination with cities and town to maintain a reliable water supply for domestic uses, minimize flooding, and preserve fish habitat and riparian vegetation. d) Work with other agencies to develop a comprehensive understanding of potential deficiencies in surface water supplies, and coordinate with private property owners on a voluntary basis to collect additional surface water data and implement an expanded voluntary monitoring effort to ensure development of effective water management and conservation strategies where appropriate. [Implemented by Action Items CON WR-1, 4, and 7].

- **Policy CON-45:** Protect the County's domestic supply drainages through vegetation preservation and protective buffers to ensure clean and reliable drinking water consistent with state regulations and guidelines. Continue implementation of current Conservation Regulations relevant to these areas, such as vegetation retention requirements, consultation with water purveyors/system owners, implementation of erosion controls to minimize water pollution, and prohibition of detrimental recreational uses. [Implemented by Action Item CON WR-3].
- **Policy CON-46:** Napa County's past, present, and future are intertwined with that of the Napa River; therefore, the County is committed to improving and sustaining the health of the river, through attaining water quality and habitat enhancement goals, supporting public access to the river for visual appreciation and recreational purposes, and completing federal, state, and local flood control projects that are consistent with "living rivers" principles.
- **Policy CON-47:** The County shall comply with applicable Water Quality Control/Basin Plans as amended through the Total Maximum Daily Load (TMDL) process to improve water quality. In its efforts to comply, the following may be undertaken: a) Monitoring water quality in impaired waterbodies identified by the Regional Water Quality Control Board(s). b) Addressing failing septic systems in the vicinity of Murphy, Browns Valley, and Salvador Creeks and throughout the County, should they be found to exist. c) Retrofitting County-maintained roads to reduce sediment caused by runoff. d) Supporting voluntary habitat restoration and bank stabilization efforts, with particular focus on the main stem and main tributaries of the Napa River. e) Ensuring continued effectiveness of the National Pollution Discharge Elimination System (NPDES) program and storm water pollution prevention. f) Ensuring continued effectiveness of the County's Conservation Regulations related to vineyard projects and other earth-disturbing activities. g) Addressing effects related to past and current mining, grazing, and other activities to the extent feasible. h) Amending the County's Conservation Regulations or County Code to address excessive sediment delivered to waterways as required by state law, particularly as it relates to private roads and rural unimproved (i.e., dirt or gravel) roads. i) Developing outreach and education programs to inform landowners and managers about improving surface water quality (e.g., rural and private road maintenance, soil and vegetation retention, construction site management, runoff control, etc.) and cooperating with other governmental and non-governmental agencies seeking to establish waiver or certification programs. [Implemented by Action Item CON WR-4].
- **Policy CON-48:** Proposed developments shall implement project-specific sediment and erosion control measures (e.g., erosion control plans and/or stormwater pollution prevention plans) that maintain pre-development sediment erosion conditions or at

minimum comply with state water quality pollution control (i.e., Basin Plan) requirements and are protective of the County's sensitive domestic supply watersheds. Technical reports and/or erosion control plans that recommend site-specific erosion control measures shall meet the requirements of the County Code and provide detailed information regarding site specific geologic, soil, and hydrologic conditions and how the proposed measure will function.

- **Policy CON-50:** The County will take appropriate steps to protect surface water quality and quantity, including the following: a) Preserve riparian areas through adequate buffering and pursue retention, maintenance, and enhancement of existing native vegetation along all intermittent and perennial streams through existing stream setbacks in the County's Conservation Regulations (also see Policy CON-27 which retains existing stream setback requirements). b) Encourage flood control reduction projects to consider scenic, fish, wildlife, and other environmental benefits when computing costs of alternative methods of flood control. c) The County shall require discretionary projects to meet performance standards designed to ensure peak runoff in 2-, 10-, 50-, and 100-year events following development is not greater than predevelopment conditions. d) Maintain minimum lot sizes of not less than 160 acres in Agriculture, Watershed, and Open Space (AWOS) designated areas to reflect desirable densities based on access, slope, productive capabilities for agriculture and forestry, sewage disposal, water supply, wildlife habitat, and other environmental considerations. e) In conformance with National Pollution Discharge Elimination System (NPDES) requirements, prohibit grading and excavation unless it can be demonstrated that such activities will not result in significant soil erosion, silting of lower slopes or waterways, slide damage, flooding problems, or damage to wildlife and fishery habitats. f) Adopt development standards, in conformance with NPDES Phase II requirements, for post-construction storm water control. g) Address potential soil erosion by maintaining sections of the County Code that require all construction-related activities to have protective measures in place or installed by the grading deadlines established in the Conservation Regulations. In addition, the County shall ensure enforceable fines are levied upon code violators and shall require violators to perform all necessary remediation activities. h) Require replanting and/or restoration of riparian vegetation to the extent feasible as part of any discretionary permit or erosion control plan approved by the County, understanding that replanting or restoration that enhances the potential for Pierce's Disease or other vectors is considered infeasible. i) Encourage management of reservoir outflows (bypass flows) to maintain fish life and riparian (streamside) vegetation. j) Encourage minimal use of chemical treatment of reservoirs to prevent undue damage to fish and wildlife resources. k) Prohibit new septic systems in areas where sewage treatment and disposal systems are available and encourage new sewage treatment and disposal systems in urbanized areas where there is high groundwater recharge potential and existing concentrations of septic systems.
- **Policy CON-50.5:** Recognize the importance of water resources that guard against flooding and attenuate floodwaters including those rivers, creeks, streams, flood corridors, riparian habitat, and lands that may accommodate floodwater important for the purposes of groundwater recharge and stormwater management as those areas identified on the County's adopted Federal Emergency Management Agency (FEMA) Flood Insurance Rate Mapping (FIRM)¹⁹. (see also Policy SAF-25 and Figure SAF-3).

- **Policy CON-52:** Groundwater is a valuable resource in Napa County. The County encourages responsible use and conservation of groundwater and regulates groundwater resources by way of its groundwater ordinances. [Implemented by Action Items CON WR-6 and 9].
- **Policy CON-65:** All aspects of landscaping from the selection of plants to soil preparation and the installation of irrigation systems should be designed to reduce water demand, retain runoff, decrease flooding, and recharge groundwater.
- **Goal SAF-4:** to protect residents and businesses from hazards caused by flooding.
 - **Policy SAF-25:** the review of newly proposed projects in a floodway as mapped on the County's Flood Insurance Rate Maps (FIRM)3 (Figure SAF-3) shall include an evaluation of the potential flood impacts that may result from the project. This review shall be conducted in accordance with the County's FEMA approved Flood Plain Management Ordinance, incorporated herein by reference, and at minimum include an evaluation of the project's potential to affect flood levels on the Napa River; the County shall seek to mitigate any such effects to ensure that freeboard on the Napa River in the area of the Napa River Flood Protection Project is maintained.

City of Napa 2040 General Plan

The following goals and policies of the City of Napa 2040 General Plan (City of Napa 2022) are applicable to the Proposed Action:

- **Goal NRC-9:** Protect and enhance the City's potable water, surface water, and groundwater quality.
 - **Policy NRC 9-1:** Continue to participate in regional efforts to proactively manage surface and groundwater resources and ensure their long-term health and viability, including implementation of the Napa-Sonoma Valley Groundwater Subbasin Groundwater Sustainability Plan being prepared by the Napa County Sustainability Agency.
 - **Policy NRC 9-2:** Continue efforts to educate the public on the importance of protecting the City's stormwater runoff from pollutants to protect the local creek and the Napa River.
- **Goal SN-3:** Reduce risk to life and property due to flooding, including inundation resulting from the failure of water supply reservoir dams.
 - **Policy SN 3-1:** Seek opportunities to invest in flood prevention infrastructure, including extension of integrated flooding/open space solutions, to reduce impacts from flooding to Downtown Napa and other areas located along the Napa River.
 - **Policy SN 3-2:** Update the Storm Drain Master Plan focusing the City's effort on condition assessment and needed repairs, storm drain capacity improvements to reduce neighborhood flooding, and assure it is complementary with the Napa River-Napa Creek Flood Protection Project (including both constructed and planned future improvements)
 - **Policy SN 3-4:** Require all projects in floodplains, to the extent feasible, adhere to strict design guidelines that ensure any proposed development will withstand a flooding event, and will not jeopardize the existing surrounding or downstream structures.

3.11 Noise

Federal

Noise Control Act

The Noise Control Act of 1972 (42 USC 4901 to 4918) was the first comprehensive statement of national noise policy. The Noise Control Act declared “it is the policy of the U.S. to promote an environment for all Americans free from noise that jeopardizes their health or welfare.” Although the Noise Control Act, as a funded program, was ultimately abandoned at the federal level, it served as the catalyst for comprehensive noise studies and the generation of noise assessment and mitigation policies, regulations, ordinances, standards, and guidance for many states, counties, and municipal governments.

Occupational Safety and Health Administration

The Occupational Safety and Health Administration established standards for occupational noise exposure under 29 CFR 1910.95. These regulations protect employees from excessive noise exposure and require a Hearing Conservation Program when routine exposure to high noise levels would occur. The regulations identify permissible daily noise exposures and stipulate that personal protection against the effects of noise exposure must be provided if those levels are exceeded.

Federal Transit Administration

The FTA developed the *Transit Noise and Vibration Impact Assessment Manual* (Noise Manual) (FTA 2018) in September 2018. The Noise Manual provides technical guidance for conducting noise and vibration analyses for transit projects. While these standards and impact assessment methodologies are not directly applicable to this type of Proposed Project, they are routinely used as guidelines for projects in federal, state and local jurisdictions.

State

California Noise Control Act

The California Noise Control Act, enacted in 1973 (Health and Safety Code 46010 et seq.), finds that excessive noise is a serious hazard to public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. The act declares that the State of California has a responsibility to protect the health and welfare of its citizens through the control, prevention, and abatement of noise. It is the policy of the State to provide an environment for all Californians that is free from noise which jeopardizes their health or welfare. The act requires the Office of Noise Control in the Department of Health Services to aid local communities in developing local noise control programs. The Office of Noise Control also works with the Office of Planning and Research to provide guidance for preparing required noise elements in city and county general plans, pursuant to Government Code Section 65302(f).

Governor’s Office of Planning and Research

The *State of California General Plan 2017 Guidelines* published by the Governor’s Office of Planning and Research provides a basis for local programs to control and abate environmental noise and to protect residents from excessive exposure (Governor’s Office of Planning and Research 2017). These guidelines include a noise level/land use compatibility chart that categorizes various outdoor L_{dn} ranges into up to four compatibility categories: normally acceptable, conditionally acceptable,

normally unacceptable, and clearly unacceptable, depending on land use. The normally and conditionally acceptable L_{dn} ranges are intended to indicate that local conditions (existing noise levels and community attitudes toward dominant noise sources) should be considered in evaluating land use compatibility at specific locations. These guidelines are used by many agencies, environmental planners, and acoustical specialists as a starting point to evaluate the potential for noise impacts on and by a project. The guidelines are also used to evaluate methods for achieving noise compatibility with respect to nearby existing uses.

However, it is important to note that the guidance does not take local conditions into account, including a particular community's sensitivity to noise, noise reduction goals, or assessment of the relative importance of noise pollution. As a result, noise standards developed by local jurisdictions typically differ somewhat from the Governor's Office of Planning and Research's guidance.

Regional/Local

City of Napa General Plan

The Safety and Noise Element of the *City of Napa 2040 General Plan* (City of Napa 2022) contains the following goals and policies that are relevant to the Proposed Project:

- **Goal SN-4:** Protect public health and welfare by minimizing exposure of sensitive uses to noise and preventing significant degradation of the acoustic environment.
 - **Policy SN 4-6:** Regularly monitor noise levels near sensitive uses to assess efficacy of, or additional need for, traffic calming measures.
 - **Policy SN 4-8:** Require all construction within 1,000 feet of noise-sensitive uses to undertake measures to reduce noise impacts. Within 100 feet of pile driving locations and 25 feet of construction sites using other non-impact equipment (dozers, excavators, etc.), require all construction to undertake measures to prevent possible exposure of vibration-sensitive buildings and receptors to substantial ground borne vibration levels.

City of Napa Municipal Code

Chapter 8.08 of the City of Napa Municipal Code contains the City's Noise Control Regulations, also known as a noise ordinance. The noise ordinance establishes the times of day and other conditions that specific noise sources in the City must abide by.

Noise related to construction activities is regulated per Section 8.08.025 of the City of Napa Municipal Code. The City's municipal code limits construction activities to the hours of 7:00 a.m. to 7:00 p.m., Monday through Friday (City of Napa 2023). The City's municipal code further limits the following construction activities unless a permit is secured from the City Manager (City of Napa 2023):

- Start-up of machines and equipment prior to 8:00 a.m., Monday through Friday;
- delivery of materials and equipment prior to 7:30 a.m. and past 5:00 p.m., Monday through Friday;
- cleaning of machines and equipment past 6:00 p.m., Monday through Friday;
- servicing of equipment past 6:45 p.m., Monday through Friday; and
- construction on weekends or legal holidays outside the hours of 8:00 a.m. to 4:00 p.m.

Additionally, the City's municipal code requires that all construction activity in the City adheres to the following (City of Napa 2023):

- All muffler systems on construction equipment shall be properly maintained.
- All construction equipment shall not be placed adjacent to developed areas unless said equipment is provided with acoustical shielding.
- All construction and grading equipment shall be shut down when not actively in use.
- Construction activity by or on behalf of a public agency, which is necessary to avoid a disruption of a public project or to protect the public health, safety, and welfare, shall be exempt from the time limitations of this section.
- As a separate, distinct, and cumulative remedy established for a violation of Section 8.08.025 of the City of Napa Municipal Code, the Police and/or the Code Enforcement Officer may issue a stop work order for violation of this section. Such order shall become effective immediately upon posting of the notice. After service of the stop work order, no person shall perform any act with respect to the subject property in violation of any of the terms of the stop work order, except such actions the city determines are reasonably necessary to render the subject property safe and/or secure until the violation has been corrected.

3.12 Recreation

Federal

There are no identified federal plans, policies, and regulations that are relevant to this analysis of recreation.

State

There are no identified state plans, policies, and regulations that are relevant to this analysis of recreation.

Regional/Local

Napa County General Plan

The following goals and policies of the Napa County General Plan are applicable to the Proposed Project:

- **Goal ROS-1:** To ensure an extensive landscape of open spaces in which recreation, the protection of natural, cultural, and archaeological resources, agricultural production, and private property are mutually supportive and complementary.
 - **Policy ROS-1:** The County encourages the acquisition, location, design, management, and operation of recreational open space and facilities, in ways that protect natural resources, enhance natural habitats, conserve agricultural lands, maintain agricultural productivity, and respect private property. The County shall coordinate with and support the Napa County Regional Park and Open Space District in implementing this policy.

- **Policy ROS-4:** The public's right to access and enjoy publicly owned open space lands in a responsible manner should be supported where appropriate and consistent with other Recreation and Open Space Element policies and adopted resource management plans.
- **Policy ROS-8:** Minimize potential negative impacts of proposed open space improvements and uses through appropriate design and by requiring mitigation for any remaining significant impacts.
- **Policy ROS-10 (Trails):** To ensure compatibility with agriculture and private property, the following approaches and criteria will guide the location and design of trails:
 - Utilize a range of solutions tailored to individual circumstances;
 - Locate trails to take advantage of natural and visual barriers and buffers to discourage trespass onto private property and maintain the privacy of private property owners and their residences;
 - Provide notice generally, as well as specifically, to property owners adjacent to proposed trails prior to their being constructed and/or opened to the public, and seek to address concerns in a spirit of cooperation;
 - Minimize the spread of exotic invasive weeds, pathogens, and other pests through public education, eradication programs, installation of shoe and tire cleaning equipment where needed, requirements for weed-free horse feed, and similar techniques; and
 - Utilize temporary and seasonal trail closures, and type and intensity of use restrictions as appropriate during periods of high wildfire risk and to protect sensitive species and habitats and avoid conflict with agricultural operations.

City of Napa 2040 General Plan

The following goals and policies of Chapter 04 of the *City of Napa 2040 General Plan* are applicable to the Proposed Project:

- **GOAL CSPR-9:** Provide, improve, and maintain a comprehensive system of City parks, trails, and recreational facilities to meet the needs of the City's current and future residents, businesses, property owners and visitors.
 - **Policy CSPR 9-13:** Provide Trails and trail connections that serve the entire community and offer opportunities for people to hike, walk, run or ride, and connect with nature or other land uses. Trails can be soft-surfaced, such as crushed rock or wood chips, or hard-surfaced, such as asphalt, concrete, crushed rock, or soil.
- **GOAL CSPR-13:** Support trail connections to natural areas and the Napa River in order to improve community health, support a high quality of life, and an active lifestyle.
 - **Policy CSPR 13-1:** Complete the multi-use trail and amenities along the Napa River as the signature element of the City's trail system, particularly the Flood Control Project, while protecting and enhancing the natural resources along the trail corridor.
 - **Policy CSPR 13-7:** Require visual and public access when developments occur along the Napa River, especially in the Oxbow area.

3.13 Terrestrial Biological Resources

Federal

Federal Endangered Species Act

Pursuant to FESA, USFWS and NMFS have authority over Actions that may result in take of a species listed as threatened or endangered under the act. Take is defined under the FESA, in part, as killing, harming, or harassing. Under federal regulations, take is further defined to include habitat modification or degradation that results, or is reasonably expected to result, in death or injury to wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. If a likelihood exists that an Action would result in take of a federally listed species, either an incidental take permit, under Section 10(a) of FESA, or a federal interagency consultation, under Section 7 of FESA, is required to avoid take liability.

The USFWS and NMFS maintain areas of critical habitat for federally regulated species to safeguard the continued existence of such species by restricting the type and extent of activities proposed under Section 7 of FESA. Section 7 of FESA requires federal agencies to consult with USFWS and/or NMFS for actions that may take a listed species or their habitat. Federal agency actions include activities that are on federal land, conducted by a federal agency, funded by a federal agency, or authorized by a federal agency (including issuance of federal permits and licenses).

Under Section 7, the federal agency conducting, funding, or permitting an action—the federal lead agency—must consult with USFWS and/or NMFS, as appropriate, to ensure that the proposed action will not jeopardize endangered or threatened species or destroy or adversely modify designated critical habitat. If a proposed action “may affect” a listed species or designated critical habitat, the lead agency is required to prepare a biological assessment (BA), evaluating the nature and severity of the expected effect. In response, USFWS and/or NMFS issues a biological opinion (BO), with a determination that the proposed action results in one of the following.

- Jeopardize the continued existence of one or more listed species (jeopardy finding) or result in the destruction or adverse modification of critical habitat (adverse modification finding)
- Not jeopardize the continued existence of any listed species (no jeopardy finding) or result in adverse modification of critical habitat (no adverse modification finding).

The BO issued by USFWS and/or NMFS may stipulate discretionary “reasonable and prudent” conservation measures. If the proposed action would not jeopardize a listed species, USFWS and/or NMFS will issue an incidental take statement to authorize the proposed activity.

For construction of the Proposed Project, Section 7 consultation may be initiated by the USACE, who would be the lead federal agency, and would complete the consultation under Section 7 related to permits for Action elements that affect wetland or waters within their jurisdiction.

Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (FWCA), as amended in 1964, was enacted to protect fish and wildlife when federal actions result in the control or modification of a natural stream or body of water. The statute requires federal agencies to take into consideration the effect that water-related Actions would have on fish and wildlife resources. Consultation and coordination with USFWS and CDFW are required to address ways to prevent loss of and damage to fish and wildlife resources, and to further develop and improve these resources.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) domestically implements a series of international treaties that provide for migratory bird protection. The MBTA authorizes the Secretary of the Interior to regulate the taking of migratory birds. The act further provides that it is unlawful, except as permitted by regulations, “to pursue, take, or kill any migratory bird, or any part, nest or egg of any such bird...” (16 USC 703). This prohibition includes both direct and indirect acts, although harassment and habitat modification are not included unless they result in direct loss of birds, nests, or eggs. The current list of species protected by the MBTA can be found in the March 1, 2020, Federal Register (75 FR 9281). This list comprises several hundred species, including essentially all native birds. Permits for take of nongame migratory birds can be issued only for specific activities, such as scientific collecting, rehabilitation, propagation, education, taxidermy, and protection of human health and safety and of personal property. USFWS publishes a list of birds of conservation concern (BCC) to identify migratory nongame birds that are likely to become candidates for listing under FESA without additional conservation actions. The BCC list is intended to stimulate coordinated and collaborative conservation efforts among federal, state, tribal, and private parties.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (BGEPA) (16 USC 668) prohibits take and disturbance of individuals and nests. Take permits for birds or body parts are limited to religious, scientific, or falconry pursuits. However, the BGEPA was amended in 1978 to allow mining developers to apply to USFWS for permits to remove inactive golden eagle (*Aquila chrysaetos*) nests in the course of “resource development or recovery” operations. With the 2007 removal of bald eagle from the FESA list of threatened and endangered species, USFWS issued new regulations to authorize the limited take of bald eagles (*Haliaeetus leucocephalus*) and golden eagles under the BGEPA, where the take to be authorized is associated with otherwise lawful activities. A final Eagle Permit Rule was published on September 11, 2009 (74 FR 46836–46879; 50 CFR 22.26).

A permit authorizes limited, non-purposeful take of bald eagles and golden eagles, and can be applied for by individuals, companies, government agencies (including tribal governments), and other organizations to allow disturbance or otherwise take eagles in the course of conducting lawful activities, such as operating utilities and airports. Under BGEPA, take is defined as “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest or disturb.” Disturb is defined in the regulations as “to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available: (1) injury to an eagle; (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior; or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.” Most permits issued under the new regulations authorize disturbance. In limited cases, a permit may authorize the physical take of eagles, but only if every precaution is first taken to avoid physical take. As noted in Chapter 3, Section 3.13, no suitable nesting habitat or trees are present in the Proposed Project Area and, as a result, regulation under the Bald and Golden Eagle Protection Act does not apply to the Proposed Project.

Rivers and Harbors Act

Section 10 of the Rivers and Harbors Act requires authorization from USACE for the construction of any structure, dredging or disposal of dredged materials, excavation, filling, rechannelization, or any other modification in or over any defined navigable current or historical waters of the United States.

Historical waters are defined by diked areas that used to be part of a tidal navigable system that are still at or below the mean high water elevation.

Clean Water Act

The Clean Water Act (CWA) is the primary federal law that protects the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. The CWA directs states to establish water quality standards for all "waters of the United States" and to review and update such standards on a triennial basis. The U.S. Environmental Protection Agency (EPA) has delegated responsibility for implementation of portions of the CWA, including water quality control planning and control programs, such as the NPDES program (discussed below), to the SWRCB and the RWQCBs. The SWRCB establishes statewide policies and regulations for the implementation of water quality control programs mandated by federal and state water quality statutes and regulations. Key sections of the CWA include the following.

SECTION 303(D)

The CWA contains two strategies for managing water quality. One is a technology-based approach that includes requirements to maintain a minimum level of pollutant management using the best available technology (BAT). The other is a water quality-based approach that relies on evaluating the condition of surface waters and setting limitations on the amount of pollution that the waters can be exposed to without adversely affecting the beneficial uses of those waters. Section 303(d) of the CWA bridges these two strategies. Section 303(d) requires that the states make a list of waters that are not attaining standards after the technology-based limits are put into place. For waters on this list (and where the EPA Administrator deems they are appropriate), the states are to develop total maximum daily loads (TMDLs). TMDLs are established at the level necessary to implement the applicable water quality standards. The CWA does not expressly require the implementation of TMDLs. However, federal regulations require that an implementation plan be developed along with the TMDLs and Sections 303(d), and 303(e) and their implementing regulations require that approved TMDLs be incorporated into basin plans. EPA has established regulations (40 Code of Federal Regulations [CFR] 122) that require that NPDES permits be revised to be consistent with any approved TMDL.

SECTION 401

CWA Section 401 requires that an applicant pursuing a federal permit to conduct an activity that may result in a discharge of a pollutant obtain a Water Quality Certification (or waiver). A Water Quality Certification requires the evaluation of water quality considerations associated with dredging or placement of fill materials into waters of the United States. The CWA section 401 program follows a general approach of: (1) impact avoidance as a first priority, (2) minimization of impacts if avoidance is not possible, and (3) mitigation to compensate for unavoidable permanent impacts and ensure no net loss of water resources occurs. Water Quality Certifications are issued by one of the nine geographically separated Regional Water Quality Control Boards (RWQCBs) in California. Under the CWA, the RWQCB must issue or waive a Section 401 Water Quality Certification for an Action to be permitted under CWA Section 404. The Proposed Project would require a Section 401 Water Quality Certification from the San Francisco RWQCB for its work within the Napa River, which would involve discharges to these water bodies and require a Section 404 permit from the USACE.

SECTION 402

CWA Section 402 regulates stormwater discharges to surface waters through the NPDES, which is officially administered by the EPA, which has granted the State of California (SWRCB and RWQCBs) primacy in administering and enforcing the provisions of CWA and the NPDES program. NPDES is the primary federal program that regulates point-source and nonpoint-source discharges to waters of the United States. The NPDES program provides for both general permits (those that cover a number of similar or related activities) and individual (activity- or Action-specific) permits.

GENERAL PERMIT FOR CONSTRUCTION ACTIVITIES

Most construction Actions that disturb one acre or more of land are required to obtain coverage under the NPDES General Permit for Construction Activities (Construction General Permit). The SWRCB has issued a statewide Construction General Permit (Order 2009-0009-DWQ NPDES No. CAR000002 as amended by 2010-0014-DWQ and 2012-0006-DWQ). Construction activities subject to the Construction General Permit include clearing, grading, and disturbances to the ground, such as stockpiling or excavation, that result in soil disturbances of at least 1 acre of total land area. The Construction General Permit requires the applicant to file a notice of intent (NOI) to discharge stormwater and to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must include a site map and a description of the proposed construction activities; demonstrate compliance with relevant local ordinances and regulations; and present an overview of the BMPs that would be implemented to prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby water resources. Permittees are further required to conduct annual monitoring and reporting to ensure that BMPs are correctly implemented and are effective in controlling the discharge of construction-related pollutants.

SECTION 404

CWA Section 404 of the CWA regulates the placement of dredge or fill material into waters of the United States. Section 404 permits are administered by the USACE. The USACE issues permits under general categories of Nationwide Permits (NWPs) or issues individual permits on a case-by-case basis. USACE 404 permits generally require mitigation for loss of wetlands or aquatic resources.

Executive Order 13112: Prevention and Control of Invasive Species

Federal Executive Order (EO) 13112, signed February 3, 1999, directs all federal agencies to prevent and control the introduction of invasive species in a cost-effective and environmentally sound manner. The EO established the National Invasive Species Council, which is composed of federal agencies and departments, and a supporting Invasive Species Advisory Committee composed of state, local, and private entities. The council's invasive species management plan recommends objectives and measures to implement the EO and to prevent the introduction and spread of invasive species (National Invasive Species Council 2008). The EO requires consideration of invasive species in National Environmental Policy Act analyses, including their identification and distribution, their potential impacts, and measures to prevent or eradicate them.

State

California Endangered Species Act

CESA (California Fish and Game Code Sections 2050–2116) states that all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants and their habitats that are

threatened with extinction and those experiencing a significant decline that, if not halted, would lead to a threatened or endangered designation will be protected or preserved.

Under Section 2081 of the California Fish and Game Code, a permit from CDFW is required for Actions that could result in the take of a species that is state listed as threatened or endangered. Under CESA, take is defined as an activity that would directly or indirectly kill an individual of a species. The definition does not include harm or harass, as does the definition of take under FESA. Consequently, the threshold for take under CESA is higher than that under FESA. For example, habitat modification is not necessarily considered take under CESA. CESA does, however, require that impacts be fully mitigated (California Fish and Game Code Section 2081[b]; California Code of Regulations, Title 14, Sections 783.2–783.8).

California Fish and Game Code

SECTIONS 1600 THROUGH 1616

Sections 1600 through 1616 of the California Fish and Game Code require that a notification must be submitted to the CDFW for “any activity that may substantially divert or obstruct the natural flow of, or substantially change or use materials from the bed, channel, or bank of any river, stream, or lake.” CDFW reviews the notification package and, if necessary, submits to the applicant a draft LSAA that includes measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by CDFW and the applicant is an LSAA.

SECTIONS 3503, 3503.5, 3513, AND 3800

Sections 3503, 3503.5, 3513, and 3800 of the California Fish and Game Code afford protection over the destruction of nests or eggs of native bird species, and it states that no birds in the orders of Falconiformes or Strigiformes (i.e., birds of prey) can be taken, possessed, or destroyed.

SECTIONS 3511, 4700, 5050, AND 5515

Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish) of the California Fish and Game Code designate certain species as “fully protected.” Fully protected species may not be taken or possessed, and incidental take of these species cannot be authorized, except under a Natural Community Conservation Plan (NCCP). The State of California first began to designate species as fully protected prior to the creation of the CESA and the FESA. Lists of fully protected species were initially developed to provide protection to animals that were rare or faced possible extinction, including fish, amphibians, reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered under the CESA or the FESA. Fully protected species may not be taken or possessed at any time, except under certain circumstances, such as scientific research and live capture and relocation of such species pursuant to a permit for the protection of livestock (California Fish and Game Code Section 3511).

Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Act, waters of the state fall under jurisdiction of the nine Regional Water Quality Control Boards (Regional Boards). Under this act, each Regional Board must prepare and periodically update water quality control basin plans. Each basin plan sets forth water quality standards for surface water and groundwater, as well as actions to control nonpoint and point sources of pollution. Actions that affect wetlands or waters must meet the waste discharge requirements of the Regional Board. Pursuant to CWA Sections 401, an applicant for a Section 404 permit to conduct any activity that may result in discharge into navigable waters must provide a

certification from the Regional Board that such discharge would comply with state water quality standards. As part of the wetlands permitting process under Section 404, an Action applicant would be required to obtain a water quality certification from the applicable Regional Board.

Section 13050 of the Porter-Cologne Act (California Water Code, Division 7) authorizes the State Water Resources Control Board and the relevant Regional Water Quality Control Board (in this case, the Central Coast Regional Board) to regulate biological pollutants. The California Water Code generally regulates more substances contained in discharges and defines discharges to receiving waters more broadly than the CWA does.

California Native Plant Protection Act

The CNPPA of 1977 gave the California Fish and Game Commission the authority to list plant species as rare or endangered and authorized them to adopt regulations prohibiting importation of rare and endangered plants into California, take of rare and endangered plants, and sale of rare and endangered plants. The CNPPA prohibits take, possession, transportation, exportation, importation, or sale of rare and threatened plants, except as a result of agricultural practices, fire control measures, timber operations, mining, or actions of public agencies or private utilities. Private landowners are also exempt from the prohibition against removing rare and endangered plants, although they must provide 10-day notice to CDFW before removing the plants. The CNPPA has mostly been superseded by CESA.

Regional/Local

Napa County General Plan

The County of Napa's General Plan (Napa County 2008) includes the following Natural Resources Goals and Policies that are relevant to the Proposed Project:

- **Goal CON-2:** Maintain and enhance the existing level of biodiversity.
- **Goal CON-3:** Protect the continued presence of special-status species, including special-status plants, special-status wildlife, and their habitats, and comply with all applicable state, federal, or local laws or regulations.
- **Goal CON-4:** Conserve, protect, and improve plant, wildlife, and fishery habitats for all native species in Napa County.
 - **Policy CON-10:** The County shall conserve and improve fisheries and wildlife habitat in cooperation with governmental agencies, private associations and individuals in Napa County.
 - **Policy CON-13:** The County shall require that all discretionary residential, commercial, industrial, recreational, agricultural, and water development Actions consider and address impacts to wildlife habitat and avoid impacts to fisheries and habitat supporting special-status species to the extent feasible. Where impacts to wildlife and special-status species cannot be avoided, Actions shall include effective mitigation measures and management plans including provisions to:
 - a) Maintain the following essentials for fish and wildlife resources:
 - 1) Sufficient dissolved oxygen in the water.
 - 2) Adequate amounts of proper food.

- 3) Adequate amounts of feeding, escape, and nesting habitat.
- 4) Proper temperature through maintenance and enhancement of streamside vegetation, volume of flows, and velocity of water.
- b) Ensure that water development Actions provide an adequate release flow of water to preserve fish populations.
- c) Employ supplemental planting and maintenance of grasses, shrubs and trees of like quality and quantity to provide adequate vegetation cover to enhance water quality, minimize sedimentation and soil transport, and provide adequate shelter and food for wildlife and special-status species and maintain the watersheds, especially stream side areas, in good condition.
- d) Provide protection for habitat supporting special-status species through buffering or other means.
- e) Provide replacement habitat of like quantity and quality on- or off-site for special-status species to mitigate impacts to special-status species.
- f) Enhance existing habitat values, particularly for special-status species, through restoration and replanting of native plant species as part of discretionary permit review and approval.
- g) Require temporary or permanent buffers of adequate size (based on the requirements of the subject special-status species) to avoid nest abandonment by birds and raptors associated with construction and site development activities.
- h) Demonstrate compliance with applicable provisions and regulations of recovery plans for federally listed species.
- **Policy CON-14:** To offset possible losses of fishery and riparian habitat due to discretionary development Actions, developers shall be responsible for mitigation when avoidance of impacts is determined to be infeasible. Such mitigation measures may include providing and permanently maintaining similar quality and quantity habitat within Napa County, enhancing existing riparian habitat, or paying in-kind funds to an approved fishery and riparian habitat improvement and acquisition fund. Replacement habitat may occur either on-site or at approved off-site locations, but preference shall be given to on-site replacement.
- **Policy CON-16:** The County shall require a biological resources evaluation for discretionary Actions in areas identified to contain or potentially contain special-status species based upon data provided in the Baseline Data Report (BDR), California Natural Diversity Database (CNDDB), or other technical materials. This evaluation shall be conducted prior to the approval of any earthmoving activities. The County shall also encourage the development of programs to protect special-status species and disseminate updated information to state and federal resource agencies.
- **Policy CON-26:** Consistent with Napa County's Conservation Regulations, natural vegetation retention areas along perennial and intermittent streams shall vary in width with steepness of the terrain, the nature of the undercover, and type of soil. The design and management of natural vegetation areas shall consider habitat and water quality needs, including the needs of native fish and special status species and flood protection where appropriate. Site-specific setbacks shall be established in

coordination with Regional Water Quality Control Boards, California Department of Fish and Game, U.S. Fish and Wildlife Service, National Oceanic and Atmospheric Administration National Marine Fisheries Service, and other coordinating resource agencies that identify essential stream and stream reaches necessary for the health of populations of native fisheries and other sensitive aquatic organisms within the County's watersheds. Where avoidance of impacts to riparian habitat is infeasible along stream reaches, appropriate measures will be undertaken to ensure that protection, restoration, and enhancement activities will occur within these identified stream reaches that support or could support native fisheries and other sensitive aquatic organisms to ensure a no net loss of aquatic habitat functions and values within the county's watersheds.

- **Policy CON-30:** All public and private Actions shall avoid impacts to wetlands to the extent feasible. If avoidance is not feasible, Actions shall mitigate impacts to wetlands consistent with state and federal policies providing for no net loss of wetland function.
- **Policy CON-31:** The County shall maintain and improve marshland habitat in the southern part of the county through a variety of appropriate measures.
- ⊖ **Policy CON-32:** The County shall maintain and improve slough and tidal mudflats habitat with appropriate measures.

City of Napa General Plan

The City of Napa 2040 General Plan (City of Napa 2022) includes a Natural Resources Conservation (NRC) Element with the following Goals and Policies that are relevant to the Proposed Project:

- **GOAL NRC-1:** Manage natural resources, including riparian corridors, wetlands, and open space areas in and around the city to preserve and enhance plant and wildlife habitats
 - **Policy NRC 1-2:** Review future waterway improvement Actions (e.g., flood control, dredging, private development), as well as all development adjacent to the waterways, to protect and minimize effects on the riparian and aquatic habitats.
 - **Policy NRC 1-8:** Require development Actions to provide protection for significant on-site natural habitat whenever feasible and protect significant species and groves or clusters of trees on Action sites.
- **GOAL NRC-2:** Recognize and support the preservation of rare, endangered, and threatened species.
 - **Policy NRC 2-1:** Continue to consult with, and refer development proposals in sensitive areas to, State and federal wildlife agencies for review and comment.
 - **Policy NRC 2-2:** As part of development review on sites with sensitive species, require Action proponents to either conserve any habitat areas, or identify any feasible means of avoiding any net loss of habitat or habitat value for endangered, threatened, and rare species. Establish programs that provide for the use of off-site mitigation when in the best interest of the public.

City of Napa – Protected Native Tree Program

The removal or pruning of a protected native tree is prohibited unless a permit is first applied for by the property owner or person authorized by the property owner. Applications will be reviewed by City staff to determine whether it is part of a discretionary development application or if the application will need to be brought before the Parks, Recreation and Trees Advisory Commission for a final determination.

Protected native trees are specific species of trees located on private property one acre in size or larger, zoned for residential or agricultural purposes, or located on property zoned for commercial or industrial purposes. In establishing this protection of specified trees, it is the City's intent to promote a healthy urban forest that contributes to clean air, soil conservation, energy conservation, scenic beauty, enhanced property values, and quality of life; ensuring that Napa will continue to be a desirable place to live and work. Section 12.45 of the municipal code regulates Protective Native Trees.

The following native tree species with a diameter as shown are considered protected:

- Black oak (*Quercus kelloggii*) – 12 inches or greater
- Black walnut (*Juglans hindsii*) – 12 inches or greater
- Blue oak (*Quercus douglasii*) – 6 inches or greater
- California bay (*Umbellularia californica*) – 12 inches or greater
- Coast live oak (*Quercus agrifolia*) – 12 inches or greater
- Coast redwood (*Sequoia sempervirens*) – 36 inches or greater
- Valley oak (*Quercus lobata*) – 12 inches or greater

3.14 Traffic/Transportation

Federal

There are no federal regulations that pertain to transportation and are relevant to the Proposed Project.

State

Senate Bill 743

SB 743 was signed into law in September 2013. SB 743, which added PRC Section 21099 to CEQA, proposed a change in how transportation impacts are analyzed in transit priority areas to better align local environmental review with statewide objectives. These alignment considerations include reductions to GHG emissions, encouragement of infill mixed-use development in designated priority development areas, reductions of regional sprawl land development, and reductions in mobile source Vehicle Miles Traveled (VMT).

In November 2017, the Governor's Office of Planning and Research released the final proposed update to CEQA Guidelines consistent with SB 743, recommending VMT, both within and outside of transit priority areas, as the most appropriate metric of transportation impact. This metric will align with local environmental review under CEQA and with California's long-term GHG emissions reduction goals.

Regional/Local

Napa Countywide Transportation Plan – Vision 2040: Moving Napa Forward (2015)

The Napa Countywide Transportation Plan outlines priorities for the NVTa and Napa County's transportation system to relieve congestion, improve traffic safety, create more active transportation infrastructure, provide more reliable and frequent bus service, and maintain and repair the existing transportation system. The Napa Countywide Transportation Plan considers land use, environment, population, and financial projections up to 2045 (NCTPA 2015).

Community Based Transportation Plan (2015)

This Community Based Transportation Plan (CBTP) (NCTPA 2015) has been developed through a collaborative planning process between Napa County residents, transportation planners, and Napa County Transportation and Planning Agency (NCTPA) staff, with a focus on ensuring equitable access to transportation for Communities of Concern (COCs). COCs are defined as places that have concentrated populations in four of the following eight categories: 1. Minority Population; 2. Low income (<200% of Poverty) Population; 3. Limited English Proficiency Population; 4. Zero-Vehicle Households; 5. Seniors 75 or Over; 6. Population with a Disability; 7. Single-Parent Families; and 8. Cost-burdened Renter. NCTPA's outreach resulted in the following four themes to improve transportation for Napa's Communities of Concern:

- Improve traffic safety
- Maintain and repair bike and pedestrian facilities
- Add sidewalks and bikeways to expand the network
- Enhance bus service

State Route (SR) 29 Comprehensive Multimodal Corridor Plan (2020)

The SR 29 Comprehensive Multimodal Corridor Plan (SR 29 CMCP) (NVTa 2020a) evaluates the most constrained portion of SR 29, which is an 11.5-mile portion that stretches from Imola Avenue (designated SR 121 east of SR 29) in the City of Napa to SR 37 in the City of Vallejo. The objective of the SR 29 CMCP is to develop a comprehensive multimodal package of prioritized improvements that address the corridor's pre-eminent issues, including:

- Traffic congestion and delay;
- Increased crash risks for all users;
- Lack of low-stress multimodal connectivity; and
- Reduced travel time and transit reliability.

Imola Corridor Complete Streets Improvement Plan (2020)

The Imola Corridor Complete Streets Improvement Plan (NVTa 2020b) was created to meet the needs of the residential neighborhoods, businesses, and destinations along Imola Avenue. Creation of the plan required context-sensitive solutions that adapt to the changing character along the corridor. The purpose of the plan is to articulate the current challenges on the corridor and recommend achievable solutions to implement the community vision. The Final Plan was adopted by the NVTa Board on September 16, 2020.

Countywide Bicycle Plan (2019)

The Napa Countywide Bike Plan is a joint effort by the NVRTA and the various departments of Napa County to improve the bicycling environment for all residents and visitors by identifying key infrastructure, programs, and policies (NVRTA 2019).

Napa Countywide Pedestrian Plan (2016)

The first Napa Countywide Pedestrian Plan (2016) was created to address pedestrian needs and opportunities and to establish a policy framework and implementation plan to enhance pedestrian mobility and safety throughout all Napa County communities. This plan identifies and prioritizes pedestrian projects, programs, and planning efforts of countywide significance. The plan provides the background, direction, and tools needed to improve the active transportation network to encourage walking trips in Napa County and improve safety for all users. The plan is an important component to coordinate, plan, and program pedestrian projects throughout all of Napa County (NVRTA 2016).

Napa County General Plan

The following goals and policies of the Napa County General Plan (Napa County 2008) Circulation Element are applicable to the Proposed Project:

- **Goal CIR-4:** The County supports state, regional, and local efforts to reduce greenhouse gas emissions from the transportation system.
 - **Policy CIR-7:** All applicants for development projects or modifications thereto shall be required to evaluate the VMT associated with their projects, in order to determine the projects' environmental impacts pursuant to the California Environmental Quality Act. Applicants shall specify feasible measures to reduce a proposed project's VMT and shall provide an estimate of the VMT reduction that would result from each measure. Upon the effective date of the pertinent State CEQA Guidelines, projects for which the specified VMT reduction measures would not reduce unmitigated VMT by 15 percent or more shall be considered to have a significant environmental impact.
 - **Policy CIR-9:** The County shall update its Transportation Impact Study (TIS) Guidelines to specify a methodology for evaluating a project's VMT and a list of potential mitigation measures for achieving VMT reductions from a project. The County shall periodically monitor vehicle trips at built projects to assess the effectiveness of specified VMT reduction measures and shall periodically modify the list in the TIS Guidelines to reflect ongoing best practices in VMT reduction.

City of Napa 2040 General Plan

The following goals and policies of the City of Napa 2040 General Plan (City of Napa 2022), Climate Change and Sustainability Element and Transportation Element, are applicable to the Proposed Project:

- **Goal CCS-2:** Promote Napa as a network of interconnected neighborhoods with compact, walkable development patterns that are integrated with a sustainable mobility system that emphasizes walking, biking, or taking transit.

- **Policy CCS 2-5:** Establish programs for the public street system to reduce VMT and promote more sustainable modes of transportation. Consider VMT and alternative modes of transportation in the design of street extensions, connections, and right-of-way controls at intersections, and when monitoring and adjusting traffic signals.
- **Goal TE-1:** Foster a comprehensive network of safe, accessible roads, trails, sidewalks, and pathways that emphasize a Complete Streets approach, while reducing VMT and dependence on single-occupancy vehicles.
 - **Policy TE 1-2:** Foster a more connected system of streets, pedestrian facilities, and bicycle facilities as new development and redevelopment is undertaken, or as opportunities are presented.
- **Goal TE-5:** Maintain levels of traffic service that provide for efficient movement of people, goods, and services within the City, and adequate connections to the region and state.
 - **Policy TE 5-4:** Maintain acceptable traffic flow along the following crucial corridor arterials:
 - Imola Avenue West (SR121) – from west of Lernhart Street to Soscol Avenue
 - Trancas Street – from State Route 29 to Soscol Avenue
 - Lincoln Avenue – from Jefferson Street to Silverado Trail
 - Jefferson Street – from Trancas Street to Imola Avenue
 - Soscol Avenue – from north of Lincoln Avenue to Imola Avenue
 - Silverado Trail (SR121) – from Soscol Avenue to Trancas Street

Uses along these arterials shall generally generate less than 520 trips per day/acre or include appropriate traffic mitigation measures. Continue to apply the Traffic Impact Overlay to properties on designated crucial corridors.
 - **Policy TE 5-6:** Evaluate new development and redevelopment projects for compliance with adopted VMT significance thresholds.
- **Goal TE-7:** Maintain parking standards that balance parking demand with urban design goals and do not negatively impact pedestrians, bicyclists, and transit users in development areas throughout the City.
 - Establish requirements for new large¹ non-residential and residential projects to undertake TDM measures and develop flexible parking standards where parking reductions may be offered for projects compliant with specified TDM goals.
- **Goal TE-9:** Provide safe evacuation routes in case of emergencies and natural disasters, including flooding, earthquake, and fire.

¹ Large projects are defined as any project requiring a VMT analysis for CEQA purposes under the City's adopted SB 743 (2013) implementation program. SB 743 amended various chapters of the Government Code and the Public Resources Code. https://leginfo.ca.gov/faces/billNavClient.xhtml?_bill_id=201320140SB743

3.15 Tribal Cultural Resources

Federal

Indian Trust Assets

Indian Trust Assets (ITAs) are legal interests in property held in trust by the U.S. for Native American tribes or individuals. Examples of potential ITAs are lands, minerals, fishing rights, and water rights. Management of ITAs is based on the following orders, agreements, and regulations:

- Executive Order 13175, Consultation and Coordination with Indian Tribal Governments 65 FR 67249;
- Memorandum on Government-to-Government Relations With Native American Tribal Governments (FR Volume 59, Number 85, signed April 29, 1994);
- Secretarial Order No. 3175 – Departmental Responsibilities for Indian Trust Resources;
- Secretarial Order No. 3206 – American Indian Tribal Rights, Federal -Tribal Trust Responsibilities, and the federal Endangered Species Act (ESA);
- Secretarial Order No. 3215 – Principles for the Discharge of the Secretary's Trust Responsibility;
- Secretarial Order No. 3342 – Identifying Opportunities for Cooperative and Collaborative Partnerships with Federally Recognized Indian Tribes in the Management of Federal Lands and Resources; and
- Secretarial Order No. 3335 – Reaffirmation of the Federal Trust Responsibility to Federally Recognized Tribes and Individual Indian Beneficiaries.

American Indian Religious Freedom Act of 1978

The American Indian Religious Freedom Act of 1978 (AIRFA; 42 U.S.C. § 1996) protects the rights of Native Americans to exercise their traditional religions by ensuring access to sites, use and possession of sacred objects, and the freedom to worship through ceremonials and traditional rites.

Historic Sites Act of 1935

The Historic Sites Act of 1935 (54 U.S.C. 320101–320106, formerly "16 U.S.C. 461–467) declares "...that it is a national policy to preserve for public use historic sites, buildings, and objects of national significance....," asserting historic preservation as a government duty under jurisdiction of the United States Secretary of the Interior.

National Historic Preservation of 1966

As discussed and defined in Section 3.6, Cultural Resources, Section 106 of the NHPA requires federal agencies to consider the effects of their undertakings on historic properties. For purposes of the discussion regarding tribal cultural resources (TCR), it is important to underscore that historic properties include properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization that meet the National Register criteria (36 C.F.R. § 800.16[I]).[1]. 36 C.F.R. § 800.2[ii] requires consultation with Indian tribes and Native Hawaiian communities that attach religious and/or cultural significance to a property that may be affected by an undertaking.

Traditional Cultural Properties and Traditional Cultural Landscapes

Traditional Cultural Properties (TCPs) are properties associated with cultural practices or beliefs of a living community that are: (1) rooted in that community's history; and (2) important in maintaining the continuing cultural identity of a community. TCPs can refer to properties of importance to any community, including Indigenous communities. The appropriate terminology for sites of importance to Indian tribes is 'historic property of religious and cultural significance to an Indian tribe [and Native Hawaiian organization]' (ACHP 2008:19; ACHP 2011:14). Traditional cultural landscapes (TCL) encompass the same meaning and utility, as well as inclusivity of Indigenous communities. The Secretary of the Interior's Guidelines for the treatment of cultural landscapes define a cultural landscape as "a geographic area (including both cultural and natural resources and the wildlife or domestic animals therein), associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values" (Birnbaum and Peters 1996:4). Historic vernacular landscapes "evolved through use by the people whose activities or occupancy shaped them" and ethnographic landscapes "contain a variety of natural and cultural resources that associated people define as heritage resource" (Birnbaum and Peter 1996:4; Ball et al. 2015:7).

- National Register Bulletin 38 provides examples of TCPs – and TCLs – that fit the definition in the guidelines (Parker and King 1998:1):
- A location associated with the traditional beliefs of a Native American group about its origins, its cultural history, or the nature of the world.
- A rural community whose organization, buildings and structures, or patterns of land use reflect the cultural traditions valued by its long-term residents.
- An urban neighborhood that is the traditional home of a particular cultural group, and that reflects its beliefs and practices.
- A location where Native American religious practitioners have historically gone, and are known or thought to go today, to perform ceremonial activities in accordance with traditional cultural rules of practice.
- A location where a community has traditionally conducted economic, artistic, or other cultural practices important in maintaining its historic identity.
- TCPs and TCLs are eligible for inclusion on the NRHP if they meet the criteria set forth in 36 C.F.R. § 60.4, National Register Criteria for Evaluation. The steps in the identification and evaluation of TCPs are the following (abbreviated from Parker and King 1998:11-14):
- Potential Traditional Cultural Properties must be identified through consultation with the affected community or Tribe.
- The investigation must consider the beliefs and practices associated with a potential Traditional Cultural Properties from the perspective of the community or Tribe.
- The potential Traditional Cultural Properties must be a property, that is, a tangible place on the landscape, rather than an intangible belief or practice.
- The property must retain integrity of relationship with the beliefs and practices that give it meaning to the community or Tribe.
- The property must retain integrity of condition, such that the elements of the property associated with the beliefs and practices that give it significance are present.

- The property must meet one or more of the four criteria for eligibility on the National Register (see Section 2.5.1.1 [Cultural Resources – Regulatory Setting – Federal]).

Cultural resources routinely not considered for eligibility for inclusion in the NRHP are religious properties, moved properties, birthplaces and graves, cemeteries, reconstructed properties, commemorative properties, and properties achieving significance within the past 50 years. However, these resources can be evaluated as eligible if they meet one or more of the NRHP eligibility criteria for evaluation, retain integrity, and meet special criteria requirements called criteria considerations. The most notable of the seven considerations (A through G) is Criteria Consideration G, which specifies that a property that has achieved significance within the last 50 years can qualify for the NRHP only if it is of exceptional importance. As noted by Parker and King (1998:17–18), “a significance ascribed to a property only in the past 50 years cannot be considered traditional.” However, they also note: “The fact that a property may have gone unused for a lengthy period of time, with use beginning again only recently, does not make the property ineligible for the [National] Register” (Parker and King 1998:14).

If a property is determined to be a TCP, it becomes the responsibility of the lead agency to assess whether a proposed project would have an effect on the property, and should the effect be adverse, would it alter or destroy the elements that make the property significant and eligible. If a proposed project is determined to have an adverse effect, the lead agency is responsible for seeking measures that would mitigate the adverse effects to TCPs.

State

Tribal Cultural Resources

As defined at PRC § 21074, a TCR is a site, feature, place, cultural landscape, sacred place or object that is of cultural value to a California Native American tribe and is either: (1) on or eligible for the CRHR or a local historic register; or (2) the lead agency, at its discretion, chooses to treat the resource as a TCR. TCRs are similar to TCPs in terms of their characteristics, identification, and treatment, and may include a cultural landscape to the extent that the landscape is geographically defined in terms of the size and scope of the landscape. Additionally, as defined at PRC § 21074(c), a historical resource, a unique archaeological resource, or a non-unique archaeological resource may also be a TCR if it conforms to the criteria of a TCR in PRC § 21074(a). CEQA mandates that lead agencies determine whether a project will have a significant impact on TCRs that are eligible for listing on the CRHR (i.e., a historical resource), or are determined to be significant by the lead agency to appropriately mitigate any such impacts.

Under the CEQA Guidelines, even if a resource is not included on any local, state, or federal register, or identified in a qualifying historical resources survey, a lead agency may still determine that any resource is a historical resource (i.e., TCR) for the purposes of CEQA, if there is substantial evidence supporting such a determination (CEQA Guidelines § 15064.5[a]). A lead agency must consider a resource to be historically significant if it finds that the resource meets the criteria for listing in the CRHR. A resource may be eligible for inclusion in the CRHR if it:

- Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage (Criterion 1)
- Is associated with the lives of persons important in our past (Criterion 2)

- Embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of an important creative individual or possesses high artistic values (Criterion 3)
- Has yielded, or may be likely to yield, information important in prehistory or history (Criterion 4)

In accordance with CEQA guidelines, cultural resources investigations are necessary to identify TCRs that may have significant impacts as a result of a project (14 CCR §15064.5). The following steps are routinely implemented in a cultural resources investigation for CEQA compliance:

- Identify cultural resources in the proposed project area.
- Evaluate against the CRHR criteria of significance (listed below).
- Evaluate the impacts of the proposed project on all cultural/tribal resources.
- Develop and implement measures to mitigate proposed project impacts on historical resources or resources deemed significant by the lead agency.
- As TCRs hold cultural value to a California Native American tribe, consultation with local Native American tribes is an integral component of each of the cultural resources investigation steps described above.

Assembly Bill (AB) 52 and Consultation

The lead agency for CEQA is responsible for consultation with Native American tribes regarding the potential for a project to impact TCRs, pursuant to AB 52 and PRC §§ 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, 21084.3, and 5097.94(m). AB 52 recognizes that "...tribes may have expertise with regard to their tribal history and practices, which concern the tribal cultural resources with which they are traditionally and culturally affiliated..." and that consultation will occur between a lead agency and Native American tribes for covered projects.

PRC §21080.3.1 (a) and Government Code §65352.4 define consultation as "the meaningful and timely process of seeking, discussing, and considering carefully the views of others, in a manner that is cognizant of all parties' cultural values and, where feasible, seeking agreement. Consultation between government agencies and Native American tribes shall be conducted in a way that is mutually respectful of each party's sovereignty. Consultation shall also recognize the tribes' potential needs for confidentiality with respect to places that have traditional tribal cultural significance."

As described in Section 3.6 Cultural Resources, a project may induce a significant impact to a historical resource, unique archaeological resource, or a TCR if it causes a substantial adverse change (i.e., physical demolition, destruction, relocation, or alteration) to the resource or immediate surroundings (14 CCR 15064.5[b]), thereby demolishing or significantly altering the physical characteristics that qualify it for listing on the CRHR or local registers (PRC §§ 5020.01[k] and 5024.1[g]). A project that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment (PRC § 21084.2). A lead agency shall establish measures to avoid impacts that would alter significant characteristics of a TCR, when feasible (PRC §21084.3).

Native American Historical, Cultural, and Sacred Sites

Pursuant to PRC 5097.94 the Native American Heritage Commission (NAHC) has authority and duty to "identify and catalog places of special religious or social significance to Native Americans, and known graves and cemeteries of Native Americans on private lands" and has the power and duty to

make recommendations for acquisition by the state or other public agencies regarding Native American sacred places that are located on private lands, are inaccessible to Native Americans, and have cultural significance to Native Americans.

California Native American Graves Protection and Repatriation Act of 2001

The California Native American Graves Protection and Repatriation Act of 2001 (CalNAGPRA) requires all state agencies and museums that receive state funding and that have possession or control over collections of human remains or cultural items to provide a process for the identification and repatriation of these items to the appropriate tribes.

Regional/Local

Napa County General Plan

The Napa County General Plan details two Cultural Resources Goals (Goal CC-4 and Goal CC-5) aligning Napa County's efforts to identify, protect, and preserve important prehistoric and historic resources and encourage the continuing use and rehabilitation of historic buildings. Implementation of these policies is codified through five Action Items (CC-19.1, 19.2, 23.1, 23.2, 28.1) and 15 Policies (CC-17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 26.5, 27, 28, 29, 30). While all of these policies may broadly apply to TCRs, the following may more specifically:

- **Policy CC-19:** Support of the identification and preservation of resources from the historic and precontact periods.
- **Policy CC-23:** Support of the protection of historic and precontact cultural resources from inadvertent impacts caused by earth moving and other construction activities.

City of Napa General Plan

On October 18, 2022, the City of Napa adopted the Napa 2040 General Plan. Chapter 5 of the 2040 General Plan enumerates 16 goals for the preservation of historic and cultural resources, which would include potential TCRs. These goals are:

- **Goal HCR 1.** To preserve and enhance historic resources and encourage the rehabilitation and reuse of historic resources.
- **Goal HCR 2.** To continue the City's preservation program by identifying resources and landscapes that provide visible reminders of Napa's history.
- **Goal HCR 3.** To encourage efforts to designate and recognize properties and districts for local, CRHR and NRHP.
- **Goal HCR 4.** To promote educational initiative that foster community awareness of Napa's historic and cultural resources.
- **Goal HCR 5.** To increase the economic viability of historic and cultural resources through preservation incentives.
- **Goal HCR 6.** To encourage the original use of historic structures.
- **Goal HCR 7.** To balance the preservation of historic buildings with strategies to increase energy efficiency.
- **Goal HCR 8.** To publicly promote the economic benefits of historic preservation.

- **Goal HCR 9.** To structure the development of the city center to reflect its historic form with a mix of old and new buildings.
- **Goal HCR 10.** To work across the community to promote the historic resources of Napa's Downtown as contributors to the experience of tourists.
- **Goal HCR 11.** To protect historic resources during the development of public parking spaces within Napa's downtown.
- **Goal HCR 12.** To preserve historic neighborhoods and the historic character of Napa's built environment.
- **Goal HCR 13.** To develop ADU design standards that retain the historic character of properties and districts.
- **Goal HCR 14.** To protect and preserve important archaeological resources.
- **Goal HCR 15.** To recognize the Tribal Nations who first lived in Napa and preserve their cultural resources.
- **Goal HCR 16.** To recognize the cultural identity and heritage of Napa's various communities.

3.16 Utilities

Federal

There are no identified federal plans, policies, and regulations that are relevant to the analysis of utilities.

State

California Integrated Waste Management Plan of 1989

The California Integrated Waste Management Plan of 1989 requires each county to prepare a County Integrated Waste Management Plan (CIWMP).

Napa County's CIWMP provides goals and objectives for the County and cities to meet the requirements set by the State Plan to reduce the amount of solid waste disposed in landfills and transformed through acts of source reduction, recycling, and composting activities.

Regional/Local

Napa Countywide Stormwater Pollution Prevention Program (NCSPPP)

The NCSPPP is a joint effort of the County of Napa, cities of American Canyon, Napa, St. Helena and Calistoga, and the Town of Yountville to prevent stormwater pollution, protect and enhance water quality in creeks and wetlands, preserve beneficial uses of local waterways, and comply with State and federal regulations. Though the entities of the NCSPPP carry out their own individual stormwater pollution prevention programs, the NCSPPP provides for the coordination and consistency of approaches between the individual participants and documents their efforts in annual reports.

Napa County General Plan

The following goals and policies of the *Napa County General Plan* are applicable to the Proposed Project (Napa County 2008):

- **Policy CON-1:** The County will preserve land for greenbelts, forest, recreation, flood control, adequate water supply, air quality improvement, habitat for fish, wildlife and wildlife movement, native vegetation, and natural beauty. The County will encourage management of these areas in ways that promote wildlife habitat renewal, diversification, and protection.
- **Policy CON-60:** The County shall promote cost-effective water conservation and water efficiency measures that reduce water loss, waste, and water demand through the following measures:
 - a) Taking a leadership role in water conservation efforts, by monitoring and publicly reporting on the County's water use, using low flow fixtures, drought-tolerant landscaping, drip irrigation, recycled water use where available and appropriate, periodic water use "audits" and other strategies to conserve water at all County owned and operated facilities.
 - b) Requiring the use of water conservation measures in areas served by municipal supplies to improve water use efficiency and reduce overall demand including, but not limited to, working cooperatively with all water providers and with developers to incorporate water conservation measures into project designs (e.g., as recommended by the California Urban Water Conservation Council), and coordination with water providers to continue to develop and implement water drought contingency plans to assist County citizens and businesses in reducing water use during periods of water shortages and emergencies.
 - c) Seeking cooperative partnerships with government agencies, non-profit organizations, private industry groups, and individuals in furthering water conservation strategies in Napa County.
- **Policy CON-62:** As stated in Policy AG/LU-74, the County supports the extension of recycled water to the Coombsville area to reduce reliance on groundwater in the MST groundwater basin and exploration of other alternatives. Also, the County shall identify and support ways to utilize recycled water for irrigation and non-potable uses to offset dependency on groundwater and surface waters and ensure adequate wastewater treatment capacity through the following measures:
 - a) Require (as part of continued implementation of County Code Title 13 Division 2 provisions associated with sewer systems) verification of adequate wastewater service for all development projects prior to their approvals. This requirement includes coordination with wastewater service purveyors to verify adequate capacity and infrastructure either exists or will be available prior to operation of the development project.
 - b) Use wastewater treatment and reuse facilities where feasible to reclaim, reuse, and deliver treated wastewater for irrigation and possible potable use depending on wastewater treatment standards.
 - c) Require proposals for non-residential construction in the Airport Industrial Area and lower Milliken-Sarco-Tulocay Creeks Area to incorporate dual plumbing to

allow for the use of non-potable/recycled water when such water becomes available.

- d) Encourage the use of non-potable/recycled water wherever recycled water is available and require the use of recycled water for golf courses where feasible.
- **Policy CON-67:** The County shall promote and encourage “green building” design, development, and construction through the achievement of Leadership in Energy and Environmental Design (LEED) standards set by the U.S. Green Building Council, the Green Point Rated system standards set by Builditgreen.org, or equivalent programs. Actions in support of this policy shall include:
 - a) Audit current County practices to assess opportunities and barriers to implementation of current sustainable practices.
 - b) Amend the County Code as necessary to remove barriers to and encourage “green” construction.
 - c) Develop new County buildings as “green buildings,” utilizing sustainable construction and practices.
 - d) Encourage all new large development projects and major renovation of existing facilities to be based on Green Building Council standards utilizing sustainable construction and practices to achieve a minimum LEED rating of Silver, or comparable level on the Green Point Rated system per standards set by Builditgreen.org or other comparable updated rating systems.
 - e) Support state and federal incentive programs that offer rebates and cost sharing related to the implementation of “green building” standards and LEED certification.
- **Policy CON-74:** The County shall evaluate new technologies for energy generation and conservation and solid waste disposal as they become available and shall pursue their implementation as appropriate in a manner consistent with the principle of adaptive management. This evaluation shall include review of promising technological advances which may be useful in decreasing County greenhouse gas (GHG) emissions, increase in renewable energy that is generated locally, and review of the County’s success in meeting targets for GHG emission reductions.
- **Policy CON-87:** The County shall promote solid waste source reduction, reuse, recycling, composting and environmentally-safe transformation of waste. The County shall seek to comply with the requirements of AB 939 with regard to meeting state-mandated targets for reductions in the amount of solid waste generated in Napa County.
- **Policy CON-90:** The County shall support efforts to provide solid waste resource recovery facilities and household hazardous waste collection facilities convenient to residences, businesses, and industries.
- **Policy CON-91:** Encourage the maximum protection of all environmental values at solid waste disposal sites by the adoption of standards of planning, design, construction, operation, and maintenance, including:
 - a) Location away from residential areas.
 - b) Screening from view.

- c) Good road access, not through residential areas.
- d) No inhabited areas downwind from the site because dust and odor problems can occur in even the most carefully conducted operations.
- e) Location to prevent flooding and pollution and contamination of surface and ground water.
- f) Haul distance standards.

City of Napa 2040 General Plan

The following goals and policies the Community Services, Parks and Recreation Element of the *City of Napa 2040 General Plan* are applicable to the Proposed Project (City of Napa 2022):

- **GOAL CSPR-5:** Support utilities and infrastructure that deliver safe and reliable services for current and future residents and businesses.
 - **Policy CSPR 5-1:** Safely manage the water supply and services, wastewater, sewer, recycled water, and storm drain infrastructure in a manner that provides for future growth of the City.
 - **Policy CSPR 5-2:** Work with power and dry utility providers, property owners, and developers to underground service lines in existing neighborhoods, and require undergrounding service lines for new projects where feasible.
 - **Policy CSPR 5-3:** Develop and maintain a safe, attractive, and environmentally-sensitive drainage system for handling runoff due to seasonal rainstorms, especially runoff in creeks and the Napa River.
 - **Policy CSPR 5-7:** Protect existing water supplies by protecting watersheds in cooperation with Napa County and other stakeholders.
- **GOAL CSPR-7:** Provide for solid waste and recycling services to meet the needs of current and future residents and businesses.
 - **Policy CSPR 7-1:** Safely manage solid waste management services in a manner that provides for future growth of the City.

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Appendix E. Resource Topics Not Discussed in Detail

Appendix E – Resource Topics Not Discussed in Detail

Agriculture and Forestry

The entirety of the Proposed Action Area is classified as urban and built-up land. The closest area designated as Unique Farmland/Prime Farmland is on the east side of the Napa River approximately 1.2 miles away from the Proposed Action Area (California Department of Conservation [DOC] 2022a). There are no forestry resources located in the Proposed Action Area (Napa County 2008).

The Proposed Action Area is not characterized as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (DOC 2022b). Therefore, the Proposed Action would not use land that is designated as prime farmland and would not result in the conversion of prime, unique, or statewide importance farmland to non-agricultural uses. Additionally, the Proposed Action Area does not contain land zoned for agricultural use or any Williamson Act contract land (DOC 2022b). Therefore, the Proposed Action would not use or impact agricultural lands within an existing Williamson Act contract and would not conflict with those uses.

The Proposed Action Area does not contain forest land or timberland and would not conflict with existing zoning for or cause re-zoning of forest land or timberland and would not result in the loss or conversion of forest land (Napa County 2008).

There is no farmland or forest land in the Proposed Action Area. Therefore, no farmland would be converted to non-agricultural use and no forestland would be converted to non-forest use. The Proposed Action Area would not involve other changes in the existing environment that due to their location or nature could result in the conversion of farmland to non-agricultural use or the conversion of forest land to non-forest use.

The 1999 Final SEIS/EIR did not evaluate effects to agriculture and forestry because these resources do not exist in the Proposed Action Area. Agriculture and forestry resources would not be adversely affected by the Proposed Action. Therefore, no additional impacts to these resources would occur and the impacts would remain the same as presented in the 1999 Final SEIS/EIR.

Energy

Pacific Gas & Electric Company (PG&E) provides electric services to Napa County and in the Proposed Action Area. PG&E also provides gas service in the Proposed Action Area. According to PG&E's Economic Development Site Tool (PG&E 2023), there are no existing electric transmission lines near or within the Proposed Action Area. PG&E overhead power poles run along Lincoln Avenue and Wall Street in the Proposed Action Area. The Napa County General Plan (Napa County 2008) states that the County promotes "research and the development and use of advanced and renewable energy technology." Additionally, Goal CON-16 in the general plan is to "promote the economic and environmental health of Napa County by conserving energy, increasing the efficiency of energy use, and producing renewable energy locally."

The Proposed Action would result in the temporary consumption of energy during construction work from the general use of construction equipment and vehicles, the delivery of earthmoving equipment and construction materials, utility relocation, and floodwall construction. However, energy

consumption would be short term and temporary. The USACE and District would coordinate with PG&E to relocate overhead power poles that fall within the Proposed Action Area footprint and would conflict with the proposed floodwall construction. These power poles would be relocated outside of the proposed floodwall construction area but still within the Proposed Action Area. Effects of the Proposed Action on utilities are discussed further in Section 3.19, *Utilities and Service Systems*. Once the Proposed Action construction is completed, O&M activities for the proposed floodwalls would not require the use of substantial amounts of energy. Thus, energy consumption would not be considered wasteful, inefficient, or unnecessary during both the Proposed Action construction and operation. Additionally, the Proposed Action would not conflict with or obstruct a state or local plan for renewable energy or energy deficiency.

The 1999 Final SEIS/EIR concluded that the Overall Flood Protection Project would neither substantially increase the overall per capita energy consumption, nor substantially increase reliance on natural gas and oil. It would also not adversely affect local and regional energy supplies and would not involve an inordinate use of fuel or energy for construction or operation. The current evaluation and findings for the Proposed Action's effects on energy use remains consistent with the previous conclusion in the 1999 Final SEIS/EIR. Therefore, no additional impacts to energy would occur and the impacts would remain the same as presented in the 1999 Final SEIS/EIR.

Environmental Justice

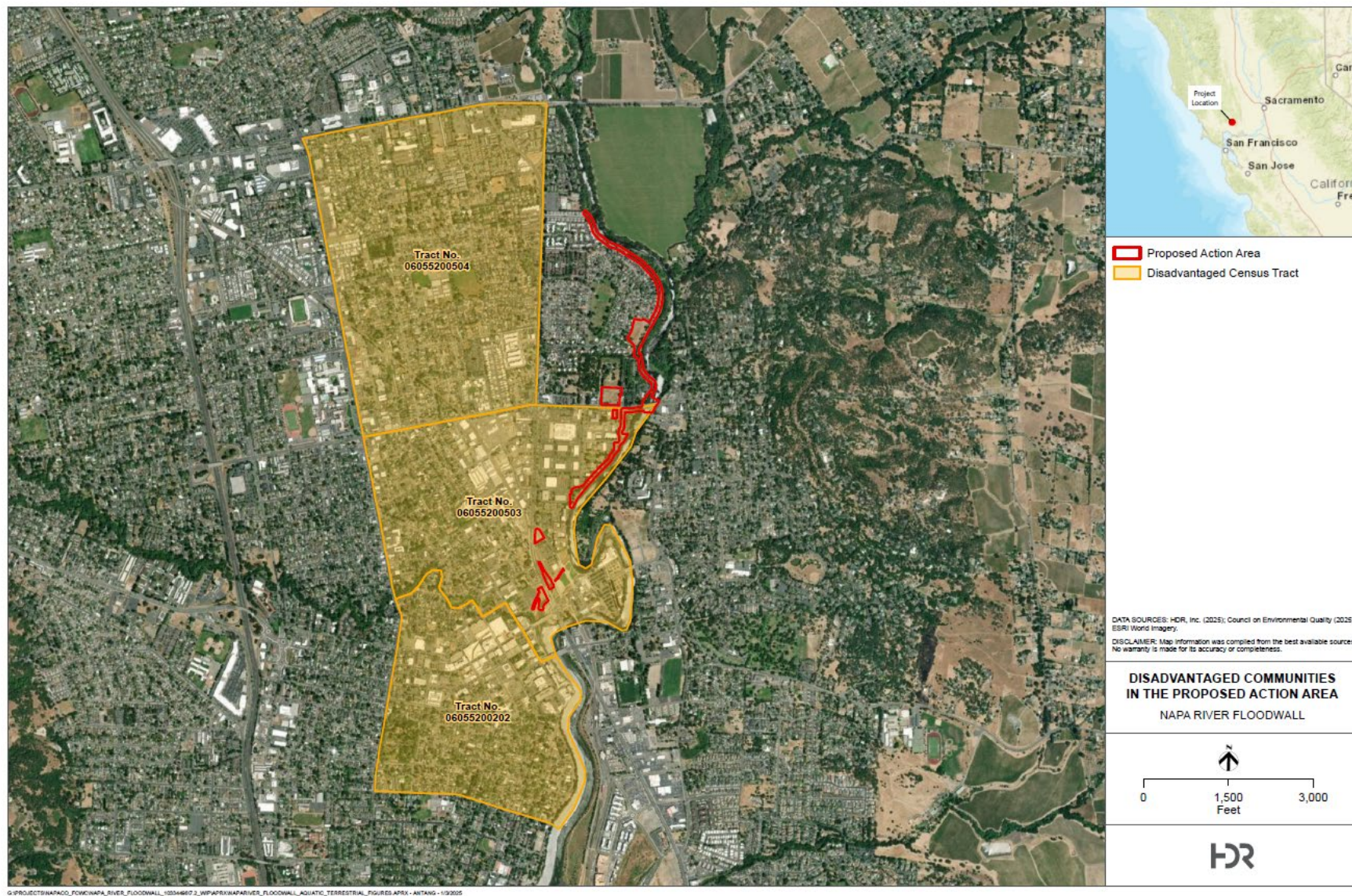
The EPA has defined environmental justice (EJ) as “the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.” USACE and other federal agencies are required to take EJ concerns into consideration pursuant to the NEPA and Executive Orders 12898 (1994), 13985 (2021), 14008 (2021) and the Justice40 (2022) initiative. EO 12898, passed in 1994, emphasized identification of disproportionately high and adverse environmental impacts to minority and low-income populations. EO 14008, 13985, and Justice40 added EJ considerations beyond identification and assessment required by EO 12898.

Existing Conditions

This section provides the existing conditions of the Proposed Action Area as it relates to low-income and minority populations. The section first discusses and compares the low-income and minority population data for the City of Napa, then discusses the same population data for the entire Napa County.

The Proposed Action Area is near three census tracts designated as disadvantaged, as shown in **Figure E-1** below. It directly overlaps one of them; tract number 06055200503. This tract is considered disadvantaged because it meets the and burden thresholds for low income as well as expected building loss rate, projected flood risk, and airborne level of PM 2.5.

Figure E-1. Disadvantaged Communities in the Proposed Action Area



Data for the analyses were from American Community Survey (ACS) data tables on the US Census website. ACS's 2022 5-Year estimates are the most recent data listed on the US Census website. The following 2022 ACS 5-Year Estimate data tables were used:

- **Table B03002:** Hispanic Or Latino Origin By Race (Minority Populations)
- **Table B17010:** Poverty Status In The Past 12 Months Of Families By Family Type By Presence Of Related Children Under 18 Years By Age Of Related Children (Low-Income Populations)

Table E-1 presents the race and ethnicity characteristics for Napa County and the City of Napa. As seen in **Table E-1**, 49.6 percent of the total population of Napa County is of a minority population. When compared to the total minority population of City of Napa (48.2 percent), the minority population percentage in Napa County is higher.

Table E-1. Race and Ethnicity Characteristics

Race/Ethnicity	Total Estimate	Percentage of Population
Napa County		
Total Population	137,384	100.0
White alone, non-Hispanic	69,244	50.4
Black or African American alone, non-Hispanic	2,405	1.8
Asian alone, non-Hispanic	10,866	7.9
Other ^a	6,687	4.9
Hispanic or Latino (all races)	48,182	35.1
City of Napa		
Total Population	79,233	100.0
White alone, non-Hispanic	41,027	51.8
Black or African American alone, non-Hispanic	609	0.8
Asian alone, non-Hispanic	2,120	2.7
Other ^a	3,121	3.9
Hispanic or Latino (all races)	32,356	40.8

Source: U.S. Census Table B03002, ACS 2022 5-Year Estimates Detailed Tables

^a Other includes non-Hispanic Native Hawaiian and Other Pacific Islander alone, non-Hispanic American Indian and Alaska Native alone, non-Hispanic Some other race, and non-Hispanic Two or more races.

Table E-2 presents the poverty status of families in Napa County and the City of Napa. As seen in **Table E-2**, 5.3 percent of families living in Napa County are below the poverty level. When compared to the percentage of families living below the poverty level in the City of Napa (5.3 percent), the percentages of the two geographic jurisdictions are the same.

Table E-2. Poverty Status

Poverty	Total Estimate	Percentage of Population
Napa County		
Total Families	33,163	100.0
Total Families Below Poverty Level	1,763	5.3
City of Napa		
Total Families	19,469	100.0
Total Families Below Poverty Level	1,033	5.3

Source: U.S. Census Table B17010, ACS 2022 5-Year Estimates Detailed Tables

Regulatory Framework

This section identifies the applicable federal, state, and local laws, regulations, and orders that are relevant to the analysis of interests and/or impacts on low-income and minority populations.

Federal

E.O. 12898 (59 Federal Register [FR] 7629), Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order 12898 focuses federal attention on the environmental and human health impacts of federal actions on low-income and minority populations with the goal of achieving environmental protection for all communities. This includes identifying and addressing the disproportionately high and adverse human health or environmental impacts of their actions on low-income and minority populations, developing a strategy for implementing environmental justice, and promoting nondiscrimination in federal programs that affect human health and the environment, as well as providing low-income and minority communities access to public information and public participation.

E.O. 13985, Advancing Racial Equity and Support for Underserved Communities Through the Federal Government

Executive Order 13985, signed on January 20, 2021, focuses on advancing racial equity and support for underserved communities through the federal government. It mandates federal agencies to assess whether their policies, practices, and programs promote equitable outcomes and address systemic barriers. Additionally, it establishes an interagency Equity Action Plan to enhance accountability and ensure progress toward reducing disparities.

E.O. 14008, Tackling the Climate Crisis at Home and Abroad

Executive Order 14008, signed on January 27, 2021, emphasizes tackling the climate crisis domestically and internationally. It directs federal agencies to prioritize clean energy initiatives, reduce greenhouse gas emissions, and build resilience to climate impacts while creating well-paying jobs. The order also focuses on environmental justice, ensuring that underserved and marginalized communities benefit from the transition to a sustainable and equitable economy.

Justice40 Initiative

The Justice40 Initiative, established under Executive Order 14008, aims to ensure that 40% of the benefits from federal investments in climate and clean energy initiatives reach disadvantaged communities. It addresses environmental justice by prioritizing equitable access to resources like

clean energy, affordable housing, and sustainable infrastructure. The initiative seeks to redress historic inequities by directing federal funding to communities disproportionately affected by pollution, climate change, and systemic disinvestment.

CEJST

These executive orders and initiatives can be analyzed for compliance using the Climate and Economic Justice Screening Tool (CEJST) from the CEQ. This tool, developed under EO 14008, was created to provide a consistent government-wide method to identify communities with EJ concerns. The CEJST identifies disadvantaged communities by census tracts that meet the thresholds for at least one of the tool's categories of socioeconomic or environmental burdens, or if they are on land within the boundaries of Federally Recognized Tribes.

Compliance Analysis

The Proposed Action includes the construction of floodwalls south of Lincoln Avenue, floodwalls north of Lincoln Avenue, scour protection under the Lincoln Avenue bridge, and floodwalls at the Dry Bypass. There would be temporary lane closures for construction of the relocated utilities on Lincoln Avenue. The Napa River Trail north of Lincoln Avenue and near the River Terrace Inn would also be closed temporarily and a trail detour would be established during construction. All material generated during construction would be disposed at approved facilities within 30 miles of the Proposed Action Area. The Proposed Action Alternative would not require nighttime work or installation of lighting. After construction, the Napa River Trail would be connected north and south of Lincoln Avenue and repaved in areas that were previously paved. Additionally, all disturbed areas in the Proposed Action Area that are outside of the proposed floodwall alignment and O&M corridor would be seeded and restored after construction to minimize erosion. Utilities in the Proposed Action Area that would conflict with the proposed floodwalls would be relocated through coordination with the appropriate service providers.

Table E-3 provides a summary of the relevant environmental resource areas as it relates to minority and low-incomes populations analyzed in this section and summarizes any potential adverse effect even after mitigation is incorporated.

Table E-3. Summary of Relevant Environmental Resources and Potential Adverse Effect Determination

Relevant Environmental Resource	Potential Adverse Effect?
Air Quality and Greenhouse Gas Emissions	No
Hazards and Hazardous Materials	No
Land Use and Planning	No
Noise and Vibration	No
Population and Housing	No
Public Services	No
Recreation	No
Transportation	No
Wildfire	No

Air Quality and Greenhouse Gas Emissions

The Proposed Action Alternative would generate criteria pollutant emissions during site clearing, grading, material delivery, construction of proposed flooding improvements, and site cleanup. However, the Proposed Action would comply with all rules and regulations related to construction. Additionally, best management practices would be implemented to reduce dust emissions and avoid health impacts. Operational activities may generate emissions due to the use of equipment and vehicles, but it would be less than the levels generated during construction. It is also anticipated that odors during construction would be temporary, intermittent, and would dissipate rapidly from the source with an increase in distance; therefore, it would not affect a substantial number of individuals.

Construction of the Proposed Action is anticipated to generate GHG emissions below the Bay Area Air Quality Management District threshold and operational activities would generate limited GHG emissions due to the limited vehicles and equipment required as well as the infrequent necessity of maintenance activities. Therefore, the Proposed Action would not result in disproportionately high and adverse effects on minority or low-income populations as it relates to air quality and greenhouse gas emissions.

Hazards and Hazardous Materials

The Proposed Action Alternative construction activities would utilize hazardous materials, such as gasoline and hydraulic fluids. All construction activities would abide by the Proposed Action construction BMPs and the Stormwater Pollution Prevention Plan (SWPPP). All construction waste materials would be off-hauled to an appropriate, permitted facility. Any potentially contaminated soils or groundwater encountered during ground-disturbing activities would be managed, stored, and disposed of in accordance with requirements of the SWPPP and NPDES construction general permit.

Additionally, any hazardous materials encountered, including contaminated soils and groundwater, would be managed, and disposed of in accordance with California Department of Toxic Substances Control regulations. Furthermore, construction activities associated with the Proposed Action would have to comply with regional, state, and federal requirements for the transport, use, and disposal of hazardous materials. Construction would be temporary and once completed, operations and maintenance activities would not require the use of hazardous materials and waste. Therefore, the Proposed Action Alternative would not result in disproportionately high and adverse effects on minority or low-income populations as it relates to hazards and hazardous materials.

Land Use and Planning

The Proposed Action Alternative would not divide an established community in the City of Napa or conflict with local land use plans and policies. Minor property acquisition would be required for construction of the proposed floodwalls and to maintain appropriate flood easements. One business property would be fully acquired, and the District would abide by state and federal regulations and provide fair market evaluations. Proposed Action Alternative would not result in disproportionately high and adverse effects on minority or low-income populations as it relates to land use.

Noise and Vibration

The Proposed Action Alternative may cause new sources of noise and vibration during construction work either from construction traffic and/or equipment usage. However, mitigation measures would be implemented to reduce noise and vibration to levels so that construction noise does not exceed local noise level thresholds. Vibrations generated during construction would also be monitored and

minimized to the extent feasible. Therefore, the Proposed Action Alternative would not result in disproportionately high and adverse effects on minority or low-income populations as it relates to noise and vibration.

Population and Housing

Minor or partial property acquisitions would be required for construction of the Proposed Action Alternative. Constructing the proposed floodwall north of Lincoln Avenue would require removing the eastern most row of trailer vacation rental units closest to the river to make space for the proposed floodwall near the RiverPointe property. These vacation rental units are not permanent residences and are relocated out of the floodway during the winter months typically due to the risk of flooding onsite. After the re-alignment of Burrows Court within the RiverPointe property to accommodate the proposed floodwall construction, some vacation rental units would be reinstalled depending on the remaining space available. The Proposed Action may require other property acquisitions for flood easements within the Proposed Action Area. All property acquisitions would abide by applicable federal and state laws.

Potential staging areas that are identified would not displace any residents during construction. Proposed haul routes would be on existing local roads and no full road closures would be required for site access. Operation and maintenance of the Proposed Action would be confined to the Napa River vicinity such that no residents would be displaced during operation and maintenance activities. Therefore, the Proposed Action would not result in disproportionately high and adverse effects on minority or low-income populations as it relates to population and housing.

Public Services

While project construction would require staging areas and temporary site access for construction vehicles and equipment, no full road closures would be required. Existing roadways would be used for site access as well as the proposed floodwall alignment. Construction activities would be temporary and short-term. Because of this, there is no anticipated need for increased fire or police protection, or capacity at schools, parks, and other public facilities. Therefore, the Proposed Action Alternative would not result in disproportionately high and adverse effects on minority or low-income populations as it relates to public services.

Recreation

The Proposed Action would not expose nearby existing neighborhood and regional parks and other recreational facilities to more users that would cause substantial or accelerated physical deterioration. This would include the existing Napa River Trail as well as the new recreational trail that would be constructed on the water side of the floodwall starting at the high ground at River Terrace Inn and run north to Wall Street. The existing Napa River Trail would be closed temporarily during construction and a trail detour would be established. Therefore, the Proposed Action would not result in disproportionately high and adverse effects on minority or low-income populations as it relates to recreation.

Transportation

As mentioned previously, construction trucks would use existing roadways and the proposed floodwall alignment for site access. Construction truck trips would be temporary. Construction equipment and materials would be delivered and stored in the staging areas and is not anticipated to be moved during peak hour traffic along Lincoln Avenue. Therefore, the Proposed Action would not

result in disproportionately high and adverse effects on minority or low-income populations as it relates to transportation.

Wildfire

The Proposed Action is not located in or near an SRA or lands classified as VHFHSZ. It would not expose people to significant risks as it relates to downslope or downstream flooding or landslides. Rather, the Proposed Action would provide improved flood protection for the City and County of Napa community. Therefore, the Proposed Action would not result in adverse effects toward all populations including minority or low-income populations as it relates to wildfire.

Environmental Justice Determination

The Proposed Action would not result in adverse effects on minority or low-income populations. Mitigation measures, best management practices, and compliance with all relevant laws and regulations would reduce potential adverse effects to less than significant levels. As stated, the determination of whether the Proposed Action Alternative would result in disproportionately high and adverse effects is based on the totality of the following considerations:

- The location of adverse effect in relation to minority, low-income, and elderly populations.

The location of the Proposed Action is along the west bank of the Napa River, north of the bypass. The objectives of the Proposed Action are to attain flood protection for the Proposed Action Area and to reduce the flood risk to the City and County of Napa while sustaining the overall economy, providing safe access to the river, and improving the habitat viability. Any adverse effects that are caused by the Proposed Action would be experienced by all populations within the Proposed Action Area, including minority, low-income, and elderly populations.

- The severity of the adverse effect and the success of the proposed mitigation measures in reducing the effect.

As discussed, mitigation measures, BMPs, and compliance to relevant laws and regulations would reduce the severity of potentially adverse effects of the Proposed Action. With mitigation measure implementation, the Proposed Action would not result in adverse effects.

- Whether mitigation measures reduce impacts equally for both minority and low-income populations as for non-minority and non-low-income populations.

All mitigation measures and best management practices incorporated into the Proposed Action Alternative would be applied equally to all populations within the Proposed Action Area and would ultimately have a positive effect on minority and low-income populations.

- The project benefits that would be received by minority and low-income populations.

Benefits of the Proposed Action would be experienced by minority and low-income populations and there would be no denial of these benefits to these respective populations.

Based on the evaluation of all potential adverse effects related to environmental justice and the overall Proposed Action objectives of flood protection and flood risk reduction for the City of Napa, the Proposed Action would not result in disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority and low-income populations.

Therefore, no additional impacts to environmental justice would occur and the impacts would remain the same as presented in the 1999 Final SEIS/EIR.

Land Use and Planning

The Proposed Action Alternative would provide improved flood protection in the Proposed Action Area and would further advance the Overall Flood Protection Project objective to achieve 100-year flood protection for the City of Napa. Gates and access points would be incorporated into the proposed floodwalls to allow for trail and O&M access on either side of the floodwalls and would not physically divide or affect established communities. Homes on the water side of Shoreline Drive have existing levee maintenance easements in their back yards. These easements are not suitable for project construction and maintenance, so new easements would be acquired. After project construction, the reconstructed levee berm top would serve as an O&M road, and existing fences would be replaced. Cross fences at each property line would also be constructed across the O&M road, to further delineate individual properties. The floodwall location and alignment were set to minimize impacts to back yards from construction and future O&M activities.

Constructing the floodwall would require removing the eastern most row of trailer vacation rental units closest to the river to make space for the proposed floodwall. Burrows Court in the RiverPointe parcel may be realigned adjacent to the proposed floodwall. Currently, the affected trailer vacation rental units at RiverPointe are removed during the winter, as required by the flood action plan for the resort, due to flood risk. After the proposed floodwall is constructed and the flood action plan for the resort is updated, the remaining trailer vacation rental units could be left in place all year because the wall is anticipated to provide increased flood protection.

The Proposed Action would require the use of Lincoln Ave, Shoreline Drive, Trout Way, Wall Street, RiverPointe, and potentially other areas for site access. It is anticipated that existing roads are wide enough to accommodate all construction equipment and would not require road widening or improvements. While Lincoln Avenue may require traffic control for project construction, this would only occur on a temporary basis. All construction traffic and access would be coordinated with local landowners prior to construction. Construction activities would be in proximity to residential uses but would only be present on a temporary basis.

The Proposed Action would not physically divide an established community. Temporary construction activities would occur adjacent to existing residences and within the RiverPointe property.

Minor or partial property acquisitions would be required for construction of the Proposed Action Alternative. As stated above, the eastern most row of trailer vacation rental units closest to the river at the RiverPointe property would be removed for construction of the proposed floodwall. These vacation rental units are not permanent residences and are relocated out of the floodway during the winter months typically due to the risk of flooding onsite. After the re-alignment of Burrows Court within the RiverPointe property to accommodate the proposed floodwall construction, some vacation rental units would be reinstalled depending on the remaining space available. The Proposed Action may require other property acquisitions for flood easements within the Proposed Action Area. All property acquisitions would abide by applicable federal and state laws.

North of Lincoln Avenue, near the Lake Park subdivision, the existing levee berm would be partially excavated from the river side, and the floodwall would be constructed approximately 15 feet toward the river from the existing backyard fences. The area behind the wall would then be filled to provide a flat surface at roughly the elevation of the old top of levee. Homes on the water side of Shoreline Drive have existing levee maintenance easements in their back yards. These easements are not

suitable for project construction and maintenance, so new easements would be acquired. After project construction, the reconstructed levee berm top would serve as an O&M road, and existing fences would be replaced. Cross fences at each property line would also be constructed across the O&M road, to further delineate individual properties. The proposed floodwall alignment was set to minimize impacts to back yards from construction and future O&M activities. Therefore, the Proposed Action Alternative would not conflict with existing land uses in the Proposed Action Area or the City of Napa's land use plans, policies or regulations.

The Napa River trail would be reconstructed north of Lincoln Avenue after construction of the proposed floodwall is complete. The trail would also be connected south of Lincoln Avenue to its existing terminus near the River Terrace Inn. This trail connection would further advance the City of Napa's goals and objectives identified in the City General Plan and would provide a benefit to the Proposed Action Area.

The Proposed Action Alternative would not conflict with any land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Minor and partial property acquisitions and flood easements would be obtained and would abide by federal and state laws. Temporary construction activities would occur adjacent to existing residences and would temporarily disrupt the existing multi-use trail. However, once construction is completed the Proposed Action would meet several goals and policies of the City of Napa for flood protection.

Therefore, no additional impacts to land use and planning would occur and the impacts would remain the same as presented in the 1999 Final SEIS/EIR.

Mineral Resources

Although Napa County has been the site for historic mining activities, the Napa County General Plan states that the current geological opportunities for future mineral extraction are unknown (Napa County 2008). The State Department of Conservation, Office of Mine Reclamation has specified the Napa Quarry, Pope Creek Quarry, and American Canyon Quarry as active mines. The Proposed Action Area is not located near any of the three active mines. The closest active mine, Napa Quarry, is located approximately four miles away from the Proposed Action Area (DOC 2016).

The chief minerals presently mined in Napa County are aggregate and basalt rock used for concrete aggregate (Napa County 2008). According to the Office of Mine Reclamation, no mineral resource zones or gas fields are located in the Proposed Action Area (DOC 2016). Therefore, the Proposed Action Area would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state. Additionally, the Proposed Action Area is not located within an area known to contain mineral resources (DOC 2016). No locally important mineral resource recovery sites are located within the Proposed Action Area. Thus, the Proposed Action would not result in the loss of availability of a locally important mineral resource recovery site delineated in a local general plan, specific plan, or other land use plan.

The 1999 Final SEIS/EIR did not evaluate effects to mineral resources because these resources do not exist in the Proposed Action Area. Mineral resources would not be adversely affected by the Proposed Action. Therefore, no additional impacts to mineral resources would occur and the impacts would remain the same as presented in the 1999 Final SEIS/EIR.

Population and Housing

The Proposed Action Area is located in Napa County, in the City of Napa. Napa County has a total population of 138,319, and the City of Napa has a total population of 79,246 (U.S. Census American Community Survey (ACS) 2022A). The Proposed Action Area falls within Napa County's Census Tract 2005.03/2005.05 Block Group 2/2 (CT 114 BG 3). This block group has a total population of 2,729 (U.S. Census ACS 2022a). Napa County has a total of 55,448 housing units with 49,738 units occupied (U.S. Census ACS 2022b). The City of Napa has a total of 31,071 housing units with 29,356 units occupied. Census Tract 2005.03 BG 2 has a total of 234 housing units, of which 212 are occupied. Census Tract 2005.05 BG 2 has a total of 425 housing units, 403 of which are occupied (U.S. Census ACS 2022b).

The Proposed Action would not create any new homes or businesses or expand existing roads or other infrastructure that could induce substantial unplanned population growth either directly or indirectly. Construction activities, and associated jobs, would be short term, temporary, and would not induce growth due to a need for worker housing. It is anticipated that construction workers would commute to and from the Proposed Action Area from nearby cities. The Proposed Action would meet the long-term objectives of the USACE, City of Napa, County of Napa, and District to provide increased flood protection along the Napa River.

Acquisition of property and up to 16 tiny vacation rental homes in the RiverPointe property would be required. The tiny vacation rental homes would potentially be removed as a result of the Proposed Action construction. These homes are not permanent residences and are relocated annually out of the floodway during the winter months due to the risk of flooding onsite. After the re-alignment of Burrows Court within the RiverPointe property to accommodate the proposed floodwall construction, some tiny vacation rental homes would be reinstalled depending on the remaining space available. The Proposed Action may require other minor acquisitions of property for flood easements within the Proposed Action Area. All property acquisitions would abide by applicable federal and state laws. Therefore, the Proposed Action would not displace existing people or permanent housing that would require the construction of replacement housing.

The 1999 Final SEIS/EIR concluded that the Overall Flood Protection Project would not result in adverse effects to population and housing in the Proposed Action Area through the implementation of fair and equitable federal and state relocation treatments. The current Proposed Action would not displace or require the relocation of permanent residences or businesses and would not require the construction of additional housing. Potential effects of the Proposed Action to environmental justice populations and socioeconomics are discussed separately in Sections 3.6 and 3.15, respectively, of this document. Growth-inducing effects of the Proposed Action are also discussed in Chapter 5 of this document. The current evaluation and findings for the Proposed Action's effects on population and housing remains consistent with the previous conclusions in Sections 3.9 and 6.1 of the 1999 Final SEIS/EIR. Therefore, no additional impacts to population and housing would occur and the impacts would remain the same as presented in the 1999 Final SEIS/EIR.

Public Services

The Proposed Action Area is served by the City of Napa Police and Fire departments. The California Highway Patrol also provides law enforcement on public roads in the area. The closest public recreational facility is Lake Park located approximately 0.25 miles west of the Proposed Action Area (City of Napa 2022). The Napa River Trail also runs through the Proposed Action Area.

No new government buildings or facilities would be created as a result of the Proposed Action. Construction of the Proposed Action would be short term, and therefore, there is no need for increased fire protection or police protection. Construction of the Proposed Action would not require any road closures; thus, no detour routes are needed to manage traffic in the event of a fire or other emergency. Additionally, roads used for site access are anticipated to be wide enough to directly accommodate the use of construction trucks. All vehicle parking, equipment, and materials would be located and stockpiled at designated staging areas and would not block any access roads. Upon completion of construction, fire and police response times would remain consistent with current response times. Therefore, fire and police protection response times would not be affected. The Proposed Action is not anticipated to induce population growth, as discussed in Chapter 5, so additional fire or police protection services to maintain service ratios would not be required and no other impacts related to fire protection and police protection are anticipated.

There are no schools, public facilities, or parks located within the Proposed Action Area. The Napa River Trail runs through the Proposed Action Area and would be temporarily disturbed and closed during construction. Effects of the Proposed Action on the Napa River Trail are discussed further in Section 3.14, *Recreation*. The Proposed Action would not result in adverse physical impacts on schools, public facilities, or parks in adjacent communities. The Proposed Action would also not generate an increase in population that would affect these public services. No new housing would be created as a result of the Proposed Action, so no additional school capacity, service requirements, or parks would be needed to serve new populations.

The 1999 Final SEIS/EIR concluded that the Overall Flood Protection Project would not result in adverse effects to public services in the Proposed Action Area. The current Proposed Action would not result in substantial adverse physical impacts associated with the construction of or need for new or physically altered governmental facilities, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services. The Proposed Action would also not require the construction of or need for new schools, public facilities, or parks as the result of an increase in population. Potential effects of the Proposed Action to recreational resources are discussed separately in Section 3.14 of this document. The current evaluation and findings for the Proposed Action's effects on public services remains consistent with the previous conclusion of the 1999 Final SEIS/EIR. Therefore, no additional impacts to public services would occur and the impacts would remain the same as presented in the 1999 Final SEIS/EIR.

Socioeconomics

The Proposed Action would not create any new homes or businesses or expand existing roads or other infrastructure that could induce substantial unplanned population growth either directly or indirectly. Construction activities, and associated jobs, would be short term, temporary, and would not induce growth due to a need for worker housing. It is anticipated that construction workers would commute to and from the Proposed Action Area from nearby cities.

The Proposed Action Alternative would meet the long-term objectives of the USACE, City of Napa, County of Napa, and District to provide increased flood protection along the Napa River. The Proposed Action Alternative would not create new employment opportunities during operations and maintenance and would not create conditions for population growth.

The Proposed Action Area consists of mainly urban and residential uses north of Lincoln Avenue, and some commercial uses south of Lincoln Avenue. There is no affordable housing located in the Proposed Action Area or vicinity. As stated in Section 3.12, *Land Use*, minor or partial property

acquisitions would be required for construction of the Proposed Action Alternative. The eastern most row of trailer vacation rental units closest to the river at the RiverPointe property would be removed for construction of the proposed floodwall. These vacation rental units are not permanent residences and are relocated out of the floodway during the winter months typically due to the risk of flooding onsite. After the re-alignment of Burrows Court within the RiverPointe property to accommodate the proposed floodwall construction, some vacation rental units would be reinstalled depending on the remaining space available. The Proposed Action may require other property acquisitions for flood easements within the Proposed Action Area. All property acquisitions would abide by applicable federal and state laws. The Proposed Action Alternative would not displace existing housing, including affordable housing, without providing appropriate compensation and/or relocation assistance.

There is no affordable housing located in the Proposed Action Area or vicinity. There is also no affordable housing planned for in the Proposed Action Area. The Proposed Action Area is largely built out and there are no future plans for additional housing in the Proposed Action Area. Construction, operations, and maintenance of the Proposed Action Alternative would not conflict with any plans for housing, affordable or otherwise, in the Proposed Action Area or the City of Napa. The Proposed Action Alternative would not impede the City's ability to provide affordable and available housing for a range of income levels.

One business south of Lincoln Avenue would be acquired to accommodate the proposed floodwall alignment. The District would abide by state and federal regulations to acquire this property and would offer fair market value. Other minor or partial property acquisitions would be required for construction of the Proposed Action Alternative as stated in Section 3.12, *Land Use*. The eastern most row of trailer vacation rental units closest to the river at the RiverPointe property would be removed for construction of the proposed floodwall. These vacation rental units are not permanent residences and are relocated out of the floodway during the winter months typically due to the risk of flooding onsite. After the re-alignment of Burrows Court within the RiverPointe property to accommodate the proposed floodwall construction, some vacation rental units would be reinstalled depending on the remaining space available. The Proposed Action Alternative may require other property acquisitions for flood easements within the Proposed Action Area. All property acquisitions would abide by applicable federal and state laws. The Proposed Action Alternative would not displace existing businesses without providing appropriate compensation and/or relocation assistance.

Construction and operation of the Proposed Action would not be inconsistent with the City of Napa's General Plan goals and policies or the City's land use and zoning designations. The Proposed Action is intended to meet the long-term objectives of the USACE, City of Napa, County of Napa, and District to provide increased flood protection along the Napa River. With implementation of the Proposed Action Alternative, housing and businesses that are currently within the 100-year floodplain in the Proposed Action Area would gain flood protection, which could improve conditions for economic development.

Based on the 2019 American Community Survey, census tracts in the Proposed Action Area include Census Tracts 200.03 and 2005.05. Approximately 19.6 percent of the population in Census Tract 2005.03 is below the poverty level, and approximately 8 percent of the population in Census Tract 2005.05 is in poverty. These percentages are higher than the County's percentage of 7.8 percent of the population below the poverty level. The median household income in Census Tracts 2005.03 and 2005.05 is \$66,683 and \$78,315, respectively, compared to the County median household income of \$88,596. Minority populations make up 25.3 percent of the population in Census Tract

2005.03, 33.1 percent of the population in Census Tract 2005.05, and 26.6 percent of the population of the County (U.S. Census Data 2019).

Based on this data, median household income levels and populations below the poverty level are more predominant in the Proposed Action Area when compared to the County as a whole. The population of Census Tract 2005.05 also has a greater percentage of minorities when compared to the County. As such, the Proposed Action could result in disproportionate adverse impacts during construction, such as short-term air quality emissions, transportation and circulation effects, and construction noise impacts. The effects of the Proposed Action Alternative on low income and minority populations are evaluated further in Section 3.6, *Environmental Justice*.

However, short-term construction impacts would be reduced to a less than significant level with BMPs and mitigation measures as described in the other sections in this chapter. Once construction is complete, the Proposed Action Alternative would provide increase flood protection in the Proposal Action area and the City of Napa; therefore, environmental hazards related to flooding would be reduced for the entire population and would not disproportionately impact low-income, very-low income, or minority populations. Therefore, no additional impacts to socioeconomics would occur and the impacts would remain the same as presented in the 1999 Final SEIS/EIR.

Wildfire

In 2016, Napa County partnered with CAL FIRE to develop the Napa County Fire Department's Strategic Plan (Napa County 2016). The Plan focuses on fire prevention, natural resource management, and fire suppression efforts including the following strategic initiatives:

1. Develop a Comprehensive Succession Management and Professional Development Workforce Plan.
2. Develop and Maintain a Standards Cover Document.
3. Identify, Evaluate, and Implement Best Industry Practices.
4. Develop a Comprehensive Marketing and Communications Plan.
5. Refine, Embrace, and be the Values of the Napa County Fire Department.
6. Develop a Fixed Assets, Apparatus, Equipment, and Capital Improvement Plan.
7. Develop a Comprehensive Strategic Approach to Technology.
8. Develop and Implement an Effective Communication Process System.
9. Maintain an Up-to-Date Emergency Operations Plan Consistent with County Office of Emergency Services, California Emergency Management Agency, and FEMA Guidelines.
10. Develop, Implement, and Maintain an Emergency Communications Center/Dispatch Plan.

The Proposed Action is located in a Local Responsibility Area (LRA) and is not in a very high fire hazard severity zone (CAL FIRE 2022). An LRA is an area where local agencies are responsible for fire suppression rather than the state. While wildfire risk is not high in the Proposed Action Area, should an evacuation occur, emergency evacuation routes and response plans would not be impaired by construction because road closures and traffic detours would not be required. Additionally, the construction contractor would implement fire protection measures onsite to reduce the risk of fire hazards during construction. Therefore, the Proposed Action would not interfere or sustainably impair an adopted emergency response plan or emergency evacuation plan.

The Proposed Action is not located in an area with steep slopes. While winds may be present in the Napa Valley, construction and operation of the Proposed Action would not change wind conditions or available fuels. Construction of the Proposed Action would involve the use of motorized vehicles and equipment, and it has been documented that equipment use is one of the top causes of fire in California (CAL FIRE 2019). However, with the implementation of fire protection measures by the contractor onsite, the risk of fire hazards would be avoided and minimized. Therefore, the Proposed Action would not exacerbate wildfire risks and is not anticipated to expose construction workers or nearby residences to increased pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

There are PG&E overhead power lines in the Proposed Action Area and underground utilities that would need to be relocated to avoid conflicts with the proposed floodwalls. The USACE and District would coordinate with PG&E to relocate overhead power poles that fall within the Proposed Action Area footprint and would conflict with the proposed floodwall construction. These power poles would be relocated outside of the proposed floodwall construction area but still within the Proposed Action Area.

Similarly, the USACE and District would coordinate with the City of Napa to relocate and realign existing City utilities that fall within the Proposed Action Area footprint and would conflict with the proposed floodwall construction. These conflicting City utilities would be relocated outside of the proposed floodwall construction area but still within the Proposed Action Area. Effects of the Proposed Action on utilities and service systems including infrastructure are discussed further in Section 3.19, *Utilities and Service Systems*.

Relocation of these overhead power poles and utilities would not increase fire risks in the Proposed Action Area because the contractor would implement fire protection measures onsite to reduce risk of fire hazards during construction. Furthermore, the long-term impact of utility relocations as a part of the Proposed Action would not be significant because PG&E already conducts routine maintenance for these existing power lines, such as vegetation thinning and trimming under and near power lines, to reduce the fire risk near existing facilities and would continue to perform this maintenance. Therefore, although implementation of the Proposed Action would require the relocation of power lines and utilities, it would not exacerbate fire risks or result in temporary or ongoing impacts to the environment.

The Proposed Action Area is located in an area that is considered low in landslide susceptibility due to the predominantly flat topography and lack of steep slopes. The proposed floodwalls would be constructed on the top of the existing west bank of the Napa River, setback from the existing slope. Furthermore, the intent of the Proposed Action is to provide increased flood protection for the Proposed Action Area. Therefore, the Proposed Action would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

The 1999 Final SEIS/EIR did not evaluate effects to wildfire because this topic was not added to the CEQA Guidelines until 2018. As described above, the Proposed Action is not located in a very high fire hazard severity zone, is served by an LRA, and would not exacerbate fire risks or cause additional fire risks in the Proposed Action Area. Therefore, no additional impacts to wildfire would occur and the impacts would remain the same as presented in the 1999 Final SEIS/EIR.

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Appendix F. Air Quality and Greenhouse Gas Emissions Modeling

CalEEMod Input Data

Project Name: Napa River/Napa Creek Flood Protection Project
Project Location: BAAQMD
CEC Climate Zone: 4
Land Use Setting: Urban
Operational Year: 2027

Land Use

Land Use Type	Land Use Subtype	Unit Amount	Size Metric	Lot Acreage	SF
Parking	Other Non-Asphalt Surfaces	19.76	Acre	19.76	860,745.60

Note: Total area of disturbance including staging (14.37 acres + 5.39 acres staging/stockpiling)

Construction Schedule

Construction Phase Name	Phase Type	Start Date	End Date	# Days/Week	Total Days	# one-way worker trips/day	# one-way vendor trips/day	# Total haul trips	Worker Trip Length	Vendor Trip Length	Haul Trip Length
Site Preparation	Site Preparation	7/10/2025	8/15/2025	5	27	60	0	0	10.8	7.3	30
Construction	Building Construction	8/13/2025	7/6/2026	5	234	60	2	38	10.8	7.3	30
Site Cleanup	Site Preparation	7/1/2026	7/14/2026	5	10	60	0	0	10.8	7.3	30

Notes/Assumptions:

Project construction schedule was provided by project engineers
Work hours would be Monday through Friday (5 days/week) for 10 hours per day per project description
Maximum of 30 workers per day per project description
Each worker would commute to the project site in a separate vehicle
Haul trucks (3) and dump trucks (16) are accounted under the hauling truck trips
Number of truck trips = number of trucks x 2
Haul trip length is 30 miles one-way per project description
Worker and Vendor trip lengths are default
Concrete mixer truck trips are accounted as vendor trips

List of Construction Equipment

Equipment Name	CalEEMod Equipment Name	Count	Hours/Day	HP	Load Factor	Notes
Site Preparation						
Water Truck	Off-Highway Trucks	1	2	350	0.38	Adjusted default hp to 350 hp and hours to 2 hours per day
Loader	Tractor/Loader/Backhoe	1	10	97	0.37	default
Excavator	Excavators	1	10	158	0.38	default
Construction						
Forklift	Forklift	1	10	89	0.2	default
Dozer	Rubber Tired Dozer	1	10	247	0.4	default
Crane	Crane	1	10	231	0.29	default
Pump	Pumps	1	10	84	0.74	default
Pile Driver	Other Construction Equipment	1	10	170	0.42	Adjusted default hp to 170 hp
Vibratory Compactor	Plate Compactor	1	10	8	0.43	default
Grader	Grader	1	10	187	0.41	default
Ashpalt Paver	Paver	1	10	130	0.41	default
Hydroseeding Truck	Off-Highway Trucks	1	7	134	0.38	Adjusted default hp to 134 hp and hours to 7 hours per day
Manlift	Aerial Lift	1	10	63	0.31	default
Marooka Tracked Carrier	Tractor/Loader/Backhoe	1	10	74	0.37	Adjusted default hp to 74 hp
Site Cleanup						
Backhoe	Tractor/Loader/Backhoe	1	10	97	0.37	default
Pickup Truck	Off-Highway Trucks	1	10	402	0.38	default

Notes/Assumptions:

Equipment data is from the project description

Horsepower was adjusted for some equipment based on the typical horsepower for that specific equipment

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	19.76	Acre	19.76	860,745.60	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	4			Operational Year	2027
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - total area of disturbance including staging

Construction Phase - construction schedule provided by project engineer

Off-road Equipment - from project description

Off-road Equipment - from project description

Off-road Equipment - from project description

Grading - .

Trips and VMT - from project description

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	300.00	234.00
tblConstructionPhase	NumDays	10.00	27.00

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tblConstructionPhase	PhaseEndDate	11/25/2026	7/6/2026
tblConstructionPhase	PhaseEndDate	8/20/2025	8/15/2025
tblConstructionPhase	PhaseStartDate	10/2/2025	8/13/2025
tblConstructionPhase	PhaseStartDate	8/7/2025	7/10/2025
tblGrading	AcresOfGrading	0.00	19.76
tblGrading	AcresOfGrading	0.00	19.76
tblOffRoadEquipment	HorsePower	97.00	74.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	172.00	170.00
tblOffRoadEquipment	HorsePower	402.00	134.00
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.41	0.41
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.31	0.31
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Dozers
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Pavers
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	UsageHours	7.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	7.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripNumber	0.00	38.00
tblTripsAndVMT	VendorTripNumber	141.00	2.00
tblTripsAndVMT	WorkerTripNumber	5.00	60.00
tblTripsAndVMT	WorkerTripNumber	8.00	60.00
tblTripsAndVMT	WorkerTripNumber	362.00	60.00

2.0 Emissions Summary**2.1 Overall Construction****Unmitigated Construction**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	0.1674	1.5345	1.6305	3.4300e-003	0.0417	0.0650	0.1066	9.4500e-003	0.0603	0.0698	0.0000	300.5645	300.5645	0.0794	9.7000e-004	302.8361
2026	0.2135	1.9772	2.0268	4.3200e-003	0.0455	0.0835	0.1291	0.0105	0.0776	0.0881	0.0000	378.8541	378.8541	0.1005	1.1100e-003	381.6991
Maximum	0.2135	1.9772	2.0268	4.3200e-003	0.0455	0.0835	0.1291	0.0105	0.0776	0.0881	0.0000	378.8541	378.8541	0.1005	1.1100e-003	381.6991

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	0.1674	1.5345	1.6305	3.4300e-003	0.0417	0.0650	0.1066	9.4500e-003	0.0603	0.0698	0.0000	300.5641	300.5641	0.0794	9.7000e-004	302.8358
2026	0.2135	1.9772	2.0268	4.3200e-003	0.0455	0.0835	0.1291	0.0105	0.0776	0.0881	0.0000	378.8537	378.8537	0.1005	1.1100e-003	381.6987
Maximum	0.2135	1.9772	2.0268	4.3200e-003	0.0455	0.0835	0.1291	0.0105	0.0776	0.0881	0.0000	378.8537	378.8537	0.1005	1.1100e-003	381.6987

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	7-10-2025	10-9-2025	0.7328	0.7328
2	10-10-2025	1-9-2026	1.0682	1.0682

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3	1-10-2026	4-9-2026	1.0444	1.0444
4	4-10-2026	7-9-2026	1.0405	1.0405
5	7-10-2026	9-30-2026	0.0111	0.0111
		Highest	1.0682	1.0682

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0736	0.0000	1.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.5000e-004	3.5000e-004	0.0000	0.0000	3.8000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0736	0.0000	1.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.5000e-004	3.5000e-004	0.0000	0.0000	3.8000e-004

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category											MT/yr					
tons/yr																
Area	0.0736	0.0000	1.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.5000e-004	3.5000e-004	0.0000	0.0000	3.8000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0736	0.0000	1.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.5000e-004	3.5000e-004	0.0000	0.0000	3.8000e-004

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/10/2025	8/15/2025	5	27	
2	Construction	Building Construction	8/13/2025	7/6/2026	5	234	
3	Cleanup	Site Preparation	7/1/2026	7/14/2026	5	10	

Acres of Grading (Site Preparation Phase): 19.76

Acres of Grading (Grading Phase): 0

Acres of Paving: 19.76

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Cleanup	Rubber Tired Dozers	0	8.00	247	0.40
Cleanup	Tractors/Loaders/Backhoes	1	10.00	97	0.37
Construction	Cranes	1	10.00	231	0.29
Site Preparation	Excavators	1	10.00	158	0.38
Site Preparation	Off-Highway Trucks	1	2.00	350	0.38
Construction	Forklifts	1	10.00	89	0.20
Construction	Generator Sets	0	8.00	84	0.74
Construction	Rubber Tired Dozers	1	10.00	247	0.40
Construction	Pumps	1	10.00	84	0.74
Construction	Other Construction Equipment	1	10.00	170	0.42
Construction	Plate Compactors	1	10.00	8	0.43
Construction	Graders	1	10.00	187	0.41
Construction	Pavers	1	10.00	130	0.42
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Construction	Off-Highway Trucks	1	7.00	134	0.38
Construction	Tractors/Loaders/Backhoes	1	10.00	74	0.37
Construction	Aerial Lifts	1	10.00	63	0.31
Site Preparation	Tractors/Loaders/Backhoes	1	10.00	97	0.37
Construction	Welders	0	8.00	46	0.45
Cleanup	Off-Highway Trucks	1	10.00	402	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Cleanup	2	60.00	0.00	0.00	10.80	7.30	30.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	60.00	0.00	0.00	10.80	7.30	30.00	LD_Mix	HDT_Mix	HHDT
Construction	11	60.00	2.00	38.00	10.80	7.30	30.00	LD_Mix	HDT_Mix	HHDT

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.1 Mitigation Measures Construction****3.2 Site Preparation - 2025****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0105	0.0000	0.0105	1.1300e-003	0.0000	1.1300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.4700e-003	0.0517	0.1023	1.8000e-004		2.2300e-003	2.2300e-003		2.0500e-003	2.0500e-003	0.0000	15.7502	15.7502	5.0900e-003	0.0000	15.8776
Total	6.4700e-003	0.0517	0.1023	1.8000e-004	0.0105	2.2300e-003	0.0127	1.1300e-003	2.0500e-003	3.1800e-003	0.0000	15.7502	15.7502	5.0900e-003	0.0000	15.8776

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8200e-003	1.1400e-003	0.0157	5.0000e-005	6.4000e-003	3.0000e-005	6.4300e-003	1.7000e-003	3.0000e-005	1.7300e-003	0.0000	4.6334	4.6334	1.2000e-004	1.2000e-004	4.6722
Total	1.8200e-003	1.1400e-003	0.0157	5.0000e-005	6.4000e-003	3.0000e-005	6.4300e-003	1.7000e-003	3.0000e-005	1.7300e-003	0.0000	4.6334	4.6334	1.2000e-004	1.2000e-004	4.6722

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0105	0.0000	0.0105	1.1300e-003	0.0000	1.1300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.4700e-003	0.0517	0.1023	1.8000e-004		2.2300e-003	2.2300e-003		2.0500e-003	2.0500e-003	0.0000	15.7502	15.7502	5.0900e-003	0.0000	15.8776
Total	6.4700e-003	0.0517	0.1023	1.8000e-004	0.0105	2.2300e-003	0.0127	1.1300e-003	2.0500e-003	3.1800e-003	0.0000	15.7502	15.7502	5.0900e-003	0.0000	15.8776

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8200e-003	1.1400e-003	0.0157	5.0000e-005	6.4000e-003	3.0000e-005	6.4300e-003	1.7000e-003	3.0000e-005	1.7300e-003	0.0000	4.6334	4.6334	1.2000e-004	1.2000e-004	4.6722
Total	1.8200e-003	1.1400e-003	0.0157	5.0000e-005	6.4000e-003	3.0000e-005	6.4300e-003	1.7000e-003	3.0000e-005	1.7300e-003	0.0000	4.6334	4.6334	1.2000e-004	1.2000e-004	4.6722

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Construction - 2025****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1522	1.4713	1.4523	2.9800e-003		0.0625	0.0625		0.0581	0.0581	0.0000	260.2211	260.2211	0.0736	0.0000	262.0619
Total	0.1522	1.4713	1.4523	2.9800e-003		0.0625	0.0625		0.0581	0.0581	0.0000	260.2211	260.2211	0.0736	0.0000	262.0619

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	1.5900e-003	3.4000e-004	1.0000e-005	2.1000e-004	1.0000e-005	2.2000e-004	6.0000e-005	1.0000e-005	7.0000e-005	0.0000	0.6995	0.6995	2.0000e-005	1.1000e-004	0.7331
Vendor	1.0000e-004	4.4800e-003	1.3500e-003	2.0000e-005	6.6000e-004	3.0000e-005	6.9000e-004	1.9000e-004	3.0000e-005	2.2000e-004	0.0000	1.9277	1.9277	4.0000e-005	2.8000e-004	2.0137
Worker	6.8200e-003	4.2600e-003	0.0586	1.9000e-004	0.0239	1.1000e-004	0.0241	6.3700e-003	1.0000e-004	6.4700e-003	0.0000	17.3325	17.3325	4.4000e-004	4.5000e-004	17.4777
Total	6.9400e-003	0.0103	0.0603	2.2000e-004	0.0248	1.5000e-004	0.0250	6.6200e-003	1.4000e-004	6.7600e-003	0.0000	19.9597	19.9597	5.0000e-004	8.4000e-004	20.2244

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1522	1.4713	1.4523	2.9800e-003		0.0625	0.0625		0.0581	0.0581	0.0000	260.2208	260.2208	0.0736	0.0000	262.0616
Total	0.1522	1.4713	1.4523	2.9800e-003		0.0625	0.0625		0.0581	0.0581	0.0000	260.2208	260.2208	0.0736	0.0000	262.0616

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	1.5900e-003	3.4000e-004	1.0000e-005	2.1000e-004	1.0000e-005	2.2000e-004	6.0000e-005	1.0000e-005	7.0000e-005	0.0000	0.6995	0.6995	2.0000e-005	1.1000e-004	0.7331
Vendor	1.0000e-004	4.4800e-003	1.3500e-003	2.0000e-005	6.6000e-004	3.0000e-005	6.9000e-004	1.9000e-004	3.0000e-005	2.2000e-004	0.0000	1.9277	1.9277	4.0000e-005	2.8000e-004	2.0137
Worker	6.8200e-003	4.2600e-003	0.0586	1.9000e-004	0.0239	1.1000e-004	0.0241	6.3700e-003	1.0000e-004	6.4700e-003	0.0000	17.3325	17.3325	4.4000e-004	4.5000e-004	17.4777
Total	6.9400e-003	0.0103	0.0603	2.2000e-004	0.0248	1.5000e-004	0.0250	6.6200e-003	1.4000e-004	6.7600e-003	0.0000	19.9597	19.9597	5.0000e-004	8.4000e-004	20.2244

3.3 Construction - 2026**Unmitigated Construction On-Site**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2004	1.9375	1.9124	3.9200e-003		0.0824	0.0824		0.0765	0.0765	0.0000	342.6674	342.6674	0.0970	0.0000	345.0914
Total	0.2004	1.9375	1.9124	3.9200e-003		0.0824	0.0824		0.0765	0.0765	0.0000	342.6674	342.6674	0.0970	0.0000	345.0914

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.0000e-005	2.0700e-003	4.5000e-004	1.0000e-005	2.7000e-004	2.0000e-005	2.9000e-004	8.0000e-005	2.0000e-005	9.0000e-005	0.0000	0.9026	0.9026	3.0000e-005	1.4000e-004	0.9460
Vendor	1.3000e-004	5.8600e-003	1.7500e-003	3.0000e-005	8.7000e-004	3.0000e-005	9.1000e-004	2.5000e-004	3.0000e-005	2.9000e-004	0.0000	2.4920	2.4920	5.0000e-005	3.7000e-004	2.6030
Worker	8.4800e-003	5.1100e-003	0.0728	2.4000e-004	0.0315	1.4000e-004	0.0317	8.3900e-003	1.3000e-004	8.5200e-003	0.0000	22.1241	22.1241	5.4000e-004	5.6000e-004	22.3043
Total	8.6400e-003	0.0130	0.0750	2.8000e-004	0.0327	1.9000e-004	0.0329	8.7200e-003	1.8000e-004	8.9000e-003	0.0000	25.5187	25.5187	6.2000e-004	1.0700e-003	25.8533

Mitigated Construction On-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2004	1.9375	1.9124	3.9200e-003		0.0824	0.0824		0.0765	0.0765	0.0000	342.6670	342.6670	0.0970	0.0000	345.0910
Total	0.2004	1.9375	1.9124	3.9200e-003		0.0824	0.0824		0.0765	0.0765	0.0000	342.6670	342.6670	0.0970	0.0000	345.0910

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.0000e-005	2.0700e-003	4.5000e-004	1.0000e-005	2.7000e-004	2.0000e-005	2.9000e-004	8.0000e-005	2.0000e-005	9.0000e-005	0.0000	0.9026	0.9026	3.0000e-005	1.4000e-004	0.9460
Vendor	1.3000e-004	5.8600e-003	1.7500e-003	3.0000e-005	8.7000e-004	3.0000e-005	9.1000e-004	2.5000e-004	3.0000e-005	2.9000e-004	0.0000	2.4920	2.4920	5.0000e-005	3.7000e-004	2.6030
Worker	8.4800e-003	5.1100e-003	0.0728	2.4000e-004	0.0315	1.4000e-004	0.0317	8.3900e-003	1.3000e-004	8.5200e-003	0.0000	22.1241	22.1241	5.4000e-004	5.6000e-004	22.3043
Total	8.6400e-003	0.0130	0.0750	2.8000e-004	0.0327	1.9000e-004	0.0329	8.7200e-003	1.8000e-004	8.9000e-003	0.0000	25.5187	25.5187	6.2000e-004	1.0700e-003	25.8533

3.4 Cleanup - 2026**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category	tons/yr										MT/yr					
Fugitive Dust					0.0105	0.0000	0.0105	1.1300e-003	0.0000	1.1300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.8300e-003	0.0264	0.0339	1.0000e-004		9.8000e-004	9.8000e-004		9.0000e-004	9.0000e-004	0.0000	9.0045	9.0045	2.9100e-003	0.0000	9.0774
Total	3.8300e-003	0.0264	0.0339	1.0000e-004	0.0105	9.8000e-004	0.0115	1.1300e-003	9.0000e-004	2.0300e-003	0.0000	9.0045	9.0045	2.9100e-003	0.0000	9.0774

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.4000e-004	3.8000e-004	5.4700e-003	2.0000e-005	2.3700e-003	1.0000e-005	2.3800e-003	6.3000e-004	1.0000e-005	6.4000e-004	0.0000	1.6635	1.6635	4.0000e-005	4.0000e-005	1.6770
Total	6.4000e-004	3.8000e-004	5.4700e-003	2.0000e-005	2.3700e-003	1.0000e-005	2.3800e-003	6.3000e-004	1.0000e-005	6.4000e-004	0.0000	1.6635	1.6635	4.0000e-005	4.0000e-005	1.6770

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category	tons/yr										MT/yr					
Fugitive Dust					0.0105	0.0000	0.0105	1.1300e-003	0.0000	1.1300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.8300e-003	0.0264	0.0339	1.0000e-004		9.8000e-004	9.8000e-004		9.0000e-004	9.0000e-004	0.0000	9.0045	9.0045	2.9100e-003	0.0000	9.0773
Total	3.8300e-003	0.0264	0.0339	1.0000e-004	0.0105	9.8000e-004	0.0115	1.1300e-003	9.0000e-004	2.0300e-003	0.0000	9.0045	9.0045	2.9100e-003	0.0000	9.0773

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.4000e-004	3.8000e-004	5.4700e-003	2.0000e-005	2.3700e-003	1.0000e-005	2.3800e-003	6.3000e-004	1.0000e-005	6.4000e-004	0.0000	1.6635	1.6635	4.0000e-005	4.0000e-005	1.6770
Total	6.4000e-004	3.8000e-004	5.4700e-003	2.0000e-005	2.3700e-003	1.0000e-005	2.3800e-003	6.3000e-004	1.0000e-005	6.4000e-004	0.0000	1.6635	1.6635	4.0000e-005	4.0000e-005	1.6770

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.554639	0.059030	0.188043	0.120453	0.022437	0.005729	0.010970	0.007473	0.000973	0.000534	0.026133	0.000855	0.00273

5.0 Energy Detail

Historical Energy Use: N

[illegible]

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0736	0.0000	1.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.5000e-004	3.5000e-004	0.0000	0.0000	3.8000e-004
Unmitigated	0.0736	0.0000	1.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.5000e-004	3.5000e-004	0.0000	0.0000	3.8000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

SubCategory tons/yr											MT/yr					
Architectural Coating	0.0180					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0556					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	1.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.5000e-004	3.5000e-004	0.0000	0.0000	3.8000e-004
Total	0.0736	0.0000	1.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.5000e-004	3.5000e-004	0.0000	0.0000	3.8000e-004

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory tons/yr											MT/yr					
Architectural Coating	0.0180					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0556					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	1.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.5000e-004	3.5000e-004	0.0000	0.0000	3.8000e-004
Total	0.0736	0.0000	1.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.5000e-004	3.5000e-004	0.0000	0.0000	3.8000e-004

7.0 Water Detail**7.1 Mitigation Measures Water**

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use**Unmitigated**

Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use Mgal	MT/yr			
Other Non-Asphalt Surfaces 0 / 0	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000

Mitigated

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Indoor/Outdoor Use		Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
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Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Napa River/Napa Creek Flood Protection Project

Bay Area AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	19.76	Acre	19.76	860,745.60	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	4			Operational Year	2027
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - total area of disturbance including staging

Construction Phase - construction schedule provided by project engineer

Off-road Equipment - from project description

Off-road Equipment - from project description

Off-road Equipment - from project description

Grading - .

Trips and VMT - from project description

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	300.00	234.00

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstructionPhase	NumDays	10.00	27.00
tblConstructionPhase	PhaseEndDate	11/25/2026	7/6/2026
tblConstructionPhase	PhaseEndDate	8/20/2025	8/15/2025
tblConstructionPhase	PhaseStartDate	10/2/2025	8/13/2025
tblConstructionPhase	PhaseStartDate	8/7/2025	7/10/2025
tblGrading	AcresOfGrading	0.00	19.76
tblGrading	AcresOfGrading	0.00	19.76
tblOffRoadEquipment	HorsePower	97.00	74.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	172.00	170.00
tblOffRoadEquipment	HorsePower	402.00	134.00
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.41	0.41
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.31	0.31
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Dozers
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Pavers

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	UsageHours	7.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	7.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripNumber	0.00	38.00
tblTripsAndVMT	VendorTripNumber	141.00	2.00
tblTripsAndVMT	WorkerTripNumber	5.00	60.00
tblTripsAndVMT	WorkerTripNumber	8.00	60.00
tblTripsAndVMT	WorkerTripNumber	362.00	60.00

2.0 Emissions Summary**2.1 Overall Construction (Maximum Daily Emission)**

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	3.7794	33.2307	38.8588	0.0808	1.7797	1.4089	3.1886	0.3504	1.3073	1.6576	0.0000	7,831.0767	7,831.0767	2.0426	0.0268	7,890.1197
2026	4.0489	34.6554	37.9262	0.0878	3.0991	1.4397	4.5388	0.4928	1.3356	1.8284	0.0000	8,504.2706	8,504.2706	2.2672	0.0256	8,568.5815
Maximum	4.0489	34.6554	38.8588	0.0878	3.0991	1.4397	4.5388	0.4928	1.3356	1.8284	0.0000	8,504.2706	8,504.2706	2.2672	0.0268	8,568.5815

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	3.7794	33.2307	38.8588	0.0808	1.7797	1.4089	3.1886	0.3504	1.3073	1.6576	0.0000	7,831.0767	7,831.0767	2.0426	0.0268	7,890.1197
2026	4.0489	34.6554	37.9262	0.0878	3.0991	1.4397	4.5388	0.4928	1.3356	1.8284	0.0000	8,504.2706	8,504.2706	2.2672	0.0256	8,568.5815
Maximum	4.0489	34.6554	38.8588	0.0878	3.0991	1.4397	4.5388	0.4928	1.3356	1.8284	0.0000	8,504.2706	8,504.2706	2.2672	0.0268	8,568.5815

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
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Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4034	2.0000e-005	2.0100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.3200e-003	4.3200e-003	1.0000e-005		4.6100e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.4034	2.0000e-005	2.0100e-003	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	1.0000e-005	1.0000e-005		4.3200e-003	4.3200e-003	1.0000e-005	0.0000	4.6100e-003

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4034	2.0000e-005	2.0100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.3200e-003	4.3200e-003	1.0000e-005		4.6100e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.4034	2.0000e-005	2.0100e-003	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	1.0000e-005	1.0000e-005		4.3200e-003	4.3200e-003	1.0000e-005	0.0000	4.6100e-003

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/10/2025	8/15/2025	5	27	
2	Construction	Building Construction	8/13/2025	7/6/2026	5	234	
3	Cleanup	Site Preparation	7/1/2026	7/14/2026	5	10	

Acres of Grading (Site Preparation Phase): 19.76

Acres of Grading (Grading Phase): 0

Acres of Paving: 19.76

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Cleanup	Rubber Tired Dozers	0	8.00	247	0.40
Cleanup	Tractors/Loaders/Backhoes	1	10.00	97	0.37
Construction	Cranes	1	10.00	231	0.29
Site Preparation	Excavators	1	10.00	158	0.38

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Site Preparation	Off-Highway Trucks	1	2.00	350	0.38
Construction	Forklifts	1	10.00	89	0.20
Construction	Generator Sets	0	8.00	84	0.74
Construction	Rubber Tired Dozers	1	10.00	247	0.40
Construction	Pumps	1	10.00	84	0.74
Construction	Other Construction Equipment	1	10.00	170	0.42
Construction	Plate Compactors	1	10.00	8	0.43
Construction	Graders	1	10.00	187	0.41
Construction	Pavers	1	10.00	130	0.42
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Construction	Off-Highway Trucks	1	7.00	134	0.38
Construction	Tractors/Loaders/Backhoes	1	10.00	74	0.37
Construction	Aerial Lifts	1	10.00	63	0.31
Site Preparation	Tractors/Loaders/Backhoes	1	10.00	97	0.37
Construction	Welders	0	8.00	46	0.45
Cleanup	Off-Highway Trucks	1	10.00	402	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Cleanup	2	60.00	0.00	0.00	10.80	7.30	30.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	60.00	0.00	0.00	10.80	7.30	30.00	LD_Mix	HDT_Mix	HHDT
Construction	11	60.00	2.00	38.00	10.80	7.30	30.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction**3.2 Site Preparation - 2025****Unmitigated Construction On-Site**

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7761	0.0000	0.7761	0.0838	0.0000	0.0838			0.0000			0.0000
Off-Road	0.4796	3.8305	7.5785	0.0133		0.1653	0.1653		0.1521	0.1521		1,286.0483	1,286.0483	0.4159		1,296.4466
Total	0.4796	3.8305	7.5785	0.0133	0.7761	0.1653	0.9414	0.0838	0.1521	0.2359		1,286.0483	1,286.0483	0.4159		1,296.4466

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1422	0.0749	1.2448	3.9900e-003	0.4929	2.2100e-003	0.4951	0.1307	2.0400e-003	0.1328		403.8102	403.8102	9.0400e-003	9.0700e-003	406.7383
Total	0.1422	0.0749	1.2448	3.9900e-003	0.4929	2.2100e-003	0.4951	0.1307	2.0400e-003	0.1328		403.8102	403.8102	9.0400e-003	9.0700e-003	406.7383

Mitigated Construction On-Site

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7761	0.0000	0.7761	0.0838	0.0000	0.0838			0.0000			0.0000
Off-Road	0.4796	3.8305	7.5785	0.0133		0.1653	0.1653		0.1521	0.1521	0.0000	1,286.0483	1,286.0483	0.4159		1,296.4466
Total	0.4796	3.8305	7.5785	0.0133	0.7761	0.1653	0.9414	0.0838	0.1521	0.2359	0.0000	1,286.0483	1,286.0483	0.4159		1,296.4466

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1422	0.0749	1.2448	3.9900e-003	0.4929	2.2100e-003	0.4951	0.1307	2.0400e-003	0.1328		403.8102	403.8102	9.0400e-003	9.0700e-003	406.7383
Total	0.1422	0.0749	1.2448	3.9900e-003	0.4929	2.2100e-003	0.4951	0.1307	2.0400e-003	0.1328		403.8102	403.8102	9.0400e-003	9.0700e-003	406.7383

3.3 Construction - 2025**Unmitigated Construction On-Site**

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.0130	29.1347	28.7577	0.0590		1.2384	1.2384		1.1504	1.1504		5,680.0927	5,680.0927	1.6072		5,720.2735
Total	3.0130	29.1347	28.7577	0.0590		1.2384	1.2384		1.1504	1.1504		5,680.0927	5,680.0927	1.6072		5,720.2735

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.4000e-004	0.0303	6.6800e-003	1.4000e-004	4.2600e-003	2.7000e-004	4.5300e-003	1.1700e-003	2.6000e-004	1.4200e-003		15.2633	15.2633	5.2000e-004	2.4200e-003	15.9974
Vendor	2.0600e-003	0.0855	0.0263	3.9000e-004	0.0136	5.2000e-004	0.0141	3.9000e-003	5.0000e-004	4.4000e-003		42.0519	42.0519	8.8000e-004	6.2100e-003	43.9255
Worker	0.1422	0.0749	1.2448	3.9900e-003	0.4929	2.2100e-003	0.4951	0.1307	2.0400e-003	0.1328		403.8102	403.8102	9.0400e-003	9.0700e-003	406.7383
Total	0.1447	0.1906	1.2778	4.5200e-003	0.5107	3.0000e-003	0.5137	0.1358	2.8000e-003	0.1386		461.1255	461.1255	0.0104	0.0177	466.6612

Mitigated Construction On-Site

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.0130	29.1347	28.7577	0.0590		1.2384	1.2384		1.1504	1.1504	0.0000	5,680.0927	5,680.0927	1.6072		5,720.2735
Total	3.0130	29.1347	28.7577	0.0590		1.2384	1.2384		1.1504	1.1504	0.0000	5,680.0927	5,680.0927	1.6072		5,720.2735

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.4000e-004	0.0303	6.6800e-003	1.4000e-004	4.2600e-003	2.7000e-004	4.5300e-003	1.1700e-003	2.6000e-004	1.4200e-003		15.2633	15.2633	5.2000e-004	2.4200e-003	15.9974
Vendor	2.0600e-003	0.0855	0.0263	3.9000e-004	0.0136	5.2000e-004	0.0141	3.9000e-003	5.0000e-004	4.4000e-003		42.0519	42.0519	8.8000e-004	6.2100e-003	43.9255
Worker	0.1422	0.0749	1.2448	3.9900e-003	0.4929	2.2100e-003	0.4951	0.1307	2.0400e-003	0.1328		403.8102	403.8102	9.0400e-003	9.0700e-003	406.7383
Total	0.1447	0.1906	1.2778	4.5200e-003	0.5107	3.0000e-003	0.5137	0.1358	2.8000e-003	0.1386		461.1255	461.1255	0.0104	0.0177	466.6612

3.3 Construction - 2026**Unmitigated Construction On-Site**

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.0130	29.1347	28.7577	0.0590		1.2384	1.2384		1.1504	1.1504		5,680.0927	5,680.0927	1.6072		5,720.2735
Total	3.0130	29.1347	28.7577	0.0590		1.2384	1.2384		1.1504	1.1504		5,680.0927	5,680.0927	1.6072		5,720.2735

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.3000e-004	0.0300	6.7000e-003	1.4000e-004	4.2600e-003	2.7000e-004	4.5300e-003	1.1700e-003	2.5000e-004	1.4200e-003		14.9567	14.9567	5.2000e-004	2.3700e-003	15.6764
Vendor	2.0200e-003	0.0850	0.0260	3.8000e-004	0.0136	5.2000e-004	0.0141	3.9000e-003	5.0000e-004	4.4000e-003		41.2812	41.2812	8.8000e-004	6.1000e-003	43.1196
Worker	0.1342	0.0682	1.1735	3.8700e-003	0.4929	2.1000e-003	0.4950	0.1307	1.9400e-003	0.1327		391.3890	391.3890	8.2500e-003	8.5700e-003	394.1495
Total	0.1366	0.1832	1.2061	4.3900e-003	0.5107	2.8900e-003	0.5136	0.1358	2.6900e-003	0.1385		447.6268	447.6268	9.6500e-003	0.0170	452.9454

Mitigated Construction On-Site

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.0130	29.1347	28.7577	0.0590		1.2384	1.2384		1.1504	1.1504	0.0000	5,680.0927	5,680.0927	1.6072		5,720.2735
Total	3.0130	29.1347	28.7577	0.0590		1.2384	1.2384		1.1504	1.1504	0.0000	5,680.0927	5,680.0927	1.6072		5,720.2735

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.3000e-004	0.0300	6.7000e-003	1.4000e-004	4.2600e-003	2.7000e-004	4.5300e-003	1.1700e-003	2.5000e-004	1.4200e-003		14.9567	14.9567	5.2000e-004	2.3700e-003	15.6764
Vendor	2.0200e-003	0.0850	0.0260	3.8000e-004	0.0136	5.2000e-004	0.0141	3.9000e-003	5.0000e-004	4.4000e-003		41.2812	41.2812	8.8000e-004	6.1000e-003	43.1196
Worker	0.1342	0.0682	1.1735	3.8700e-003	0.4929	2.1000e-003	0.4950	0.1307	1.9400e-003	0.1327		391.3890	391.3890	8.2500e-003	8.5700e-003	394.1495
Total	0.1366	0.1832	1.2061	4.3900e-003	0.5107	2.8900e-003	0.5136	0.1358	2.6900e-003	0.1385		447.6268	447.6268	9.6500e-003	0.0170	452.9454

3.4 Cleanup - 2026**Unmitigated Construction On-Site**

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.0956	0.0000	2.0956	0.2263	0.0000	0.2263			0.0000			0.0000
Off-Road	0.7651	5.2694	6.7888	0.0205		0.1963	0.1963		0.1806	0.1806		1,985.1621	1,985.1621	0.6420		2,001.2131
Total	0.7651	5.2694	6.7888	0.0205	2.0956	0.1963	2.2919	0.2263	0.1806	0.4069		1,985.1621	1,985.1621	0.6420		2,001.2131

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1342	0.0682	1.1735	3.8700e-003	0.4929	2.1000e-003	0.4950	0.1307	1.9400e-003	0.1327		391.3890	391.3890	8.2500e-003	8.5700e-003	394.1495
Total	0.1342	0.0682	1.1735	3.8700e-003	0.4929	2.1000e-003	0.4950	0.1307	1.9400e-003	0.1327		391.3890	391.3890	8.2500e-003	8.5700e-003	394.1495

Mitigated Construction On-Site

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.0956	0.0000	2.0956	0.2263	0.0000	0.2263			0.0000			0.0000
Off-Road	0.7651	5.2694	6.7888	0.0205		0.1963	0.1963		0.1806	0.1806	0.0000	1,985.1621	1,985.1621	0.6420		2,001.2131
Total	0.7651	5.2694	6.7888	0.0205	2.0956	0.1963	2.2919	0.2263	0.1806	0.4069	0.0000	1,985.1621	1,985.1621	0.6420		2,001.2131

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1342	0.0682	1.1735	3.8700e-003	0.4929	2.1000e-003	0.4950	0.1307	1.9400e-003	0.1327		391.3890	391.3890	8.2500e-003	8.5700e-003	394.1495
Total	0.1342	0.0682	1.1735	3.8700e-003	0.4929	2.1000e-003	0.4950	0.1307	1.9400e-003	0.1327		391.3890	391.3890	8.2500e-003	8.5700e-003	394.1495

4.0 Operational Detail - Mobile

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.554639	0.059030	0.188043	0.120453	0.022437	0.005729	0.010970	0.007473	0.000973	0.000534	0.026133	0.000855	0.0027

5.0 Energy Detail

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4034	2.0000e-005	2.0100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.3200e-003	4.3200e-003	1.0000e-005		4.6100e-003
Unmitigated	0.4034	2.0000e-005	2.0100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.3200e-003	4.3200e-003	1.0000e-005		4.6100e-003

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**6.2 Area by SubCategory****Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0984					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3049					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.9000e-004	2.0000e-005	2.0100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.3200e-003	4.3200e-003	1.0000e-005		4.6100e-003
Total	0.4034	2.0000e-005	2.0100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.3200e-003	4.3200e-003	1.0000e-005		4.6100e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0984					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3049					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.9000e-004	2.0000e-005	2.0100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.3200e-003	4.3200e-003	1.0000e-005		4.6100e-003
Total	0.4034	2.0000e-005	2.0100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.3200e-003	4.3200e-003	1.0000e-005		4.6100e-003

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Napa River/Napa Creek Flood Protection Project

Bay Area AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	19.76	Acre	19.76	860,745.60	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	4			Operational Year	2027
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - total area of disturbance including staging

Construction Phase - construction schedule provided by project engineer

Off-road Equipment - from project description

Off-road Equipment - from project description

Off-road Equipment - from project description

Grading - .

Trips and VMT - from project description

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	300.00	234.00
tblConstructionPhase	NumDays	10.00	27.00
tblConstructionPhase	PhaseEndDate	11/25/2026	7/6/2026

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstructionPhase	PhaseEndDate	8/20/2025	8/15/2025
tblConstructionPhase	PhaseStartDate	10/2/2025	8/13/2025
tblConstructionPhase	PhaseStartDate	8/7/2025	7/10/2025
tblGrading	AcresOfGrading	0.00	19.76
tblGrading	AcresOfGrading	0.00	19.76
tblOffRoadEquipment	HorsePower	97.00	74.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	172.00	170.00
tblOffRoadEquipment	HorsePower	402.00	134.00
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.41	0.41
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.31	0.31
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Dozers
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Pavers
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	UsageHours	7.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	7.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripNumber	0.00	38.00
tblTripsAndVMT	VendorTripNumber	141.00	2.00
tblTripsAndVMT	WorkerTripNumber	5.00	60.00
tblTripsAndVMT	WorkerTripNumber	8.00	60.00
tblTripsAndVMT	WorkerTripNumber	362.00	60.00

2.0 Emissions Summary**2.1 Overall Construction (Maximum Daily Emission)****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2025	3.7887	33.2723	38.7697	0.0803	1.7797	1.4089	3.1886	0.3504	1.3073	1.6576	0.0000	7,774.1396	7,774.1396	2.0452	0.0295	7,834.0636
2026	4.0588	34.6938	37.8469	0.0873	3.0991	1.4397	4.5388	0.4928	1.3356	1.8284	0.0000	8,449.1632	8,449.1632	2.2696	0.0282	8,514.3041
Maximum	4.0588	34.6938	38.7697	0.0873	3.0991	1.4397	4.5388	0.4928	1.3356	1.8284	0.0000	8,449.1632	8,449.1632	2.2696	0.0295	8,514.3041

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	3.7887	33.2723	38.7697	0.0803	1.7797	1.4089	3.1886	0.3504	1.3073	1.6576	0.0000	7,774.1396	7,774.1396	2.0452	0.0295	7,834.0636
2026	4.0588	34.6938	37.8469	0.0873	3.0991	1.4397	4.5388	0.4928	1.3356	1.8284	0.0000	8,449.1632	8,449.1632	2.2696	0.0282	8,514.3041
Maximum	4.0588	34.6938	38.7697	0.0873	3.0991	1.4397	4.5388	0.4928	1.3356	1.8284	0.0000	8,449.1632	8,449.1632	2.2696	0.0295	8,514.3041

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category	lb/day										lb/day					
Area	0.4034	2.0000e-005	2.0100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.3200e-003	4.3200e-003	1.0000e-005		4.6100e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.4034	2.0000e-005	2.0100e-003	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	1.0000e-005	1.0000e-005		4.3200e-003	4.3200e-003	1.0000e-005	0.0000	4.6100e-003

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4034	2.0000e-005	2.0100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.3200e-003	4.3200e-003	1.0000e-005		4.6100e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.4034	2.0000e-005	2.0100e-003	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	1.0000e-005	1.0000e-005		4.3200e-003	4.3200e-003	1.0000e-005	0.0000	4.6100e-003

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/10/2025	8/15/2025	5	27	
2	Construction	Building Construction	8/13/2025	7/6/2026	5	234	
3	Cleanup	Site Preparation	7/1/2026	7/14/2026	5	10	

Acres of Grading (Site Preparation Phase): 19.76**Acres of Grading (Grading Phase): 0****Acres of Paving: 19.76****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Cleanup	Rubber Tired Dozers	0	8.00	247	0.40
Cleanup	Tractors/Loaders/Backhoes	1	10.00	97	0.37
Construction	Cranes	1	10.00	231	0.29
Site Preparation	Excavators	1	10.00	158	0.38
Site Preparation	Off-Highway Trucks	1	2.00	350	0.38
Construction	Forklifts	1	10.00	89	0.20
Construction	Generator Sets	0	8.00	84	0.74
Construction	Rubber Tired Dozers	1	10.00	247	0.40
Construction	Pumps	1	10.00	84	0.74
Construction	Other Construction Equipment	1	10.00	170	0.42
Construction	Plate Compactors	1	10.00	8	0.43
Construction	Graders	1	10.00	187	0.41
Construction	Pavers	1	10.00	130	0.42
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Construction	Off-Highway Trucks	1	7.00	134	0.38
Construction	Tractors/Loaders/Backhoes	1	10.00	74	0.37
Construction	Aerial Lifts	1	10.00	63	0.31

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Site Preparation	Tractors/Loaders/Backhoes	1	10.00	97	0.37
Construction	Welders	0	8.00	46	0.45
Cleanup	Off-Highway Trucks	1	10.00	402	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Cleanup	2	60.00	0.00	0.00	10.80	7.30	30.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	60.00	0.00	0.00	10.80	7.30	30.00	LD_Mix	HDT_Mix	HHDT
Construction	11	60.00	2.00	38.00	10.80	7.30	30.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction**3.2 Site Preparation - 2025****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7761	0.0000	0.7761	0.0838	0.0000	0.0838			0.0000			0.0000
Off-Road	0.4796	3.8305	7.5785	0.0133		0.1653	0.1653		0.1521	0.1521		1,286.0483	1,286.0483	0.4159		1,296.4466
Total	0.4796	3.8305	7.5785	0.0133	0.7761	0.1653	0.9414	0.0838	0.1521	0.2359		1,286.0483	1,286.0483	0.4159		1,296.4466

Unmitigated Construction Off-Site

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1469	0.0923	1.1997	3.7100e-003	0.4929	2.2100e-003	0.4951	0.1307	2.0400e-003	0.1328		375.3053	375.3053	0.0103	0.0104	378.6715
Total	0.1469	0.0923	1.1997	3.7100e-003	0.4929	2.2100e-003	0.4951	0.1307	2.0400e-003	0.1328		375.3053	375.3053	0.0103	0.0104	378.6715

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7761	0.0000	0.7761	0.0838	0.0000	0.0838			0.0000			0.0000
Off-Road	0.4796	3.8305	7.5785	0.0133		0.1653	0.1653		0.1521	0.1521	0.0000	1,286.0483	1,286.0483	0.4159		1,296.4466
Total	0.4796	3.8305	7.5785	0.0133	0.7761	0.1653	0.9414	0.0838	0.1521	0.2359	0.0000	1,286.0483	1,286.0483	0.4159		1,296.4466

Mitigated Construction Off-Site

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1469	0.0923	1.1997	3.7100e-003	0.4929	2.2100e-003	0.4951	0.1307	2.0400e-003	0.1328		375.3053	375.3053	0.0103	0.0104	378.6715
Total	0.1469	0.0923	1.1997	3.7100e-003	0.4929	2.2100e-003	0.4951	0.1307	2.0400e-003	0.1328		375.3053	375.3053	0.0103	0.0104	378.6715

3.3 Construction - 2025**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.0130	29.1347	28.7577	0.0590		1.2384	1.2384		1.1504	1.1504		5,680.0927	5,680.0927	1.6072		5,720.2735
Total	3.0130	29.1347	28.7577	0.0590		1.2384	1.2384		1.1504	1.1504		5,680.0927	5,680.0927	1.6072		5,720.2735

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Hauling	4.1000e-004	0.0320	6.7400e-003	1.4000e-004	4.2600e-003	2.7000e-004	4.5300e-003	1.1700e-003	2.6000e-004	1.4200e-003		15.2733	15.2733	5.2000e-004	2.4200e-003	16.0079
Vendor	1.9800e-003	0.0905	0.0273	3.9000e-004	0.0136	5.3000e-004	0.0141	3.9000e-003	5.0000e-004	4.4000e-003		42.1147	42.1147	8.7000e-004	6.2300e-003	43.9927
Worker	0.1469	0.0923	1.1997	3.7100e-003	0.4929	2.2100e-003	0.4951	0.1307	2.0400e-003	0.1328		375.3053	375.3053	0.0103	0.0104	378.6715
Total	0.1493	0.2148	1.2337	4.2400e-003	0.5107	3.0100e-003	0.5137	0.1358	2.8000e-003	0.1386		432.6933	432.6933	0.0117	0.0191	438.6720

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.0130	29.1347	28.7577	0.0590		1.2384	1.2384		1.1504	1.1504	0.0000	5,680.0927	5,680.0927	1.6072		5,720.2735
Total	3.0130	29.1347	28.7577	0.0590		1.2384	1.2384		1.1504	1.1504	0.0000	5,680.0927	5,680.0927	1.6072		5,720.2735

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.1000e-004	0.0320	6.7400e-003	1.4000e-004	4.2600e-003	2.7000e-004	4.5300e-003	1.1700e-003	2.6000e-004	1.4200e-003		15.2733	15.2733	5.2000e-004	2.4200e-003	16.0079
Vendor	1.9800e-003	0.0905	0.0273	3.9000e-004	0.0136	5.3000e-004	0.0141	3.9000e-003	5.0000e-004	4.4000e-003		42.1147	42.1147	8.7000e-004	6.2300e-003	43.9927

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Worker	0.1469	0.0923	1.1997	3.7100e-003	0.4929	2.2100e-003	0.4951	0.1307	2.0400e-003	0.1328		375.3053	375.3053	0.0103	0.0104	378.6715
Total	0.1493	0.2148	1.2337	4.2400e-003	0.5107	3.0100e-003	0.5137	0.1358	2.8000e-003	0.1386		432.6933	432.6933	0.0117	0.0191	438.6720

3.3 Construction - 2026**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.0130	29.1347	28.7577	0.0590		1.2384	1.2384		1.1504	1.1504		5,680.0927	5,680.0927	1.6072		5,720.2735
Total	3.0130	29.1347	28.7577	0.0590		1.2384	1.2384		1.1504	1.1504		5,680.0927	5,680.0927	1.6072		5,720.2735

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.1000e-004	0.0317	6.7600e-003	1.4000e-004	4.2600e-003	2.7000e-004	4.5300e-003	1.1700e-003	2.5000e-004	1.4200e-003		14.9666	14.9666	5.2000e-004	2.3700e-003	15.6867
Vendor	1.9400e-003	0.0900	0.0269	3.9000e-004	0.0136	5.2000e-004	0.0141	3.9000e-003	5.0000e-004	4.4000e-003		41.3438	41.3438	8.7000e-004	6.1100e-003	43.1866
Worker	0.1392	0.0840	1.1334	3.6000e-003	0.4929	2.1000e-003	0.4950	0.1307	1.9400e-003	0.1327		363.7990	363.7990	9.4600e-003	9.8500e-003	366.9721
Total	0.1415	0.2057	1.1670	4.1300e-003	0.5107	2.8900e-003	0.5136	0.1358	2.6900e-003	0.1385		420.1094	420.1094	0.0109	0.0183	425.8454

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.0130	29.1347	28.7577	0.0590		1.2384	1.2384		1.1504	1.1504	0.0000	5,680.0927	5,680.0927	1.6072		5,720.2735
Total	3.0130	29.1347	28.7577	0.0590		1.2384	1.2384		1.1504	1.1504	0.0000	5,680.0927	5,680.0927	1.6072		5,720.2735

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.1000e-004	0.0317	6.7600e-003	1.4000e-004	4.2600e-003	2.7000e-004	4.5300e-003	1.1700e-003	2.5000e-004	1.4200e-003		14.9666	14.9666	5.2000e-004	2.3700e-003	15.6867
Vendor	1.9400e-003	0.0900	0.0269	3.9000e-004	0.0136	5.2000e-004	0.0141	3.9000e-003	5.0000e-004	4.4000e-003		41.3438	41.3438	8.7000e-004	6.1100e-003	43.1866
Worker	0.1392	0.0840	1.1334	3.6000e-003	0.4929	2.1000e-003	0.4950	0.1307	1.9400e-003	0.1327		363.7990	363.7990	9.4600e-003	9.8500e-003	366.9721
Total	0.1415	0.2057	1.1670	4.1300e-003	0.5107	2.8900e-003	0.5136	0.1358	2.6900e-003	0.1385		420.1094	420.1094	0.0109	0.0183	425.8454

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.0956	0.0000	2.0956	0.2263	0.0000	0.2263			0.0000			0.0000
Off-Road	0.7651	5.2694	6.7888	0.0205		0.1963	0.1963		0.1806	0.1806		1,985.1621	1,985.1621	0.6420		2,001.2131
Total	0.7651	5.2694	6.7888	0.0205	2.0956	0.1963	2.2919	0.2263	0.1806	0.4069		1,985.1621	1,985.1621	0.6420		2,001.2131

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1392	0.0840	1.1334	3.6000e-003	0.4929	2.1000e-003	0.4950	0.1307	1.9400e-003	0.1327		363.7990	363.7990	9.4600e-003	9.8500e-003	366.9721
Total	0.1392	0.0840	1.1334	3.6000e-003	0.4929	2.1000e-003	0.4950	0.1307	1.9400e-003	0.1327		363.7990	363.7990	9.4600e-003	9.8500e-003	366.9721

Mitigated Construction On-Site

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.0956	0.0000	2.0956	0.2263	0.0000	0.2263			0.0000			0.0000
Off-Road	0.7651	5.2694	6.7888	0.0205		0.1963	0.1963		0.1806	0.1806	0.0000	1,985.1621	1,985.1621	0.6420		2,001.2131
Total	0.7651	5.2694	6.7888	0.0205	2.0956	0.1963	2.2919	0.2263	0.1806	0.4069	0.0000	1,985.1621	1,985.1621	0.6420		2,001.2131

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1392	0.0840	1.1334	3.6000e-003	0.4929	2.1000e-003	0.4950	0.1307	1.9400e-003	0.1327		363.7990	363.7990	9.4600e-003	9.8500e-003	366.9721
Total	0.1392	0.0840	1.1334	3.6000e-003	0.4929	2.1000e-003	0.4950	0.1307	1.9400e-003	0.1327		363.7990	363.7990	9.4600e-003	9.8500e-003	366.9721

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.554639	0.059030	0.188043	0.120453	0.022437	0.005729	0.010970	0.007473	0.000973	0.000534	0.026133	0.000855	0.002730

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4034	2.0000e-005	2.0100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.3200e-003	4.3200e-003	1.0000e-005		4.6100e-003
Unmitigated	0.4034	2.0000e-005	2.0100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.3200e-003	4.3200e-003	1.0000e-005		4.6100e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Architectural Coating	0.0984					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3049					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.9000e-004	2.0000e-005	2.0100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.3200e-003	4.3200e-003	1.0000e-005		4.6100e-003
Total	0.4034	2.0000e-005	2.0100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.3200e-003	4.3200e-003	1.0000e-005		4.6100e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0984					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3049					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.9000e-004	2.0000e-005	2.0100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.3200e-003	4.3200e-003	1.0000e-005		4.6100e-003
Total	0.4034	2.0000e-005	2.0100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.3200e-003	4.3200e-003	1.0000e-005		4.6100e-003

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Napa River/Napa Creek Flood Protection Project - Bay Area AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

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Appendix G. Biological Resources

Appendix G – Biological Resources

Methods for Determining Existing Conditions

The following information sources and field activities were used to identify existing conditions of the Proposed Project Area and the biological resources occurring or potentially occurring in the area.

Literature Review

To assess aquatic and terrestrial biological resources with the potential to occur within the Proposed Project Area, nine United States Geological Survey quadrants (USGS quads) were queried in the California Department of Fish and Wildlife (CDFW) CNDDDB (CDFW 2023a). These USGS quads included Mt. George, Cordelia, Capell Valley, Sonoma, Yountville, Rutherford, Napa, Cuttings Wharf, and Sears Point. Information on federally listed species was obtained from a query of the USFWS Information for Planning and Consulting (IPaC) database (USFWS 2023a). In addition, the following references were reviewed:

- USFWS Critical Habitat Portal (USFWS 2023b);
- USFWS National Wetland Inventory (USFWS 2023c);
- Napa County RCD annual fish surveys (Napa County RCD 2023);
- California Native Plant Society (CNPS) species list query for the Proposed Project Area (CNPS 2023);
- California Department of Fish and Wildlife (CDFW), California Natural Diversity Database (CNDDDB) species list query for a 5-mile buffer around the Proposed Project Area (CDFW 2023a);
- CDFW Spotted Owl Database (CDFW 2023b);
- CDFW Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2023c);
- CDFW Special Animals List (CDFW 2023d);
- Soil map unit descriptions for the Proposed Project Area (U.S. Department of Agriculture 2023); and
- eBird records for the Proposed Project Area (eBird 2023).

Additional information on the environmental setting was collected from general sources on special-status plants and wildlife (e.g., California Bird Species of Special Concern [Shuford and Gardali 2008], California Amphibian and Reptile Species of Special Concern [Thomson et al. 2016], and California Wildlife Habitat Relationships information [CDFW 2023e]); and existing reports and memorandums addressing biological resources in the Proposed Project Area, including, but not limited to, the Napa River Flood Reduction Action 1999 Final SEIS/EIR (USACE and District 1999).

Field Surveys

A delineation of aquatic resources was conducted in July 2023 by HDR. For the purposes of the aquatic resources delineation, the “field delineation survey area” was equal to the Proposed Project Area and included the footprint of floodwall components where the Proposed Project would be

constructed within and adjacent to the Napa River, including access routes and staging areas plus a 100-foot buffer (HDR 2023).

A biological reconnaissance survey was also conducted in the Proposed Project Area in July 2023 and April 2024 by HDR to create a baseline biological resources map with vegetation communities, conspicuous special-status species, and special-status species habitat. Field observations of vegetation communities and special-status species were digitized into a GIS and georeferenced to produce land cover maps as shown on **Figure G-1**.

The field mapping was prepared consistent with the Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities (California Department of Fish and Wildlife 2018). HDR conducted vegetation mapping in accordance with CDFW's List of Vegetation Alliances and Associations (or Natural Communities List) (CDFW 2021). This list is based on A Manual of California Vegetation, Second Edition (Sawyer et al. 2009), which is the California expression of the National Vegetation Classification. HDR mapped vegetation communities and land covers at the alliance level; however, where appropriate, vegetation communities not included in this list were mapped to accurately describe the vegetation present within the Proposed Project Area. The vegetation communities were then cross-walked to the descriptions outlined in the California Wildlife Habitat Relationships Classifications (CDFW 2023e).

HDR compiled a general inventory of plant and animal species detected by sight, calls, tracks, scat, or other signs as part of the field survey and assessed the potential for special-status species occurrence. HDR also mapped observable sensitive resources, including flowering annual plants, shrubs and trees, and conspicuous wildlife (i.e., birds and some reptiles commonly accepted as regionally sensitive by CNPS, CDFW, or USFWS). No focused surveys for plant or wildlife species were performed. Field observations of vegetation communities and special-status plants were digitized into a GIS and georeferenced to produce land cover maps, as shown on **Figure G-1**.

Figure G-1. Land Cover Types (Page 1 of 5)



Figure G-1. Land Cover Types (Page 2 of 5)

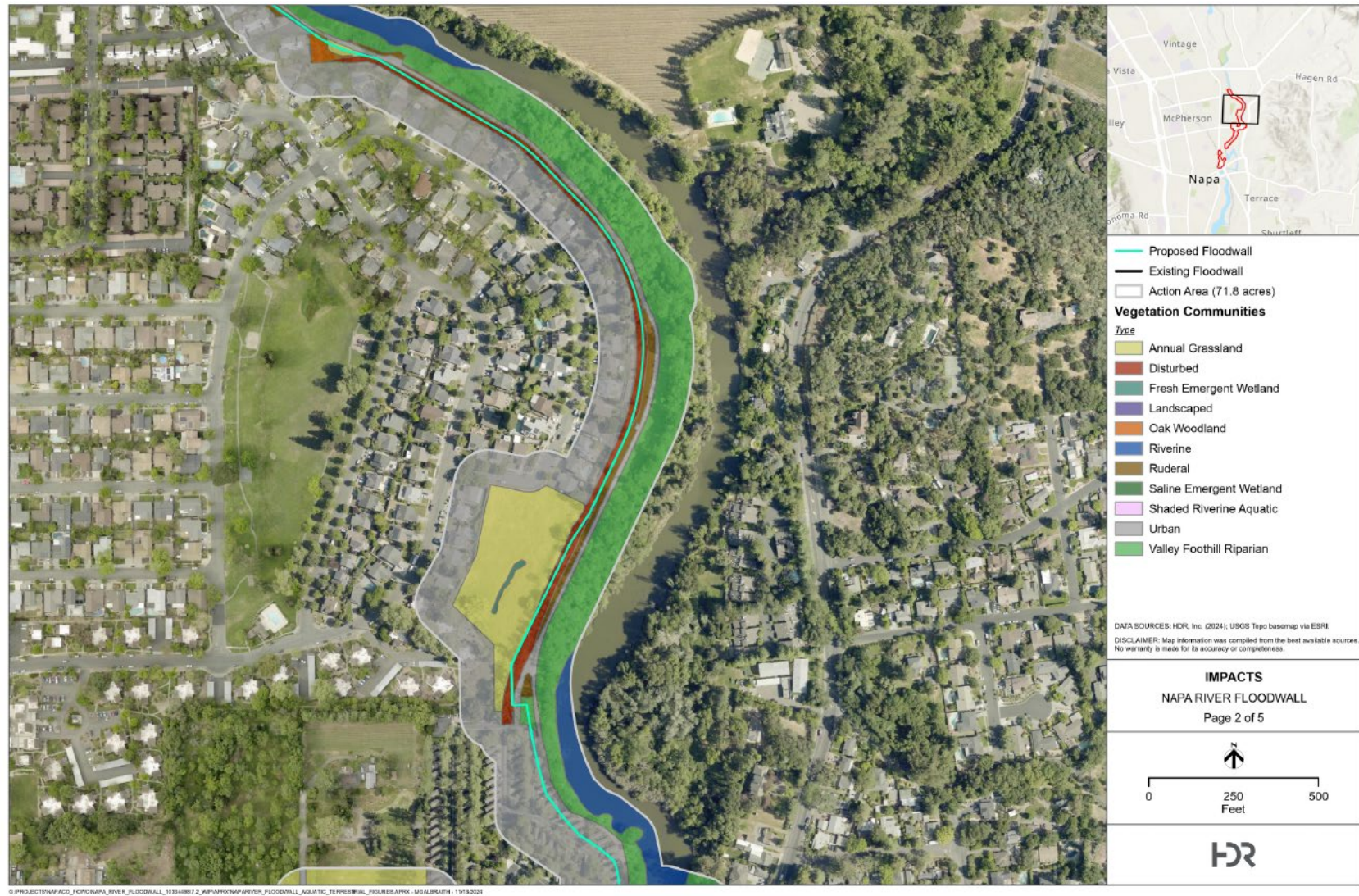


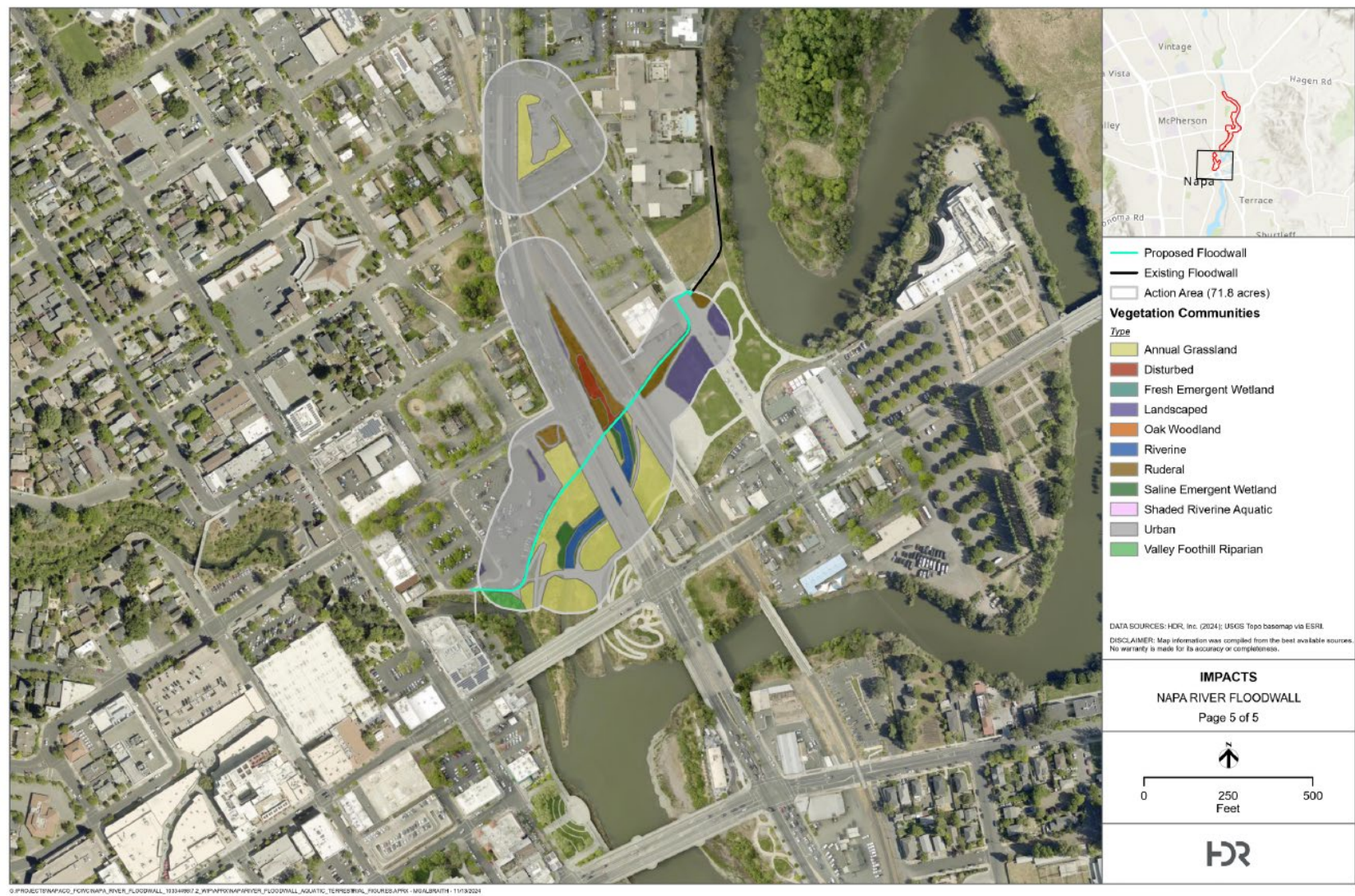
Figure G-1. Land Cover Types (Page 3 of 5)



Figure G-1. Land Cover Types (Page 4 of 5)



Figure G-1. Land Cover Types (Page 5 of 5)



Existing Conditions

Land Cover

Descriptions of all vegetation communities and land cover types found to occur throughout the Proposed Project Area (Sawyer et al. 2009; CDFW 2023e) are provided below. Table 3.13-1 in Section 3.13 provides the acreage for each of vegetation communities and land cover types in the Proposed Project Area and **Figure G-1** depicts them over a current aerial image of the region. Some vegetation communities are deemed sensitive communities/habitats and are identified in local or regional plans, policies, or regulations, or by CDFW or USFWS. CDFW's Rarity Ranking follows NatureServe's Heritage Methodology (Faber-Langendoen et al. 2012; CDFW 2023f) in which communities are given a G (global) and S (State) rank ranging from 1 (very rare and threatened) to 5 (demonstrably secure). Natural Communities with ranks of S1-S3 are considered sensitive. Several sensitive communities were identified in the Proposed Project Area including oak woodland, valley foothill riparian, fresh emergent wetland, and saline emergent wetland.

Annual Grassland

California annual grassland is dominated by a dense to sparse cover of annual grasses. Typical species observed in the Proposed Project Area include soft chess (*Bromus hordeaceus*), ripgut grass (*Bromus diandrus*), wild oat (*Avena barbata*), filaree (*Erodium botrys*), milk thistle (*Silybum marianum*), sweet fennel (*Foeniculum vulgare*), Russian thistle (*Carduus pycnocephalus*), and yellow star thistle (*Centaurea solstitialis*). Scattered trees not associated with more extensive woodland vegetation also occur within grasslands in the Proposed Project Area. Species can include native California species such as blue oak (*Quercus douglasii*), valley oak (*Quercus lobata*), and coast live oak (*Quercus agrifolia*), and non-native species such as green wattle (*Acacia decurrens*), blue gum (*Eucalyptus globulus*), and English walnut (*Juglans regia*). Grasslands attract reptiles and amphibians such as western fence lizard (*Sceloporus occidentalis*) and Pacific slender salamander (*Batrachoseps attenuatus*), and birds including California quail (*Callipepla californica*), mourning dove (*Zenaida macroura*), and western meadowlark (*Sturnella neglecta*). Annual grassland occurs in the northern and southern portions of the Proposed Project Area adjacent to the riparian corridor and within vacant lands adjacent to the access routes. Some of these grassland areas are annually mowed by the City of Napa and are periodically used for temporary staging. Due to the surrounding urban setting and routine maintenance and associated disturbance to these areas, the annual grassland in the Proposed Project Area is deemed unsuitable to support special-status species.

Oak Woodland

California oak woodlands are tree communities dominated by a specific species of oak native to California (*Quercus* spp.) (Sawyer et al. 2009). Some species associated with coast live oak woodland include California buckeye (*Aesculus californica*), valley oak, blue oak, and interior live oak (*Quercus wislizeni*) in the woodland canopy. Like grasslands, oak woodlands attract a number of wildlife species, including black-tailed deer (*Odocoileus hemionus columbianus*), Stellar's jay, and acorn woodpecker. They also provide forage for raptors such as red-tailed hawk and great-horned owl (*Bubo virginianus*). The community observed in the Proposed Project Area was located in the northwestern section and dominated by mature coast live oak with annual grasses in the understory. The CDFW has designated the coast live oak woodland community with a rarity rank of G5S4 and therefore is considered sensitive (CDFW 2023f).

Valley Foothill Riparian

California riparian communities are tree and shrub communities dominated by hydrophytic (water-loving) species that rely on available groundwater or high water tables typically found along perennial and intermittent streams, rivers, and creeks. Common tree species in this cover type include sycamore (*Platanus* spp.), willows (*Salix* spp.), cottonwoods (*Populus* spp.), alder (*Alnus* spp.), maples (*Acer* spp.), and bay laurels (*Umbellularia* spp.). In the Proposed Project Area, the riparian corridor of the Napa River consists of the Valley foothill riparian community made up of Fremont cottonwood (*Populus fremontii* ssp. *fremontii*), California sycamore (*Platanus racemosa*), valley oak, coast live oak, box elder (*Acer negundo*), Arroyo willow (*Salix lasiolepis*), red willow (*Salix laevigata*), and California bay (*Umbellularia californica*). Understory shrubs include coyote brush (*Baccharis pilularis*), poison oak (*Toxicodendron diversilobum*), California blackberry (*Rubus ursinus*), and wild rose (*Rosa californica*) along the upper banks (Sawyer et al. 2009). The CDFW has designated this riparian forest community with a rarity rank of G3S3 and therefore is considered sensitive (CDFW 2023f).

Valley foothill riparian habitat and adjacent aquatic areas provide habitat for western toad (*Bufo boreas*), garter snake (*Thamnophis sirtalis*), gopher snake (*Pituophis melanoleucus*), and fish species such as mosquito fish (*Gambusia affinis*). These species in turn serve as forage for blue heron (*Ardea herodias*), great egret (*Casmerodius albus*), snowy egret (*Egretta thula*), and other bird species. Aquatic plants are typically abundant and provide aquatic food-chain support for insect larvae and water bugs such as stoneflies (*Plecoptera*), mayflies (*Ephemeroptera*), water beetles (*Coleoptera*), and true aquatic bugs (*Heteroptera*). Riparian areas are important foraging areas for Canada goose (*Branta canadensis*), mallard (*Anas platyrhynchos*), northern pintail (*Anas acuta*), and other waterfowl species, and aerial insect eaters such as scrub jays (*Aphelocoma coerulescens*), barn swallows (*Hirundo rustica*), mockingbirds (*Mimus polyglottus*), and several bat species. Common mammal species expected within this urbanized reach of the Napa River riparian corridor include California vole (*Microtus californicus*), deer mouse (*Peromyscus* sp.), raccoon (*Procyon lotor*), and striped skunk (*Mephitis mephitis*).

Fresh Emergent Wetland

Fresh emergent wetland is a broad term for depressions of freshwater wetlands on level to gently rolling land that dominate permanently or seasonally inundated areas with fresh water. This habitat is found throughout California, most commonly at elevations below 7,500 feet (Sawyer et al. 2009). Roots of fresh emergent wetland vegetation thrive in anaerobic environments; the limits of this habitat occur at the boundary of hydric and non-hydric soils. The composition of the plant community depends on the depth and flow rate of the water, but cattail (*Typha* spp.) and bulrush (*Schoenoplectus* spp.) are characteristic and perennial drainage systems, whereas rushes and ryegrasses are common in seasonal freshwater emergent wetlands (Sawyer et al. 2009). Fresh emergent wetland provides some of the most productive wildlife habitat in the state (Kramer 1988). Fresh emergent wetland has decreased in area over the last century due to drainage for agriculture and other uses. Because of this, CDFW has designated this wetland community as sensitive (CDFW 2023f).

A small seasonal drainage dominated by freshwater emergent wetland species, including perennial ryegrass (*Festuca perennis*) and umbrella sedge (*Cyperus eragrostis*), occurs in the northern portion of the Proposed Project Area in a small open field adjacent to the western levee bank. This drainage collects runoff from a nearby culvert outlet which drains stormwater runoff from the adjacent residential development and roadway. This drainage and surrounding disturbed grassland area is

annually mowed and maintained by the City of Napa, which uses it periodically for temporary staging. Because of the routine annual maintenance activities, this drainage is dominated by non-native species and does not inundate for prolonged periods. With the surrounding urban setting and routine maintenance and associated disturbance to this area, the freshwater emergent wetland in the Proposed Project Area is deemed unsuitable to support special-status species. Therefore, it would be characterized as unsuitable for listed aquatic wildlife like vernal pool fairy shrimp (*Branchinecta lynchi*) or rare plants such as Contra Costa goldfields (*Lasthenia conjugens*). No other freshwater emergent wetland communities were identified in the Proposed Project Area.

Saline Emergent Wetland

Similar to fresh emergent wetland, saline emergent wetland occurs in seasonally or perennially wet drainages or streams inundated with flows waters either derived from higher alkalinities or waters precipitation that ponds atop saline soils. This community is also deemed sensitive communities by CDFW (2023f). Dominant species of the series include California bulrush (*Schoenoplectus californicus*), baltic rush (*Juncus balticus*), common pickleweed (*Salicornia virginica*), seablite (*Suaeda calceoliformis*), jaumea (*Jaumea carnosa*), perennial ryegrass, and barley (*Hordeum murinum ssp. leporinum*) (Sawyer et al. 2009). Saline emergent wetland provides habitat for wildlife similar to other wetlands and riparian systems and of adjacent uplands in annual grassland, but also attracts waterfowl and shorebirds when flooded. Special-status species potentially associated with saline emergent wetland habitat in the Proposed Project Area includes Delta tule pea (*Lathyrus jepsonii var. jepsonii*) and salt marsh common yellowthroat (*Geothlypis trichas sinuosa*).

Several patches of saline emergent wetland vegetation occur along the edges of the Napa River and the dry bypass flow channel in the southern portion of the Proposed Project Area, dominated by California bulrush, cattail, and baltic rush indicative of brackish (mix of saline and freshwater) marsh habitat typically found in tidally influenced creeks in the Bay Area.

Urban/Landscaped

Urban and landscaped areas typically have a small diversity of trees, shrubs, and grasses, but greater productivity than natural grasslands due to abundant water and fertilizer (McBride and Reid 2008). Examples include residential yards, golf courses, parks, and school grounds. Non-native landscape species and invasive weeds are common. Many portions of the Proposed Project Area primarily support horticultural vegetation in landscaped areas or are essentially devoid of vegetation; therefore, no series description applies to these areas. Natural ecological functions in developed areas have been greatly reduced due to paving and landscaping. Urban and landscaped cover types were noted throughout the Proposed Project Area.

Species composition in these areas is typical of highly disturbed urban areas and includes only species that thrive in urban settings. These species include European starling, western meadowlark, Brewer's blackbird, scrub jay, song sparrow (*Melospiza melodia*), mourning dove, and rock dove (*Columba livia*). Mammal species expected in this area include western gray squirrel (*Sciurus griseus*), California mouse (*Peromyscus californicus*), house mouse (*Mus musculus*), and Norway rat (*Rattus norvegicus*). Habitat values for amphibians and reptiles are low within developed areas, with habitat quality for these taxa generally dictated by the intensity of land use and landscape maintenance. Native plants have been replaced by horticultural varieties.

Ruderal/Disturbed

Ruderal and disturbed plant communities consist of varied, often temporary, collections of mostly non-native plants along roadsides or other disturbed areas. Shallow soils may be underlain by gravel and compacted or hard-pan surfaces, preventing many plants from establishing. Aggressive, invasive weeds such as brome grasses, blackberry, and thistles typically thrive in ruderal habitats (Holland and Keil 1995). Disturbed areas may be devoid of vegetation due to a recent human-induced activity. Ruderal and disturbed land covers were noted in the central and southern portions of the Proposed Project Area.

Riverine

Riverine habitat is defined as intermittent or perennial waters that distinguish rivers, creeks, and streams. The Napa River is the largest river within the Proposed Project Area.

The Napa River is tidally influenced throughout the extent of the Proposed Project Area and up to the Truncas Street Bridge (USFWS 2023c). Napa Creek is also present in the Proposed Project Area and flows southeasterly through a narrow channel into the Napa River near 1st Street in downtown Napa.

In the Napa River and its tributaries, riverine habitat provides important habitat for resident fish, including channel catfish (*Ictalurus punctatus*), striped bass (*Morone saxatilis*), and yellowfin goby (*Acanthogobius flavimanus*). In addition, the Napa River and its tributaries provide important migration corridors and spawning habitat for anadromous fishes such as central California coastal (CCC) steelhead (*Oncorhynchus mykiss*) and southern distinct population segment (DPS) green sturgeon (*Acipenser medirostris*).

Riverine habitat also provides resting and escape cover as well as areas to hunt for many species of waterfowl and some mammals, such as the river otter (*Lontra canadensis*).

Riverine habitats are protected by CDFW, and specialized permits are required for work within riparian areas. Streams that are part of riverine may be considered Waters of the United States, which are discussed below, Section 3.2, Wetlands and Waters of the United States.

Shaded Riverine Aquatic Habitat

SRA habitat is defined as the near shore aquatic area occurring at the interface between a river and adjacent woody riparian habitat. This habitat area occurs adjacent to riparian vegetation that either overhangs or protrudes into the water. It contains variable amounts of woody debris, such as leaves, logs, branches, and roots, as well as variable depths, velocities, and currents. The three key attributes of SRA cover, overhanging vegetation, in-water cover, and natural banks contribute to making this a highly productive land-water interface zone which is critically important to a wide range of both terrestrial and aquatic species of high regional importance (USFWS 1992). These attributes

SRA provides high-value feeding areas, burrowing substrates, escape cover, and reproductive cover for numerous regionally important fish and wildlife species (USFWS 1992). Riparian and SRA cover habitats are essential components of salmonid rearing habitat and help reduce localized water temperatures. Reptiles and amphibians use this habitat for denning and/or basking sites, or to access such sites. Western pond turtles (*Emys marmorata*) and other species of snakes, frogs, and salamanders are often more abundant in SRA habitat than other terrestrial and aquatic cover-types along the Napa River.

Mammals such as muskrat (*Ondatra zibethicus*) and raccoon (*Procyon lotor*) also use this habitat for reproduction, either by burrowing into the banks, or gathering branches and building nests. Many songbirds and other birds which are particularly numerous in the riparian habitat along the river, such as the green-backed heron (*Butorides virescens*), mallard (*Anas platyrhynchos*), and belted kingfisher (*Megaceryle alcyon*), also depend upon SRA cover for feeding areas, cover, and breeding sites.

Intertidal Mudflat

Intertidal mudflat is defined as a predominately unvegetated (i.e., not more than 30 percent cover) area that is flooded and unflooded daily due to diurnal tidal cycles. Emergent species grow at the landward edges of the mudflats and mingle with the low marsh area. Intertidal mudflats occur in the Proposed Project Area as exposed linear bands of river bottom at low tide between the riverbanks (from approximate elevation -2.7 National Geodetic Vertical Datum (NGVD) to +0.6 NGVD) (USACE and District 1999). Specific locations include bands on the west bank of the river south of Kennedy Park and on the east bank of the river around Tulucay Creek.

Intertidal mudflats provide for a variety of aquatic invertebrates, which are a primary food source for fish, shorebirds, and wading birds. Mudflats and shallow water areas are used for wintering habitat as well as resting areas during migration by shorebirds such as the willet (*Tringa semipalmata*), sandpiper (*Actitis macularius*, *Calidris* spp.), dowitcher (*Limnodromus* spp.), and marbled godwit (*Limosa fedoa*). Resident shorebird species include the killdeer (*Charadrius vociferus*) and black-necked stilt (*Himantopus mexicanus*). Many of these species may be seen in the Proposed Project Area within the tidal reaches of the Napa River.

Wetlands and Waters of the United States

The term “Waters of the United States” is an encompassing term used by U.S. Army Corps of Engineers (USACE) for areas that are subject to federal regulation under the Clean Water Act (CWA) Sections 404 and 10, which refer to wetlands and non-wetland (other waters) features. Wetlands that exhibit the prevalence of hydrophytic vegetation, hydric soils, and wetland hydrology were identified within the Proposed Project Area and include fresh and saline emergent wetlands.

Based on the field delineation conducted in July 2023 by HDR, a preliminary jurisdictional determination (PJD) is being sought for the Proposed Project (see **Figure G-1**). The information presented for the Proposed Project reflects preliminary research and field delineation efforts conducted for the PJD to date.

Inland non-wetland Waters of the United States are seasonal or perennial waterbodies, including lakes, stream channels, drainages, ponds, and other surface water features, that exhibit an OHWM or mean high water line but lack positive indicators for one or two of the three wetland parameters (33 CFR 328.4). Non-wetland waters of the United States that occur in the Proposed Project Area are restricted to the Napa River, Napa Creek, and the dry bypass flow channel.

In addition, the Regional Water Quality Control Board (RWQCB) regulates waters under California’s Porter-Cologne Act. Such regulated waters are called “waters of the state.” California Fish & Game Code Section 89.1, through referral to California Water Code Section 13050, defines waters of the state as “any surface water or groundwater, including saline waters, within the boundaries of the state.” Riparian plant communities associated with stream channels, such as the Napa River riparian corridor in the Proposed Project Area, could also be considered jurisdictional by the RWQCB. Aquatic features that do not fall under USACE jurisdiction (e.g., isolated features, ditches, features excavated in

uplands) would be considered waters of the state and include the fresh emergent wetland found in the northern portion of the Proposed Project Area adjacent to the levee (**Figure G-1**).

Activities that result in diversion or obstruction of the natural flow of any river, stream or lake; substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or deposit debris, waste, or other materials that could pass into any river, stream, or lake require that the Proposed Project applicant enter into a Lake or Streambed Alteration Agreement (LSAA) with CDFW under Section 1602 of the California Fish and Game Code. Therefore, any work within the banks of the Napa River, Napa Creek, or bypass riparian corridor including in-water work would require an LSAA.

Fisheries and Aquatic Habitat

The Napa River contains a wide variety of resident and anadromous fish species. Species composition within the mixohaline, tidally influenced waters of the Napa River ranges widely from saltwater fish such as Pacific herring (*Clupea pallasii*) to freshwater fish such as common carp (*Cyprinus carpio*). Salinity changes strongly influence what species occur in the Proposed Project Area at any given time. Fish and invertebrate surveys have been conducted on the Napa River. Details from these surveys, including identified species and important habitat features are described in detail in below.

The Napa County Resource Conservation District (RCD) conducts annual rotary screw trap surveys north of the city of Napa. In 2020, the most abundant species were Pacific lamprey (*Entosphenus tridentatus*), Sacramento sucker (*Catostomus occidentalis*), and California roach (*Hesperoleucis symmetricus*). Other species identified in the 2020 survey included, Sacramento pikeminnow (*Ptychocheilus grandis*), Chinook salmon (*Oncorhynchus tshawytscha*), and CCC steelhead (*Oncorhynchus mykiss*) (Napa County RCD 2023).

In addition to the species caught in the referenced surveys, CCC steelhead use the lower Napa River as a migration corridor to their spawning and rearing grounds in Tulucay, Napa, Redwood, Milliken, Dry, and Bell Canyon creeks (Napa County RCD 2023). The river system is an important nursery area for juvenile steelhead and striped bass (*Morone saxatilis*). The channel bottom and the in-stream vegetation within channels afford spawning and rearing habitat for several species of estuarine and marine fish. Existing habitat features attractive to resident and anadromous fish are uneven bottom configuration, riffles which appear at low tide, in-stream cover provided by undercut banks, SRA cover areas, emergent vegetation, and food and detritus entering the river system from aquatic and riparian vegetation, insect drop, and invertebrate production.

The Napa River also supports populations of Chinook salmon (Napa County RCD 2023). Chinook salmon were believed to be extirpated from the Napa River in the twentieth century, particularly of note during the 1980s and 1990s when California salmon populations were initially considered for protection under the federal Endangered Species Act (ESA). This has left the emergent Napa River Chinook salmon populations excluded from the nearby Chinook evolutionarily significant units (ESU), despite recolonization and consistent spawning in the Napa River and other San Francisco Bay tributaries (Garza and Crandall 2013).

The distribution of benthic invertebrate fauna in the intertidal mudflats of the river is related primarily to temporal variations in salinity and stability of the sediments. Disturbance of the sediments through wave action, currents, and periodic dredging creates a dynamic state in parts of the benthic community, particularly in shallow areas. Parts of the benthic community, therefore, are dominated

by colonizing species (those with rapid development, early sexual maturity, and high rates of reproduction) reflecting an early stage of succession (USACE and District 1999).

A series of benthic macroinvertebrate surveys found the Napa River to be dominated by insect species, mayflies (Ephemeroptera spp.) and true flies (Diptera spp.), with non-insects comprising less than 2% of the surveyed taxon (Dewberry 2005). In addition, a post-fire survey of Napa Creek at USGS Station 11458300, near the Proposed Project Area, identified the three most common non-insect macroinvertebrates as aquatic worms (Naididae spp., Turbellaria spp.) and New Zealand mudsnail (*Potamopygus antipodarum*, an invasive species) (Wulff et al. 2023). The California Natural Diversity Database (CNNDDB) also has records that suggest the potential for isopods (*Calasellus californicus*) and western ridged mussels (*Gonidea angulata*) to occur within the Proposed Project Area (CDFW 2024).

Special-Status Species

This technical memorandum defines special-status plant and wildlife species as those species that meet one or more of the following criteria:

- Species listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (FESA) (50 CFR 17.11 [listed animals], 50 CFR 17.12 [listed plants], and various notices in the FR [proposed species]).
- Species that are candidates for possible future listing as threatened or endangered under FESA (81 FR 87246, December 2, 2016).
- Species listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (CESA) (14 CCR 670.5).
- Plants listed as rare under the California Native Plant Protection Act (California Fish and Game Code Section 1900 et seq.).
- Plants with a California Rare Plant Rank (CRPR) of 1 or 2.
- Animal species of special concern to CDFW, Special Animals List.
- Animals fully protected in California (California Fish and Game Code Sections 3511 [birds], 4700 [mammals], 5050 [amphibians and reptiles], and 5515 [fish]).
- Taxa (i.e., taxonomic categories or groups) that meet the criteria for listing, even if not currently included on any list, as described in Section 15380 of the CEQA Guidelines (e.g., species that appear on the CDFW special animals list).

Special-status species were identified through a search of CNNDDB database, USFWS Critical Habitat Portal, the CNPS database, and other sources as being historically reported to occur within the general Proposed Project vicinity and Proposed Project Area, downstream of the Proposed Project site (CDFW 2023a; USFWS 2023b; CNPS 2023; Thomson et al. 2016). A list of special-status species with the potential to occur within a 5-mile radius of the Proposed Project site and Proposed Project Area is provided in **Tables G-1** and **G-2** below. The potential for special-status species to occur in the Proposed Project site and the Proposed Project Area was evaluated according to the following criteria:

- **None:** Proposed Project Area contains a complete lack of suitable habitat, the local range for the species is restricted, and/or the species is extirpated in this region.

- **Not Expected:** suitable habitat or key habitat elements might be present in the Proposed Project Area but might be of poor quality or isolated from the nearest extant occurrences. Habitat suitability refers to factors such as elevation, soil chemistry and type, vegetation communities, microhabitats, and degraded/substantially altered habitats.
- **Possible:** the presence of suitable habitat or key habitat elements in the Proposed Project Area that potentially support the species.
- **Present:** either the target species was observed directly or its presence was confirmed by diagnostic signs during field investigations or in previous studies in the Proposed Project Area.

Special-Status Plants

Approximately 26 special-status plant species occur in or within the vicinity (5 miles) of the Proposed Project Area (CDFW 2023a; CNPS 2023). Two reconnaissance-level surveys were conducted by HDR - one in July 2023 and one in April 2024. Only one special-status plant species was observed: Delta tule pea (*Lathyrus jepsonii* var. *jepsonii*). They were then evaluated for their potential to occur based on the known range of each species and their habitat associations. Approximately 12 plant species do not occur or are not expected to occur within the Proposed Project Area due to the lack of key habitat features. Therefore, these species are therefore not addressed further in this document. Including Delta tule pea, approximately 13 other special-status plant species have the potential to occur in the Proposed Project Area. Each of these species are listed in **Table G-1** and discussed below. Please see land cover mapping on **Figure G-1** in reference to suitable habitats for special-status plant species.

Table G-1. Special-Status Plant Species Potentially Occurring within or near the Proposed Project Area

Species	Common Name	Federal Status ¹	State/CRPR Status ²	Critical Habitat Designated?
<i>Astragalus tener</i> var. <i>tener</i>	Alkali milk-vetch	None	None/1B.2	No
<i>Carex lyngbyei</i>	Lyngbye's sedge	None	None/2B.2	No
<i>Ceanothus purpureus</i>	Holly leaved ceanothus	None	None/1B.2	No
<i>Downingia pusilla</i>	Dwarf downingia	None	None/2b.2	No
<i>Extriplex joaquinana</i>	San Joaquin spearscale	None	None/1B.2	No
<i>Lasthenia conjugens</i>	Contra Costa goldfields	FE	None/1B.1	Yes, but not present in the Proposed Project Area
<i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	Delta tule pea*	None	None/1B.2	No
<i>Legenere limosa</i>	Legenere	None	None/1B.1	No
<i>Leptosiphon jepsonii</i>	Jepson's leptosiphon	None	None/1B.2	No
<i>Lilaeopsis masonii</i>	Mason's lilaeopsis**	None	SR/1B.1	No
<i>Rhynchospora californica</i>	California beaked-rush	None	None/1B.1	No

Species	Common Name	Federal Status ¹	State/CRPR Status ²	Critical Habitat Designated?
<i>Symphyotrichum lentum</i>	Suisun Marsh aster	None	None/1B.2	No
<i>Trifolium amoenum</i>	Two-fork clover**	FE	None/1B.1	No
<i>Trifolium hydrophilum</i>	Saline clover	None	None/1B.2	No

1 Federally endangered (FE)

2 State Rare (SR)

*Species observed in the Proposed Project Area during 2023 field survey

**Species sighting reported from within the Proposed Project Area but not confirmed during 2023 field survey (CDFW 2023a)

Source: Species and Listing Status (CDFW 2023a), Critical Habitat (USFWS 2023b)

Alkali Milkvetch

Alkali milkvetch (*Astragalus tener* var. *tener*) is a CNPS CRPR 1B.2 annual herb in the pea family (Fabaceae) that blooms in the spring (March to June). It occurs on alkaline playas, vernal pools, and valley and foothill grasslands at elevations of 0–200 feet. There is only one extirpated location sited approximately 3 miles south of the Proposed Project Area (CDFW 2023a; CNPS 2023). This site of this location was developed in 1983. The one area dominated by non-native annual grasslands is highly disturbed, annually mowed, and periodically used for staging. The fresh emergent wetland does not support prolonged inundation required for this species and saline soils are not present in these portions of the Proposed Project Area. Previous surveys conducted in the vicinity have not reported this species or its plant associates from this area (CDFW 2023a) and populations were not observed during the early July 2023 field visit when the species would be in seed. Therefore, this species is not expected to occur in the Proposed Project Area. Previous surveys conducted in the vicinity have not reported this species or its plant associates from this area (CDFW 2023a). Therefore, this species is not expected to occur in the Proposed Project work areas.

Lyngbye's Sedge

Lyngbye's sedge (*Carex lyngbyei*) is a CNPS CRPR 2B.2 perennial graminoid in the sedge family (Cyperaceae) that blooms in the spring and summer (April to August). It occurs in saline and brackish emergent wetlands in marshlands and along the margins of tidally-influenced streams at elevations of 0–1,350 feet. There are no known locations within 5 miles of the Proposed Project Area (CDFW 2023a; CNPS 2023), but the Proposed Project Area is within its current range. However, the proposed work located under the Lincoln Avenue Bridge along the Napa River would be conducted in several sections along the high tide line along the banks that are currently covered by existing concrete or other bank stabilization materials under existing bridges. Previous surveys conducted in the vicinity have not reported this species or its plant associates from this area (CDFW 2023a) and populations were not observed during the early July 2023 field visit when the species would have been in bloom. Therefore, this species is not expected to occur in the Proposed Project Area. Therefore, HDR has concluded that this species is not expected in the work areas adjacent to the high tide line of the Napa River or at the top of bank during Proposed Project implementation.

Holly Leaved Ceanothus

Holly leaved ceanothus (*Ceanothus purpureus*) is a CNPS CRPR 1B.2 evergreen shrub in the buckthorn (Rhamnaceae) family that blooms in the spring (February to June). It occurs on volcanic

and rocky soils in chaparral and cismontane woodlands at elevations of 390 to 2,100 feet. There are over ten documented occurrences within 5 miles of the Proposed Project Area (CDFW 2023a; CNPS 2023). This species has the potential to occur in the oak woodlands within the Proposed Project Area but was not observed during the early July 2023 field visit when the species would have been in seed. Therefore, holly-leaved ceanothus is not expected to occur in the Proposed Project Area.

Dwarf Downingia

Dwarf downingia (*Downingia pusilla*) is a CNPS CRPR 2B.2 annual herb in the bellflower family (Campanulaceae) that blooms in the spring (March to May). It occurs in cismontane woodland, on vernal pools, and valley and foothill grasslands at elevations of 0–500 feet. There are six extant locations approximately 4 to 5 miles from the Proposed Project Area in seasonal wetlands vernal pools and lake margins (CDFW 2023a; CNPS 2023). The one area dominated by non-native annual grasslands is highly disturbed, annually mowed, and periodically used for staging. The fresh emergent wetland in the Proposed Project Area seasonal drainage does not support prolonged inundation required for this species. Previous surveys conducted in the vicinity have not reported this species or its plant associates from this area (CDFW 2023a). Therefore, this species is not expected to occur in the Proposed Project work areas.

San Joaquin Spearscale

San Joaquin spearscale (*Extraplex joaquinana*) is a CNPS CRPR 1B.2 annual herb in the goosefoot (Chenopodiaceae) family that blooms through the early summer to early fall (April to October). It occurs in alkaline soils in chenopod scrub, meadows, seeps, playas, and grassland at elevations of 0-2,740. There is one extant location approximately 2 miles from the Proposed Project Area in grasslands (CDFW 2023a). The one area dominated by non-native annual grasslands does not support alkaline soils, is highly disturbed, annually mowed, and periodically used for staging. Previous surveys conducted in the vicinity have not reported this species or its plant associates from this area (CDFW 2023a) and populations were not observed during the early July 2023 field visit when the species would have been in bloom. Therefore, this species is not expected to occur in the Proposed Project work areas.

Contra Costa Goldfields

Contra Costa goldfields (*Lasthenia conjugens*) is a federally endangered species as well as a CNPS CRPR 1B.1 species. It is a showy annual herb in the sunflower family (Asteraceae) that blooms in the spring (March to June). It occurs in cismontane woodland, on alkaline playas, vernal pools, and valley and foothill grasslands at elevations of 0–1,540 feet. There are two extant locations between 2 and 4 miles from the Proposed Project Area in vernal pools (CDFW 2023a; CNPS 2023). The areas dominated by annual grasslands and freshwater emergent wetland do not support prolonged ponding, are highly disturbed, annually mowed, and periodically used for staging. Previous surveys conducted in the vicinity have not reported this species or its plant associates from this area (CDFW 2023a) and populations were not observed during the early July 2023 field visit when the species would have been in seed. Therefore, this species is not expected to occur in the Proposed Project Area.

Delta Tule Pea

Delta tule pea is a CNPS CRPR 1B.2 perennial herb in the pea family (Fabaceae) that blooms in the spring and summer (May to September). It occurs in freshwater and brackish emergent wetlands in marshlands and along the margins of tidally-influenced streams at elevations of 0–20 feet. There are

four known locations within 5 miles of the Proposed Project Area (CDFW 2023a; CNPS 2023) and a flowering population was observed during the early July 2023 field visit along the banks of the dry bypass channel near the Soscol Avenue bridge in the southern portion of the Proposed Project Area (**Figure G-1**).

Legenere

Legenere (*Legenere limosa*) is a CNPS CRPR 1B.1 annual herb in the bellflower family (Campanulaceae) that blooms in the spring (April to June). It occurs in vernal pools and mesic valley and foothill grasslands at elevations of 0–2,000 feet. There is one extant location approximately 4 miles south of the Proposed Project Area in seasonal wetlands along State Route 29 (CDFW 2023a; CNPS 2023). The one area dominated by non-native annual grasslands is highly disturbed, annually mowed, and periodically used for staging. The fresh emergent wetland seasonal drainage does not support prolonged inundation required for this species. Previous surveys conducted in the vicinity have not reported this species or its plant associates from this area (CDFW 2023a) and populations were not observed during the early July 2023 field visit when the species would have been in seed. Therefore, this species is not expected to occur in the Proposed Project work areas.

Jepson's Leptosiphon

Jepson's leptosiphon (*Leptosiphon jepsonii*) is a CNPS CRPR 1B.2 annual herb in the phlox (Polemoniaceae) family that blooms in the spring (March to May). It occurs in volcanic soils in chaparral, cismontane woodland, and grassland. There is one extant location approximately 2 miles southwest of the Proposed Project Area in volcanic soils. Volcanic soils do not exist in the Proposed Project Area, deeming it unsuitable for this species. The one area dominated by non-native annual grasslands In addition, the annual grasslands in the Proposed Project Area are highly disturbed, annually mowed, and periodically used for staging. Previous surveys conducted in the vicinity have not reported this species or its plant associates from this area (CDFW 2023a). Therefore, this species is not expected to occur in the Proposed Project work areas.

Mason's Lilaeopsis

Mason's lilaeopsis (*Lilaeopsis masonii*) is a state rare and CNPS CRPR 1B.1 perennial herb in the carrot family (Apiaceae) that blooms throughout the growing season (April to November). It occurs in cismontane woodland, riparian scrub, and freshwater/brackish emergent wetlands at elevations of 0–35 feet, usually near the high tide linewater mark. There is one extant location reported from the Proposed Project Area near the high tide line of the Napa River south of Lincoln Avenue (CDFW 2023a; CNPS 2023). However, individuals at this reference location were not observed again during subsequent surveys over the past six years nor during the July 2023 field visit. In addition, populations were not observed during the July 2023 field visit downstream or upstream of this occurrence when the species would have been in bloom. In addition, the proposed work located under Lincoln Ave Bridge along the Napa River would be conducted in areas along the banks that are currently covered by existing concrete. Therefore, HDR has concluded that this species is not expected in the Proposed Project work areas adjacent to the high tide line of the Napa River or at the top of bank during Proposed Project implementation.

California beaked-Rush

California beaked-rush (*Rhynchospora californica*) is a CNPS CRPR 1B.1 perennial graminoid in the sedge family (Cyperaceae) that blooms in the spring and summer (May to July). It occurs in freshwater emergent wetlands and along the margins of perennial streams at elevations of 0–3,000

feet. There is one known location within 3 miles of the Proposed Project Area to the northeast on the slopes of Mount George (CDFW 2023a; CNPS 2023), but the Proposed Project Area is within its current range. However, the proposed work located under Lincoln Ave Bridge along the Napa River would be conducted in areas along the banks that are currently covered by existing concrete. Therefore, HDR has concluded that this species is not expected in the work areas adjacent to the high tide line of the Napa River or at the top of bank during Proposed Project implementation. Previous surveys conducted in the vicinity have not reported this species or its plant associates from this area (CDFW 2023a) and populations were not observed during the early July 2023 field visit when the species would have been in bloom. Therefore, this species is not expected to occur in the Proposed Project Area. The staging area where the seasonal drainage occurs does not support prolonged inundation required for this species. Previous surveys conducted in the vicinity have not reported this species or its plant associates from this area (CDFW 2023a). Therefore, this species is not expected to occur in the Proposed Project work areas.

Suisun Marsh Aster

Suisun Marsh aster (*Symphotrichum lentum*) is a CNPS CRPR 1B.2 perennial rhizomatous herb in the sunflower family (Asteraceae) that blooms throughout the growing season (April to November). It occurs in brackish and freshwater emergent wetlands and marshes at elevations of 0–10 feet. There is one extant location 2 miles south of the Proposed Project Area in a seasonal ditch next to the Napa Municipal Golf Course (CDFW 2023a; CNPS 2023). Previous surveys conducted in the vicinity have not reported this species or its plant associates from this area (CDFW 2023a) and populations were not observed during the early July 2023 field visit when the species would have been blooming. Therefore, this species is not expected to occur in the Proposed Project Area. However, the proposed work located under Lincoln Ave Bridge along the Napa River would be conducted in areas along the banks that are currently covered by existing concrete. Therefore, HDR has concluded that this species is not expected in the work areas adjacent to the high tide line of the Napa River or at the top of bank during Proposed Project implementation. The staging area where the seasonal drainage occurs does not support prolonged inundation required for this species. Previous surveys conducted in the vicinity have not reported this species or its plant associates from this area (CDFW 2023a). Therefore, this species is not expected to occur in the Proposed Project work areas.

Napa Bluecurls

Napa bluecurls (*Trichostema ruygtii*) is a CNPS CRPR 1B.2 annual herb in the mint family that blooms in the summer and fall (June to October). It occurs in chaparral, cismontane woodland, grassland, lower montane coniferous forest, and vernal pools at elevations of 95–2,230 feet. There are seven occurrences of the species within 5 miles of the Proposed Project Area (CDFW 2023a). However, the Proposed Project Area is outside of this species elevational range and therefore is not expected to occur in the Proposed Project work areas.

Two Fork Clover

Two fork clover (*Trifolium amoenum*) is a federally endangered and CNPS CRPR 1B.1 species. It is a showy annual herb in the pea family (Fabaceae) that blooms in the spring (April to June). It has been found in a variety of habitats including low, wet swales, grasslands, and grassy hillsides at elevations of 0–350 feet. This species is only known from two extant and two experimental records, two in Sonoma County and two in Marin County, more than 5 miles from the Proposed Project Area (USFWS 2012). Therefore, this species is not expected to occur in the Proposed Project work areas. The areas dominated by annual grasslands are highly disturbed, annually mowed, and periodically

used for staging. Previous surveys conducted in the vicinity have not reported this species or its plant associates from this area (CDFW 2023a) and populations were not observed during the early July 2023 field visit when the species would have been in seed. Therefore, this species is not expected to occur in the Proposed Project Area.

Saline Clover

Saline clover (*Trifolium hydrophilum*) is a CNPS CRPR 1B.2 annual herb in the pea family (Fabaceae) that blooms in the spring (April to June). The general habitats are marshes, swamps, vernal pools, and mesic, alkaline, valley or foothill grasslands at elevations of 0–985 feet. One extant record is approximately within 4 miles south of the Proposed Project Area in Soscol Creek (CDFW 2023a; CNPS 2023). However, there is no suitable seasonal vernal pool or mesic grassland habitats in the Proposed Project Area that would support this species. The one area dominated by non-native annual grasslands is highly disturbed, annually mowed, and periodically used for staging. The freshwater emergent wetland does not support prolonged inundation required for this species. Previous surveys conducted in the vicinity have not reported this species or its plant associates from this area (CDFW 2023a) and populations were not observed during the early July 2023 field visit when the species would have been in seed. Therefore, this species is not expected to occur in the Proposed Project Area. Previous surveys conducted in the vicinity have not reported this species or its plant associates from this area (CDFW 2023a). Therefore, this species is not expected to occur in the Proposed Project work areas.

Special-Status Wildlife

Approximately 21 special-status wildlife species occur in or within the vicinity (5 miles) of the Proposed Project Area (CDFW 2023a). Two reconnaissance-level surveys were conducted by HDR – one in July 2023 and one in April 2024. No special-status wildlife species or their sign (i.e., burrows, scat) were observed. No focused surveys for special-status wildlife species have been conducted for this Proposed Project; therefore, all species present in the Proposed Project vicinity identified through a search of CNDDDB database, USFWS Critical Habitat Portal, the CNPS database, and other sources were evaluated for their potential to occur based on the known range of each species and their habitat associations. Approximately 12 wildlife species do not occur or are not expected to occur within the Proposed Project Area due to the lack of key habitat features. These species are therefore not addressed further in this document. Approximately nine special-status wildlife species have the potential to occur in the Proposed Project Area. Each of these species are listed in **Table G-2** and discussed below. Please see land cover mapping on **Figure G-1** in reference to suitable habitats for special-status wildlife species.

Table G-2. Special-Status Wildlife Species Potentially Occurring within or near the Proposed Project Area

Species ¹	Common Name	Federal Status ²	State/CRPR Status ³	Critical Habitat Designated?
<i>Invertebrates</i>				
<i>Danaus plexippus</i>	Monarch butterfly	FC	None	No
<i>Amphibians</i>				
<i>Rana boylei</i> (North Coast DPS)	Foothill yellow-legged frog	None	SSC	No

Species ¹	Common Name	Federal Status ²	State/CRPR Status ³	Critical Habitat Designated?
<i>Rana draytonii</i>	California red-legged frog	FT	SSC	Yes, but not present in the Proposed Project Area
Reptiles				
<i>Actinemys marmorata</i>	Northwestern pond turtle	FPT	SSC	No
Birds				
<i>Buteo swainsoni</i>	Swainson's hawk	None	ST	No
<i>Elanus leucurus</i>	White-tailed kite	None	FP	No
<i>Falco peregrinus anatum</i>	American peregrine falcon	None – delisted	FP	No
<i>Geothlypis trichas sinuosa</i>	Saltmarsh common yellowthroat	None	SSC	No
Mammals				
<i>Antrozous pallidus</i>	Pallid bat	None	SSC	No

1 DPS – Distinct Population Segment

2 Federally endangered (FE); Federally Threatened (FT), Federal candidate for listing (FC)

3 State Species of Special Concern (SSC); State Candidate Endangered (CE); State Fully Protected (FP)

Source: Species and Listing Status (CDFW 2023a), Critical Habitat (USFWS 2023b)

Monarch Butterfly

Monarch butterfly (*Danaus plexippus*) is a candidate to be listed as threatened under FESA (CDFW 2023a). The monarch butterfly's migratory range in North America is both east and west of the Rocky Mountains. The western population migrates from Nevada, New Mexico, and Arizona to overwinter in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby along the California coast to Baja California (USFWS 2020). The butterflies begin migration to overwinter sites in Mexico and California during the fall, but the population abundance fluctuates based on environmental conditions (USFWS 2020).

The monarch butterfly is dependent on milkweed host plants for both oviposition and larval feeding (USFWS 2020). The habitat described for the monarch butterflies is typically associated with riparian habitats near water sources such as rivers, creeks, roadside ditches, and irrigated gardens (USFWS 2020). Three host milkweed plants were observed and mapped within the Proposed Project Area. Monarch butterflies are not known to occur or overwinter within the Proposed Project Area. However, suitable habitat is present and roosting butterflies have been reported approximately 10 miles west of the Proposed Project Area along the coastline (CDFW 2023a). It is possible for monarch butterflies to occur, deposit eggs, and forage within the Proposed Project Area.

Foothill Yellow-Legged Frog, North Coast DPS

The foothill yellow-legged frog, North Coast DPS, is a California species of special concern. Historically the species occurred from the Willamette River drainage in Oregon west of the Sierra-Cascade crest to at least the San Gabriel River drainage in Los Angeles County, as well as in a disjunct population at 6,700 feet in Baja California. In California the species has been reported from

foothill and mountain streams in the Klamath, Cascade, Sutter Buttes, Coast, Sierra Nevada, and Transverse ranges from sea level to around 6,000 feet (Thomson et al. 2016).

Foothill yellow-legged frog inhabits rivers and streams in hardwood, conifer, and valley-foothill riparian forests, mixed chaparral, and wet meadows. Habitat is generally characterized as partly-shaded, shallow perennial rivers and streams with a low gradient and rocky substrate that is at least cobble-sized; however, they have also been known to occupy intermittent and ephemeral streams by post-metamorphic frogs and small impoundments, isolated pools in intermittent streams, and meadows along the edge of streams (Thomson et al. 2016). Breeding sites in rivers and streams are often located near the confluence of tributary streams in sunny, wide shallow reaches. Tadpoles require slow, stable flows during development. Post-metamorphic frogs remain close to the water's edge (average < 10 feet), select sunny areas with limited canopy cover, and are often associated with riffles and pools. Adequate water, food resources, cover from predators, ability to regulate their body temperature (e.g., presence of basking sites and cool refugia), and absence of non-native predators are important components of non-breeding habitat (Thomson et al. 2016, CDFW 2019).

During the winter months they typically move away from larger streams and rivers to avoid high flows, usually inhabiting smaller tributaries or taking cover in adjacent vegetation on the stream or river. They have also been observed using upland habitats at an average distance from the stream of about 234 feet though have been reported moving as far as 2,723 feet from a river (Thomson et al. 2016). The species can be active both day and night (Thomson et al. 2016).

The Proposed Project Area occurs within the species known range along the North Coast. One population was reported within 3.5 miles west of the Proposed Project Area along Redwood Creek in 1972 (CDFW 2023a). Jennings and Hayes (1985) report this population as extirpated. The Napa River is tidal in the Proposed Project Area and is therefore considered not suitable for this species. Thus, foothill yellow legged frog is not expected to occur in the Proposed Project Area.

California red-legged frog

The California red-legged frog is federally listed as threatened and a California species of special concern (CDFW 2023a). The historical range of California red-legged frog generally extends south along the coast from the vicinity of Point Reyes National Seashore, Marin County and inland from the vicinity of Redding, Shasta County, southward along the interior Coast Ranges and Sierra Nevada foothills to northwestern Baja California, Mexico (Jennings and Hayes 1985). The current range is generally characterized based on the current known distribution. Although California red-legged frog is still locally abundant in portions of the San Francisco Bay area and the central coast, only isolated populations have been documented elsewhere within the species' historical range, including the Sierra Nevada, northern Coast Ranges, and northern Transverse Ranges (86 FR 47138). California red-legged frog is believed to be extirpated from the floor of the Central Valley (USFWS 2002).

California red-legged frog inhabit marshes, streams, lakes, ponds, and other, usually permanent, sources of water that have dense riparian vegetation (USFWS 2002). California red-legged frog primarily breeds in ponds and less frequently in pools within streams (Thomson et al., 2016). Breeding occurs from November through April, and red-legged frogs typically lay their eggs in clusters around aquatic vegetation (USFWS 2002). Larvae undergo metamorphosis from July to September, 3.5 to 7 months after hatching (66 FR 14626). California red-legged frogs often disperse from breeding sites to various aquatic, riparian, and upland estivation habitats during the summer (66 FR 14628); however, it is common for individuals to remain in the breeding area year-round (66 FR 14628; USFWS 2002). Adults may take refuge during dry periods in rodent holes or leaf litter in

riparian habitats (USFWS 2002). Within riparian areas, microhabitats utilized by California red-legged frogs include blackberry thickets, logjams, and root tangles (USFWS 2002).

Suitable upland habitat exists throughout the Proposed Project Area along the riparian corridor and banks of the Napa River; however, the Napa River waters are tidally influenced within the Proposed Project Area deeming it unsuitable for breeding. The California red-legged frog species cannot tolerate estuarine waters. Additionally, the California red-legged frog has not been reported from within 5 miles of the Proposed Project Area (CDFW 2023a). Due to the unsuitable breeding habitat and the fact that upland habitats are more than 5 miles away from known dispersal locations, it has been concluded that the Proposed Project Area is unsuitable for California red-legged frog. Therefore, California red-legged frog is not expected to occur.

Northwestern Pond Turtle

Northwestern pond turtle (*Actinemys marmorata*) is a federal candidate species for listing and a California species of special concern (88 FR 68370). Northwestern pond turtle occurs throughout a broad range of permanent and intermittent freshwater aquatic habitats, including rivers, lakes, ponds, vernal pools, and marshes with a preference for habitat with abundant basking sites, underwater refugia, and slow-moving water (Bury and Germano 2008). This species requires upland habitat suitable for nesting and overwintering, with loose soil for excavation and infrequent disturbance (Thomson et al. 2016). Upland habitat is typically characterized as having sparse vegetation with short grasses and forbs with little to no canopy cover. Northwestern pond turtle spend up to seven months out of the water during the winter months and typically only travel 200 meters from aquatic habitats but have been documented to travel up to 1.4 km to overwinter refugia (Ryan 2001). Along the central California coast, nesting occurs between April and August with eggs hatching in the early fall and hatchlings over-wintering in the nest before emerging in the spring (Scott et al. 2008; Thomson et al. 2016). Nest sites are often within 100 to 500 meters of water (Thomson et al. 2016).

There is an occurrence of Northwestern pond turtle approximately 1.4 miles upstream of the Proposed Project Area within Napa River (CDFW 2023a), where conditions are characterized by freshwater flows outside of the tidal influence of the Bay. There are suitable basking and nesting sites around the Lincoln Avenue bridge in the Proposed Project Area; however, the water is too saline within the reaches of the Proposed Project Area to support successful reproduction. The species could utilize the Proposed Project Area as a migratory corridor, so it is possible to occur.

Swainson's Hawk

Swainson's hawk is state-listed as threatened. The breeding range for Swainson's hawk in California consists of the extreme northeast portion of the state, the Sacramento and San Joaquin Valleys, valleys of the Sierra Nevada Range in Inyo and Mono Counties, and occasionally elsewhere in the state (Bechard et al. 2020). Swainson's hawk primarily winter in South America but some individuals winter in the Sacramento–San Joaquin Delta (Delta) (Bechard et al. 2020). They usually nest in large, mature trees in undeveloped areas. Most nest sites (87%) in the Central Valley are found in riparian habitats (Estep 1989:35), primarily because trees are more available there. Swainson's hawk also nests in mature roadside trees and in isolated trees in agricultural fields or pastures. The breeding season is March through August (Estep 1989:12, 35). Nest sites are generally adjacent to, or within flying distance of, suitable foraging habitat and near large tracts of agricultural lands (CDFW 2016:8). Suitable nesting habitat occurs throughout the Proposed Project Area but known nesting sites are located 3 to 5 miles away from the downtown area of Napa. Therefore, it is not

expected that this species would nest in the Proposed Project Area during Proposed Project implementation.

White-tailed Kite

White-tailed kite (*Elanus leucurus*) is a California fully protected species under the California Fish and Game Code. The species occurs in lowland areas west of the Sierra Nevada from the Sacramento Valley to western San Diego County. It is usually found near agricultural areas (Zeiner et al. 1990). White-tailed kites forage primarily on small mammals in open grasslands, farmlands, and emergent wetlands. Nests are located near the top of dense oak, willow, or other tree stands, typically 20-100 feet above the ground, and are composed of loosely piled sticks and twigs (Zeiner et al. 1990). Breeding occurs from February to October, with peak breeding from May to August.

There is one known occurrence approximately 3 miles south of the Proposed Project Area along State Route 221 (CDFW 2023a). Marginal nesting habitat occurs throughout the Proposed Project Area, known nesting sites are located 3 to 5 miles away from the downtown area of Napa. It is not expected that this species would nest within the Proposed Project Area.

American Peregrine Falcon

The American peregrine falcon (*Falco peregrinus anatum*) is a California fully protected species under the California Fish and Game Code (CDFW 2023a). It was delisted from FESA in 1999 (60 FR 34406–34409; 64 FR 46542–46558) and from CESA in 2008 (Comrack and Logsdon 2008). The species' California breeding range has expanded to include the Central and southern coasts, Inner North Coast Ranges, Klamath Mountains, Cascade Range, and Sierra Nevada (USFWS 1982). They nest on protected ledges on high cliffs primarily in woodland, forest, and coastal habitats, but also in some desert areas (USFWS 1982). Peregrines most often nest near marshes, lakes, and rivers that support an abundance of avian prey (Comrack and Logsdon 2008).

Suitable areas for nesting are absent in the Proposed Project Area, but foraging habitat is abundant. One sighting was reported in 2015 approximately 4 miles southeast of the Proposed Project Area in rocky slopes dominated by chaparral in wilderness parkland (CDFW 2023a). Without suitable nesting substrate, this species has a potential to forage over portions of the Proposed Project Area, but nesting is not expected.

Saltmarsh common yellowthroat

Saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*) is a California species of special concern. This subspecies is endemic to the greater San Francisco Bay area occurring from Tomales Bay, Marin County, and Napa Sloughs, southern Sonoma County, on the north, east to Carquinez Strait, and south to vicinity of San Jose, Santa Clara County (Shuford and Gardali 2008).

Saltmarsh common yellowthroat primarily breeds in suitable freshwater and salt marshes or riparian willow thickets from April to August, with peak breeding from May to July.

There are two known occurrences south of the Proposed Project Area along the Napa River (CDFW 2023a) reported from 1989 and updated in 2005. Suitable nesting habitat occurs throughout the Proposed Project Area along the Napa River. It is possible for this species to occur within the Proposed Project Area.

Pallid Bat

The pallid bat (*Antrozous pallidus*) is a California species of special concern. The species occurs throughout the state except for the high Sierra Nevada from Shasta to Kern Counties, and the northwestern corner from Del Norte and western Siskiyou Counties to Mendocino County, from sea level up to mixed conifer forests. Pallid bats use a variety of habitats such as grasslands, shrublands, woodlands, and forests, but are most common in open, dry areas with rock outcrops or cliffs for roosting (Zeiner et al. 1990). Pallid bats forage over open ground for a wide variety of insects and arachnids. They are a year-long resident in most of their range and hibernate in winter near their summer roost. Roosting sites must protect bats from high temperatures, and include caves, crevices, mines, and occasionally hollow trees and buildings. Night roosts may include porches and open buildings (Zeiner et al. 1990).

This species is unlikely to roost in the Proposed Project Area, which lacks rocky outcrops suitable for roosting, although there is potential for the species to roost in hollow trees or crevices in existing bridge crossings in the riparian corridor of the Napa River within the Proposed Project Area. Bats roosting in the area may forage over oak woodland and riparian communities occurring in the Proposed Project Area. There are six extant occurrences within 5 miles of the Proposed Project Area (CDFW 2023a). This species is considered possible to roost and forage within the Proposed Project Area.

Special-Status Aquatic

Eight special-status species with the potential to occur in or near the Proposed Project Area were identified. No focused surveys for special-status aquatic species have been conducted for this Proposed Project; therefore, all species present in the Proposed Project vicinity identified through a search of CNDDDB database, USFWS Critical Habitat Portal, and other sources were evaluated for their potential to occur based on the known range of each species and their habitat associations. Each of these species are listed in Table 3.6-1 in Section 3.6 Fisheries and Aquatic Biological Resources and discussed below. Please see land cover mapping on **Figure G-1** in reference to suitable habitats for special-status aquatic species.

Green Sturgeon

The southern DPS of green sturgeon consists of coastal and Central Valley populations south of the Eel River (71 FR 17757). National Marine Fisheries Service (NMFS) proposed to list the southern DPS of green sturgeon as threatened on April 6, 2005 (70 FR 17386) and published a Final Rule to list the southern DPS as threatened on April 7, 2006 (71 FR 17757).

Green sturgeon spend the majority of their lives in estuarine and coastal waters along the Western U.S. coast. Adults can make extensive coastal migrations and move between coastal estuaries, where they often aggregate for extended periods. Southern DPS green sturgeon adults enter the San Francisco Bay in later winter through early spring (January through May), migrate upstream, and spawn from April through June (Moser et al. 2016). Post-spawn fish may hold for several months and out-migrate in the fall or winter or move out of the river quickly during the spring and summer months and may remain in estuarine waters for many months after leaving upstream habitats (Miller et al. 2020).

The Sacramento watershed is the only confirmed historical and present spawning area for southern DPS green sturgeon (71 FR 17757). Recent surveys, however, have found evidence of green sturgeon spawning in Sacramento River tributaries including the Feather and Yuba Rivers

(Seesholtz et al. 2014, Beccio 2018, 2019). It is unknown how long juveniles remain upriver after metamorphosis, however, juveniles typically enter the San Francisco Bay (Bay)/Sacramento-San Joaquin Delta (Delta), including the San Francisco Estuary, as sub-yearlings or yearlings prior to ocean entry, and therefore, likely spend several months rearing upriver (NMFS 2018).

CDFW initiated the Sturgeon Fishing Report Card as part of a suite of sport fishing regulations in March of 2007. Each year, CDFW distribute Sturgeon Fishing Report Cards to anglers to collect data on and monitor the sturgeon fishery and population health. Green sturgeon catches were reported by anglers in the Napa River every year from 2007 to 2017, with an annual average of seven individuals. Green sturgeon were regularly caught in all seasons, with the largest reported number of individuals occurring in winter and spring (December through May) (CDFW 2023g).

Green sturgeon are known to occur within the Proposed Project Area, however, spawning of southern DPS green sturgeon is not known to occur in the Napa River or in the Proposed Project Area.

White Sturgeon

On June 19, 2024, CDFW approved white sturgeon as a candidate species for listing under CESA. Candidate species are provided full protections during the Status Review process.

White sturgeon are the largest freshwater fish in North America and are known to make long-distance marine migrations; however, marine environments are not obligatory to the completion of their life cycle (Hildebrand et al 2016). Adult and subadult fish are usually most abundant on or near their feeding grounds, such as the Bay-Delta, but are occasionally found in tidal riverine and estuarine habitats of larger tributary streams such as the Napa River (Isreal et al. 2009). In the Bay-Delta movement appears to be influenced by tidal or diel cycles and seasonal movements are correlated with salinity levels; inhabiting areas closer to the delta in low flow years and closer to the bay in high outflow years (Hildebrand et al 2016).

White sturgeon are a long-lived, late-maturing species that are highly sensitive to changes in water temperature, dissolved oxygen, flow, and salinity in their early life stages (Isreal et al. 2009). Adult white sturgeon activity levels drop during colder months and if temperatures reach below 15°C white sturgeon may go dormant (Hildebrand et al 2016).

White sturgeon February and August, with later winter spawning occurring at the southern end of their range (Hildebrand et al 2016). White sturgeon appear to be attracted to river reaches with hydraulic complexity for spawning including, deep turbulent areas of the mainstem or major tributary confluences, high velocity runs near rapids, and immediately downstream from dam outlets. Within California, spawning occurs within the Sacramento Valley with the majority of spawning on the Sacramento River between Verona and Colusa (CDFW 2023g and 2023h). White sturgeon have been observed within the Napa River and are caught recreationally.

Pacific Lamprey

Pacific lamprey are a California State SSC. Pacific lamprey is an anadromous species, and like Pacific salmon, are semelparous and have multiple run types (“ocean-maturing” and “stream-maturing”) (Clemens et al 2013).

Pacific lamprey are present in the north, central, and south Delta, with ammocoetes present year-round in all regions (DWR et al. 2013). Pacific lamprey travel upstream in rivers and streams to spawn in the winter and spring (Goodman et al. 2015). As they travel they stop eating, relying on body fat reserves for energy, before building gravel nests. Eggs hatch after approximately 20 days

and drift downstream to lower velocity areas with sandy bottoms where they live in sand and detritus substrates as filter feeders for three to seven years before migrating to the ocean (Moyle 2002, CDFW 2023i).

Pacific Lamprey are known to occur within the Napa River and could occur within the Proposed Project Area (CDFW 2023i).

Delta Smelt

Delta smelt were federally and California State listed as threatened in 1993 (58 FR 12854); in 2009 California State changed Delta smelt listing from threatened to endangered. Delta smelt is a euryhaline species, tolerant of a wide range of salinities, and endemic to the San Francisco Estuary in California. Delta smelt exhibit weak swimming behavior and diel shifts in response to tidal currents which allows them to stay within limited regions where planktonic food is concentrated (Moyle et al. 2016). The Delta smelt life cycle consists of four parts, a winter migration upstream shortly before spawning, spring spawning in freshwater, summer migration and rearing to low salinity zone, and fall maturation in the low salinity zone. The majority of the Delta smelt's life cycle is spent at the saltwater-freshwater interface, an area known as the X2 (USFWS 1999).

Most spawning occurs between January and May, with peak spawning occurring between April and May, in the Delta but some also occurs in the Suisun Marsh and Napa River (Merz et al. 2011; Kurobe et al. 2022). Delta smelt spawn in shallow, fresh, or slightly brackish water upstream of the mixing zone (Wang 1991). Delta smelt are broadcast spawners, and the eggs form an adhesive foot that sticks to surfaces. After hatching, larvae and juveniles move downstream toward the mixing zone where they are retained by the vertical circulation of fresh and salt waters (Stevens et al. 1990).

As part of the requirements of the Biological Opinion (BO) for the Proposed Project, that was permitted in 1998, a fisheries monitoring program was developed. This program sampled the fish assemblage throughout the Napa River within the vicinity of the Proposed Project Area using beach seines, otter trawls, purse seines, and fyke nets to determine fish use of the restored and created habitats. Surveys for this monitoring program were conducted yearly from 2001 to 2005. Delta smelt were observed in the lower Napa River near the Proposed Project Area in 2001 and 2002. Large numbers of larval delta smelt were observed in 2001 indicating a spawning event (Stillwater Sciences 2006). Only one adult was captured the following year, which followed a large levee breach that should have improved conditions for the species in Napa River.

CDFW has a study that monitors the distribution and relative abundance of delta smelt throughout the Delta. There are six sampling sites within the Napa River, the northernmost being approximately 1.25 miles downstream from the Proposed Project Area. The most recent observation of Delta smelt within the Napa River occurred in June 2017 at Station 348, which is approximately 2.10 miles south downstream of the Proposed Project Area (CDFW 2023j). Approximately six fish were observed at this time. Delta smelt thrive within the freshwater-saltwater mixing zone. This interface occurs within the Proposed Project Area. As there are no barriers to fish passage within the Napa River between the documented occurrences and the Proposed Project Area, Delta smelt have the potential to occur within the Proposed Project Area.

Western River Lamprey

Western river lamprey are a California State SSC. Western river lamprey is poorly studied in California and (Moyle et al. 2015). They are an anadromous species, but adults spend only a short

time in the ocean (3-4 months). Western river lamprey migrate from the ocean to spawning areas during the fall and late winter and spawning is believed to occur February through May in small tributary streams (Beamish 1980; Moyle 2002). Presumably, adults spawn in gravelly riffles, and ammocoetes will remain in silt-sand backwaters and eddies to feed, presumably for 3 to 5 years before moving into more open water (CDFW 2023i).

Western river lamprey have been observed every year, except 2020 and 2022, in Napa County RCD's annual fish monitoring surveys (Napa County RCD 2023) and would be expected to utilize the Proposed Project Area as a migratory corridor.

Steelhead

CCC steelhead refers to all naturally spawned populations of anadromous steelhead below natural and manmade impassable barriers from the Russian River to and including Aptos Creek, and all drainages of San Francisco and San Pablo Bays eastward to Chippis Island at the confluence of the Sacramento and San Joaquin Rivers (79 FR 208002). NMFS proposed to list CCC steelhead as endangered on August 18, 1997 (62 FR 43937) and reaffirmed the threatened status on January 5, 2006 (71 FR 834); updated April 14, 2014 (79 FR 20802).

CCC steelhead have the life history plasticity, in response to environmental changes, for both resident and anadromous forms but coastal streams are dominated by the anadromous form (Satterthwaite et al. 2009, Sogard et al. 2012). Adult steelhead return from the ocean for spawning in winter and build their redds in loose gravel in the main stem river and tributaries. Steelhead spend one to five years in freshwater prior to smolting and then spend up to three years in the ocean prior to returning to freshwater to spawn. CCC steelhead are considered a winter-run type of the anadromous form, and most are ocean-maturing ecotype fish, entering rivers in reproductive condition (Moyle et al., 2017).

Steelhead populations in most tributaries to San Francisco and San Pablo Bays have been extirpated, but CCC steelhead continue to spawn in the Napa River system, including Napa River and Napa Creek, as well as in other streams entering San Pablo Bay, Suisun Bay, and San Francisco Bay (Napa County RCD 2023).

CCC steelhead primarily use the lower Napa River as a migration corridor from December to May to reach spawning and rearing grounds in Tulocay, Napa, Redwood, Miliken, Dry, and Bell Canyon Creeks (USACE and District 1999). Napa Creek can provide year-round rearing conditions for juvenile steelhead, but there are no spawning areas within the Proposed Project Area.

CCC steelhead would be expected to occur within the Proposed Project Area as they are migrating into and out of the Napa River between June and November.

Sacramento Splittail

Sacramento splittail are a California State SSC. The Sacramento splittail is found in slow-moving river sections and dead-end sloughs with flooded vegetation for spawning and foraging. They are tolerant of high salinities, are benthic foragers, and spawn during seasonal inundation of floodplains (Moyle et al. 2004). Adult Sacramento splittail typically migrate upstream from brackish areas in January and February and spawn in fresh water, particularly on inundated floodplains when they are available, in March and April (Sommer et al. 1997, 2008). Juveniles move downstream into the Delta from April to August (Meng and Moyle 1995, Feyrer et al. 2005).

This species is present in the tidally influenced reaches of Napa River (Feyrer et al. 2005, Leidy 2007, Napa County RCD 2023) and has been observed in Napa County RCD's annual fish monitoring surveys from 2009 to 2023. Sacramento splittail could occur within the Proposed Project Area.

Longfin Smelt

The San Francisco Bay-Delta DPS of longfin smelt was ruled endangered under the ESA by USFWS on July 30, 2024 (89 FR 61030). The San Francisco Bay-Delta DPS of longfin smelt includes salt and freshwater habitats upstream of the Golden Gate including the San Francisco Bay, Sacramento - San Joaquin River Delta, and their tributaries. Longfin smelt are also listed as threatened under CESA.

Longfin smelt are a euryhaline species found in the Bay-Delta, Humboldt Bay, and the estuaries of the Eel River and Klamath River. The Bay-Delta population concentrate in San Pablo Bay between April and June and move upstream to spawn in estuary low-salinity zones and freshwater tributaries, including Napa River (Merz et al. 2013, Moyle 2002). Spawning occurs from November to May, peaking in January and February, with eggs released in freshwater over sandy or gravel substrates or rocks and aquatic plants. Juvenile success is positively correlated with higher freshwater inputs (Mahardja et al. 2021). Adult longfin smelt utilize estuarine wetland and slough habitat before migrating upstream to spawn, and as juveniles to rear and feed prior to entering the ocean (USFWS 2023d). Like delta smelt, the longfin smelt thrive at the X2 due to the abundance of food resources and suitable habitat areas.

The fisheries monitoring program, as mentioned above in *Delta Smelt*, encountered longfin smelt larvae each year throughout the 2001-2005 sampling period (Stillwater Sciences 2006). Over 3,500 larval longfin smelt were encountered in 2003 indicating a spawning event occurred nearby (Stillwater Sciences 2006). Over 2,000 longfin smelt were observed at a station approximately 5 miles downstream of the Proposed Project Area in the April 2023 20-milimeter trawl surveys conducted by CDFW providing evidence that breeding populations of longfin smelt continue to thrive within the Napa River. Longfin smelt can be presumed present within the Proposed Project Area during the migratory period.

Critical Habitat

The USFWS and NMFS maintain areas of critical habitat for federally regulated species to safeguard the continued existence of such species by restricting the type and extent of activities proposed under Section 7 of Federal Endangered Species Act (FESA). Section 7 of FESA requires federal agencies to consult with USFWS and/or NMFS for actions that may take a listed species or their critical habitat. This is summarized in Section 3.6 Fisheries and Aquatic Biological Resources.

Essential Fish Habitat

Section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA), as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), requires federal agencies to consult with NMFS on activities that may adversely affect Essential Fish Habitat (EFH) for species that are managed under federal fishery management plans for U.S. waters. Section 3 of the MSA defines EFH as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity" (16 United States Code [U.S.C.] Section 1802). These waters include aquatic areas, and their associated physical, chemical, and biological habitat features necessary to support the entire life cycle of the species in question and may include areas historically used by these

species. Adverse effect means any impact that reduces the quality or quantity of EFH and may include direct or indirect physical, chemical, or biological alteration of the waters or substrate and loss of (or injury to) benthic organisms, prey species and their habitat, and other ecosystem components.

The MSA also requires that NMFS designate Habitat Areas of Particular Concern (HAPCs) for each federally managed fish species. HAPCs are subsets of EFH, which are rare, particularly susceptible to human-induced degradation, ecologically important, or located in an environmentally stressed area. HAPCs are not afforded additional protection beyond that of the EFH; however, federal projects with potential adverse impacts on HAPCs will be given more scrutiny during ESA consultation process.

The Proposed Project Area addressed within this document falls within the following EFH (NOAA 2023):

- Pacific Groundfish EFH: The Pacific Groundfish Fisheries Management Plan (FMP) is designed to protect habitat for more than 90 species of fish, including rockfish, flatfish, groundfish, some sharks and skates, and other species that associate with the underwater substrate. Because the location of the Proposed Project Area is near the upper limits of tidal influence, two species are presumed present based on recorded presence and habitat suitability: the Pacific sanddab (*Citharichthys sordidus*) and starry flounder (*Platichthys stellatus*) (Moyle 2002; Leidy 2007).
- Pacific Salmon EFH: The Pacific Salmon FMP is designed to protect habitat for commercially important salmonid species. Sacramento fall-run and late-fall-run Chinook salmon is the only one of these species that may be seasonally present in the Proposed Project Area, although historically Coho salmon were common in the Napa River (Moyle 2002; Leidy 2007).

The Napa River constitutes an estuary HAPC. The inland extent of the estuary HAPC is the high-water tidal level along the shoreline or the upriver extent of saltwater intrusion, defined as upstream and landward to where ocean-derived salts measure less than 0.5 part per thousand (ppt) during the period of average annual low flow (Pacific Fishery Management Council 2023).

The Proposed Project Area is upstream of the HAPC, as described by NOAA's EFH Mapper (NOAA 2023); however, effects from the Proposed Project, such as increased turbidity, may impact water quality downstream, including that of the HAPC.

The species that fall under EFH within the Proposed Project Area include Pacific sanddab, starry flounder, and Chinook salmon, which are not covered under ESA or CESA. The life history and habitat requirements of these species are discussed below.

Pacific Sanddab

Pacific sanddabs are widely distributed along the Pacific west coast from the Bering Sea to Cabo San Lucas, at the tip of Baja California (He et al. 2013). Pacific sanddabs are benthic dwellers but are also found pelagically; adults are frequently collected in mid-water trawls. Early reproductive studies showed that Pacific sanddab caught off central California spawn between June and September, with peak activity in August, and suggested individual females spawn multiple times a year (Arora 1951).

Starry Flounder

Starry Flounder are found on different substrates, including gravel; clean shifting sand; hard, stable sand; and mud; however, fishermen report the largest catches over soft sand. Starry flounder can tolerate a wide range of salinities. In the Sacramento and San Joaquin Rivers, starry flounder have been observed in salinities of 0.02 to 0.06 ppt (i.e., essentially fresh water) (Orcutt 1950) and have been collected 75 miles upstream in the Columbia River. Age-0 and age-1+ starry flounder are a common species in estuarine habitats along the West Coast (Orcutt 1950; Sopher 1974; Pearson 1989; Emmett et al. 1991; Baxter et al. 1999; Kimmerer 2009). During the late fall and winter, mature starry flounder probably migrate to shallow coastal waters to spawn (Orcutt 1950). Spawning occurs primarily during the winter months of December and January (Orcutt 1950).

Chinook Salmon

Chinook salmon have evolved a broad array of life history patterns that allow them to take advantage of diverse riverine conditions throughout the year. These life history patterns generally fall into two main generalized freshwater life history types: stream-type and ocean-type (Healey 1991). Ocean-type Chinook salmon such as fall-run and late-fall-run enter freshwater during late summer and fall and spawn soon after. Juveniles typically migrate to the ocean as young of the year after several months of rearing.

Adult fall-run Chinook salmon migrate through the Bay-Delta and into Central Valley rivers from June through December. Individuals spawn in the Sacramento River, and eggs and alevins (yolk-sac fry) are in the gravel primarily from September to January, with a peak during October through December.

Late-fall-run Chinook salmon fry generally emerge from March through June. Late-fall-run fry rear in upstream waters until about July, migrate downstream to rear in lower stretches of the river until the following April, and emigrate out as smolts from November through May.

Wildlife Corridors

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the migration of animals. Wildlife corridors contribute to population viability by assuring continual exchange of genes between populations, providing access to adjacent habitat areas for foraging and mating, and providing routes for recolonization of habitat after local extirpation or ecological catastrophes (e.g., fires). Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation. Habitat linkages provide a potential route for gene flow and long-term dispersal of plants and animals and may also serve as primary habitat for smaller animals, such as reptiles and amphibians. Habitat linkages may be continuous habitat or discrete habitat islands that function as stepping-stones for dispersal. The Napa River is the primary wildlife corridor in the Proposed Project Area.

Effects of the Proposed Project

Method of Analysis

This section describes the methods used to analyze the biological resource impacts of the Proposed Project. The analysis considers the floodwalls south of Lincoln Avenue, floodwalls north of Lincoln Avenue, scour protection under the Lincoln Avenue bridge, and floodwalls at the dry bypass, as appropriate, in the context of construction, staging areas, post-construction operation, and

maintenance. This analysis is a supplemental analysis to the 1999 Final SEIS/EIR and focuses on the changes in impacts and conditions. Specific CEQA significance criteria related to terrestrial biological resources are listed below.

The evaluation of potential effects on special-status species and sensitive natural communities in the Proposed Project Area was based on the review of field survey data, desktop analysis, and available literature review. The analysis methods are based on industry standards and peer-review information cited throughout this section. Both effects resulting from construction of the Proposed Project and subsequent operation and maintenance of the resulting structures will be analyzed.

Construction impacts consist of temporary effects to habitats within the Proposed Project Area such as fugitive dust generation, the construction of a temporary access ramp, and minor tree trimming for construction equipment access. Permanent effects (long-term effects) would result from the construction of the floodwalls both north and south of the Lincoln Avenue bridge, the installation of rock scour protection at Lincoln Avenue bridge and its abutments, the construction of a new walking path with associated tree removal, and construction of floodwalls at the dry bypass.

After construction, all operations and maintenance (O&M) activities would be undertaken by the District indefinitely as part of their areawide O&M activities. A 15-foot-wide O&M corridor on the land side of the floodwall and the existing Napa River Trail on the water side of the floodwall would serve as maintenance corridors. Any damage to the existing Napa River Trail as a result of construction would be repaired as necessary immediately after construction. Short-term O&M effects caused by O&M activities from the Proposed Project would include periodic inspections as well as minor vegetation trimming.

The methods for analysis of effects on biological resources are organized into direct and indirect effects. Direct effects are those impacts that are directly caused by the construction and operation of the Proposed Project. Indirect effects are those impacts of the Proposed Project that occur either later in time or at a distance from the Proposed Project Area but are reasonably foreseeable, such as downstream sedimentation in adjacent habitats that is influenced by upstream construction activities. Such indirect effects are captured within the Proposed Project Area buffer. Direct and indirect effects can be either permanent or temporary. Effects on habitat are generally considered temporary when the habitat is restored to preconstruction conditions during or immediately after construction. The Proposed Project Area and land cover mapping area for vegetation and aquatic resources includes a 100-foot-wide buffer outside of the temporary and permanent impact areas. The buffer areas were assessed for potential temporary and indirect effects on vegetation and aquatic resources.

Permanent direct effects on biological resources were quantified using the estimated amount of land cover that would be converted as a result of construction of the new floodwalls and rock scour protection compared to existing conditions. Temporary direct effects on biological resources were quantified using the estimated amount of land cover that would be temporarily disturbed during construction that would be restored to pre-existing conditions during or immediately after construction. Temporarily affected habitat areas located within the Proposed Project Area were addressed as operational impacts to avoid double counting habitat effects and because construction effects along the floodwall alignment could be considered permanent if habitat could not be restored at these locations. It is assumed that the conditions on parcels of land surrounding adjacent to the floodwall could be maintained similar to existing conditions (e.g., developed).

Direct effects on biological resources identified within the Proposed Project Area were determined using GIS software. The Proposed Project Area and associated impact areas were overlaid on the

vegetation community, wildlife habitat, and wetland data to quantify the permanent and temporary effects associated with the construction and operation of the Proposed Project and No Project Alternative. Effects on occurrences of special-status plants known to occur in the Proposed Project Area were determined by overlaying the Proposed Project Area over the mapped occurrences and determining the area of overlap.

Construction effects are restricted to construction of the floodwalls, placement of rock scour protection, and associated construction access and staging. Direct and indirect effects on special-status species and their habitats were assessed using the estimated amounts of suitable habitat that would be converted by construction or indirectly disturbed during construction compared to existing conditions. In general, permanent and temporary effects on potential habitat for special-status species are overestimated because the entirety of the land cover is considered affected even when specific habitat requirements may be absent at specific locations.

Operational effects are restricted to routine inspections by workers on foot or in vehicles and vegetation trimming. To assess potential operational effects on biological resources, both direct and indirect impacts within the Proposed Project Area were evaluated.

Construction and operation of the Proposed Project could result in permanent habitat loss of suitable habitat for one special-status plant species and four special-status wildlife species with the potential to occur in the Proposed Project Area. Suitable habitat types include riverine, riparian, grasslands, disturbed, freshwater emergent wetlands, and saline emergent wetlands. **Figure G-2** shows the impacts of the Proposed Project to each habitat type.

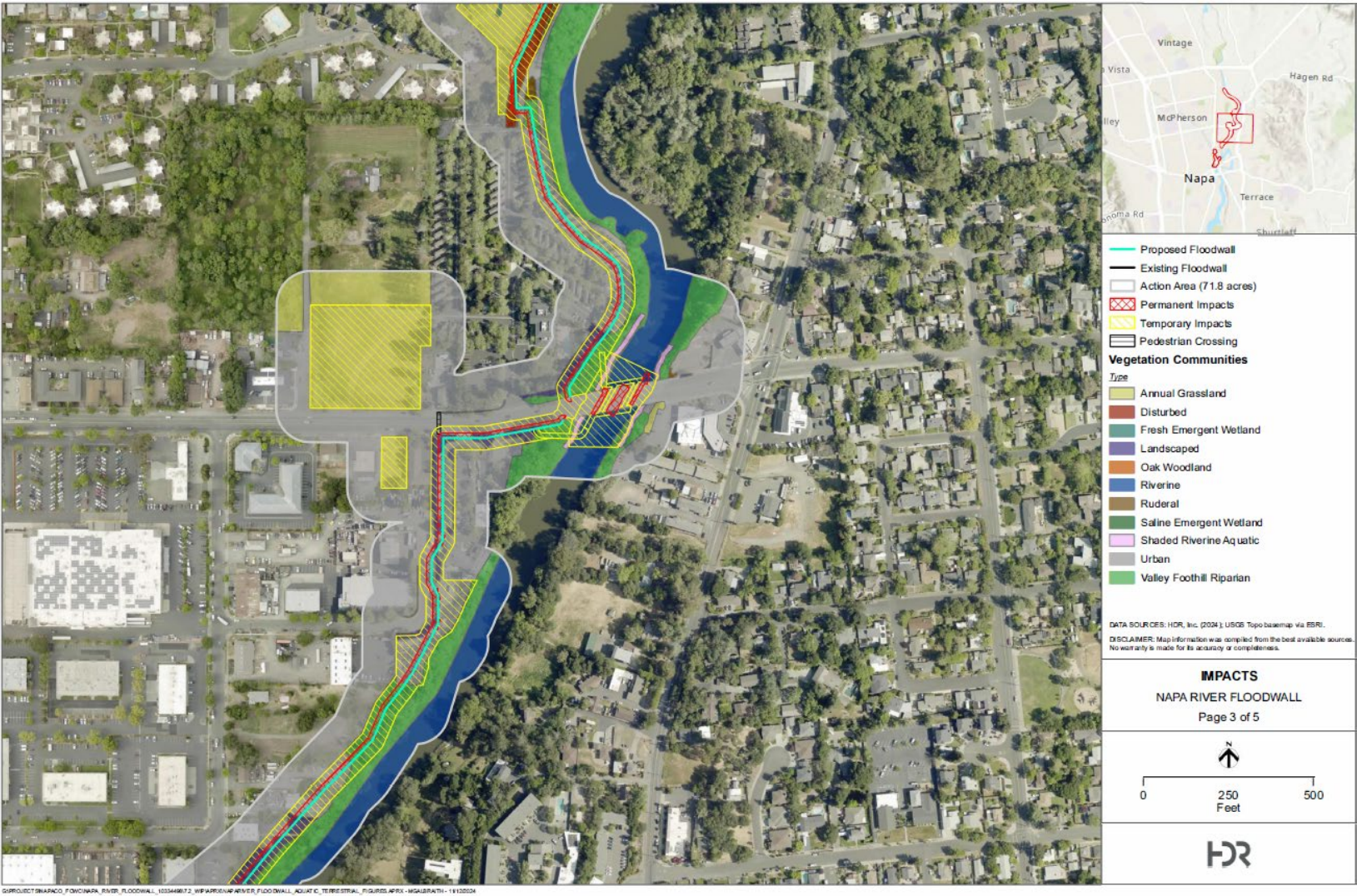
Figure G-2. Proposed Project Impacts (Page 1 of 5)



Figure G-2. Proposed Project Impacts (Page 2 of 5)



Figure G-2. Proposed Project Impacts (Page 3 of 5)



Legend:

- Proposed Floodwall
- Existing Floodwall
- Action Area (71.8 acres)
- Permanent Impacts
- Temporary Impacts
- Pedestrian Crossing

Vegetation Communities

Type	Color
Annual Grassland	Light Green
Disturbed	Dark Green
Fresh Emergent Wetland	Light Blue
Landscaped	Dark Blue
Oak Woodland	Light Yellow
Riverine	Dark Yellow
Ruderal	Light Brown
Saline Emergent Wetland	Dark Brown
Shaded Riverine Aquatic	Light Purple
Urban	Dark Purple
Valley Foothill Riparian	Light Green

IMPACTS
NAPA RIVER FLOODWALL
Page 4 of 5

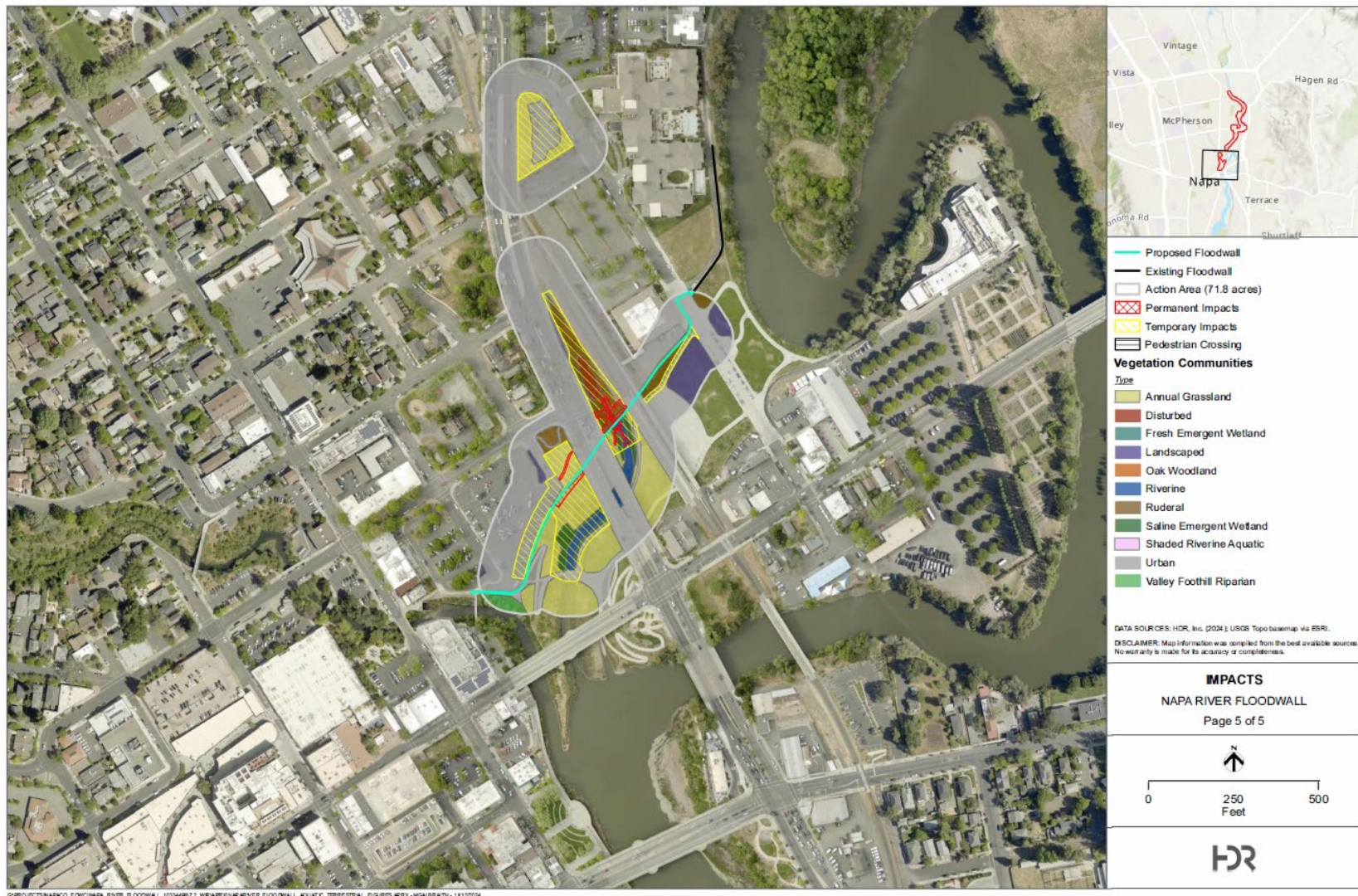
Scale: 0 to 500 Feet

North Arrow: N

Logo: HDR

DATA SOURCES: HDR, Inc. (2024); USGS Topo base map via ESRI.
DISCLAIMER: Map information was compiled from the best available sources.
No warranty is made for its accuracy or completeness.

Figure G-2. Proposed Project Impacts (Page 5 of 5)



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United States Department of the Interior

FISH AND WILDLIFE SERVICE
San Francisco Bay-Delta Fish and Wildlife Office
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Sacramento, California 95814



In Reply Refer To:
2024-0043509

November 26, 2024

Mr. Kevin Harper
Chief, Environmental Resources Branch, Planning Division
U.S. Army Corps of Engineers, Sacramento District
1325 J Street
Sacramento, California 95814-2922

Subject: Reinitiation of formal consultation on the Napa River/Napa Creek Flood Protection Project Napa County, California; Floodwalls North of Bypass river mile 15.5 to 17

Dear Kevin Harper:

This is in response to the U.S. Army Corps of Engineers' (Corps) July 1, 2024, letter requesting reinitiation of formal consultation with the U.S. Fish and Wildlife Service (Service) on the Napa River/Napa Creek Flood Protection Project (project). A Biological Opinion (BiOp) was originally issued on April 9, 1999, an amendment on June 9, 2000, and a reinitiation on November 24, 2009. It is a federal project intended to improve flood protection of the City of Napa and vicinity while also providing significant environmental quality benefits. Much of the project has already been constructed, including excavation above low tide to increase flood conveyance capacity, breaching of levees to provide for seasonally inundated habitat, establishing a total of at least 600 acres of restored wetlands, new bridges at Soscol Avenue, First Street, and the Napa Valley Wine Train railroad, east bank terracing near downtown Napa, an array of improvements along lower Napa Creek, a flood control dike from Kennedy Park to Imola Avenue, a levee from Imola Avenue to Tulocay Creek, and a dry bypass channel and associated floodwalls in the vicinity of the aforementioned replaced bridges.

This reinitiation was requested to address: (1) design changes within the remainder of work, upstream of and along the west (right) bank of the dry bypass as well as changes to minor elements within the dry bypass itself; and (2) associated effects on listed species, including those whose listing status has changed since the last reinitiation. The proposed project would be constructed by the Corps, with the Napa County Flood Control and Water Conservation District (NCFCWCD) as a non-Federal local sponsor. This response is provided under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act), and in accordance with the implementing regulations pertaining to interagency cooperation (50 CFR 402).

At issue are effects of the project on the federally listed as threatened delta smelt (*Hypomesus transpacificus*), endangered longfin smelt (*Sprinchus thaleichthys*), proposed threatened northwestern pond turtle (*Actinemys marmorata*), and candidate for listing monarch butterfly

(*Danaus plexippus*). Your request was received on July 8, 2024, with a supplemental Biological Assessment (U.S. Fish and Wildlife Service Supplemental Biological Assessment, Napa River/Napa Creek Flood Protection Project - Floodwalls North of the Bypass, prepared by HDR, Sacramento, California, June 2024; hereafter “supplemental BA”).

In the time since the BiOp, a final rule listing the longfin smelt as endangered was published (see below, BIOLOGICAL OPINION); the Sacramento splittail (*Pogonichthys macrolepidotus*) which was a threatened species at the time of the BiOp was delisted; the northwestern pond turtle was proposed for listing as threatened; and the monarch butterfly became a candidate. A revised 12-month finding for the monarch butterfly is due to be published on December 4, 2024, which could change its candidate status to proposed threatened or endangered. The supplemental BA includes determinations that the project may affect but is not likely to adversely affect (NLAA) the monarch butterfly and the northwestern pond turtle, and may affect and is likely to adversely affect the delta smelt and longfin smelt. Because the Corps references this supplemental BA in its transmittal letter, we are treating these determinations as the Corps' determinations and a request for our concurrence.

The NLAA determination for the monarch butterfly was based on very limited habitat for this species, consisting of 3 host plants of which only one will be impacted. The NLAA determination for the northwestern pond turtle was based on the tidal influence of this portion of the Napa River, making its presence unlikely. The Corps will nonetheless employ additional avoidance and minimization measures for both the monarch butterfly (host plant mapping, avoidance, and monitoring) and northwestern pond turtle (nesting season surveys, exclusion fencing, monitoring) (see supplemental BA pp. 34-35). Finally, the changes addressed by this consultation significantly reduce both in water and riparian impacts compared to the previous designs, further lessening the effects of the project on these species. We believe any effects to the monarch butterfly and the northwestern pond turtle to be insignificant and, therefore, concur with the NLAA determinations for these species (*i.e.*, our conference concurrence).

The remainder of this document provides our biological opinion on the effects of the proposed project on the delta smelt and longfin smelt. In considering your request, we based our evaluation on the following: (a) the quality and quantity of listed species habitats affected and created by all elements of the project, past and proposed; (b) the extent of impact on such habitat that would occur with elements and how any design changes may have changed that impact. The information we used to make this evaluation included the supplemental BA, observations during a site visit, communications with the Corps and local sponsor, and supplemental evaluations as a result of those communications (see CONSULTATION HISTORY, below).

CONSULTATION HISTORY

A consultation history for events preceding this reinitiation was provided in the supplemental BA included with your request which included the original BiOp and subsequent amendment; we incorporate it by reference but note that this supplemental BA did not include the most recent reinitiation of November 24, 2009. That November 24, 2009, reinitiation has Corps-provided values and map locations of all areas of permanent loss, creation, and enhancement of Shallow Water Habitat (SWH) based on the most up-to-date designs at that time. Activities since those identified in the supplemental BA include (unless otherwise noted, communications are by electronic mail):

November 24, 2009: Service issued reinitiation of consultation for entire project effects on SWH (see within that reinitiation for additional preceding events 2001-2009).

July 8, 2024: Service received electronic mail request from the Corps reinitiating formal consultation, and electronic document transfer of supplemental BA.

August 26, 2024: Service attended a site visit to project area.

September 12, 2024: Service sent follow-up email identifying need to compare proposed with original (1999) plan.

September 16, 2024: Call between Service and NCFWCWD to discuss design differences.

September 20, 2024: NCFWCWD provided footprint image comparing original and proposed design impacts for riparian.

September 24, 2024: Service requested further information on temporary impacts and revegetation limits in any vegetation free zones around proposed project elements.

September 25, 2024: NCFWCWD provided additional information on temporary and permanent (*i.e.*, vegetation maintenance zone) impacts.

October 2, 2024: Corps concurred with NCFWCWD additional information on vegetation temporary and permanent impacts.

October 3, 2024: Service notified Corps and NCFWCWD of its November 24, 2009, reinitiation, intent to modify SWH based on new design, and requests impact area for such (or citation within supplemental BA).

October 4, 2024: NCFWCWD provided additional information on SWH impact, referencing supplemental BA Table 3, p. 21 (0.18 acre, termed "Riverine habitat").

October 16, 2024: Service emailed draft reinitiation response letter and requests Corps concurrence with project description.

October 18, 2024: Corps concurred with reinitiation project description.

BIOLOGICAL OPINION

Description of the Action

The action covered by this reinitiation concerns changes and refinements to yet to be constructed elements of the project primarily upstream of the dry bypass to the upstream end of the project near Trancas Street, as well as minor revisions within the dry bypass.

After review of the supplemental BA, our April 9, 1999, Biological Opinion and November 24, 2009, reinitiation are hereby amended as follows (additional or modified text is shown in **boldface**):

1. ADD the following language below to follow the last paragraph of **Description of the Action** (November 24, 2009, reinitiation p. 8):

A number of changes are now proposed for elements within Contract 3, Subcontracts 1 and 2, from the plans and description in the 1998 Final Supplemental General Design Memorandum and 1999 Final Supplemental Environmental Impact Statement/Environmental Impact Report referenced in the Service's November 24, 2009, reinitiation. As detailed in a supplemental Biological Assessment dated June 2024, these changes include: (1) in the gap between the Soscol and railroad bridge embankments, constructing a new outfall control with a manually operated sluice gate instead of a 350 cubic feet per second land side pump station; (2) north of the dry bypass but south of Lincoln Avenue, modestly changing the configuration of floodgates and the trail; (3) a reduction of rock scour protection under Lincoln Avenue bridge to less than half originally proposed (not more than 0.18 acre); (4) beginning North of Lincoln Avenue, construct a floodwall set back farther away from the top of bank than originally proposed, thereby eliminating the need for and effects of previously planned other bank stabilization and in water work; (5) continue the floodwall North around the Lake Park subdivision, instead of the originally proposed 3-foot-high new levee; (6) For the River Glenn townhome section, install a sheet pile I-floodwall instead of a concrete T-floodwall; and, finally (7) shorten the floodwall by terminating it on high ground at the north end of the townhome section instead of farther North at the rear of the Elks Lodge.

ADDITIONAL CONSERVATION MEASURES THAT MAY PERTAIN TO DELTA SMELT AND LONGFIN SMELT

To avoid additional impacts, NCFCWCD will implement the following new general avoidance and minimization measures:

- Implementation of erosion control measures and Best Management Practices (BMPs) for construction activities, will reduce potential impacts to listed fish species and habitat resulting from sedimentation and turbidity during construction. The following water quality protection measures will be implemented:**

- **Silt fencing will be installed in all upland areas where construction occurs within 100 feet of the water; and**
 - **Spoil sites and other debris areas will be located so they do not drain directly into any body of water. Spoil sites will be graded to reduce the potential for erosion.**
- **During construction, all equipment refueling and maintenance will occur more than 200 feet from the main channel. Any spill within the floodplain and active channel of the Napa River will be reported to the National Marine Fisheries Service (NMFS) within 48 hours.**
- **If the applicant's contractor requires it, they will use vibrational pile driving or padded hammer techniques where possible to prevent acoustic impacts to listed fish species. Where the use of these techniques is not possible, an approved pile driving plan will be submitted to NMFS for approval prior to start of construction. Where possible, the applicant's contractor will comply with the *Interim Criteria for Injury of Fish to Pile Driving Operations* (NMFS 2008):**
 - **The Sound Exposure Level will not exceed 183 decibels for fish under 2 grams and 187 decibels for fish over 2 grams, in any single strike, measured at a distance of 32.8 feet (10 meters) from the source; and**
 - **The peak sound pressure level will not exceed 206 decibels in any single strike, measured at a distance of 32.8 feet (10 meters) from the source.**
 - **If used, pile driving will only occur during daylight hours. Restricted working hours will allow for relaxation periods and movement windows for special-status fish present in the Action Area;**
 - **The number and size of piles will be developed as part of the final design and will be limited to the minimum necessary to meet the engineering and design requirements of the Proposed Action.**
 - **The use of other sound attenuation devices and methods, such as bubble curtains, may be explored if needed to maintain Sound Exposure Levels below the NMFS Interim Criteria (NMFS 2008).**
- **An erosion and sediment control plan will be developed to control short-term and long-term erosion and sedimentation effects and to restore soils**

and vegetation in areas affected by construction activities. The plans will include all the necessary state requirements regarding erosion control and will implement BMPs for erosion and sediment control that will be in place for the duration of construction activities. The following erosion control measures will be included:

- **Install physical erosion control stabilization BMPs (hydroseeding with native seed mix, mulch, silt fencing, fiber rolls, sandbags, and erosion control blankets) to capture sediment and control both wind and water erosion. Erosion control may not utilize plastic monofilament netting or similar materials.**
- **Maintain emergency erosion control supplies on-site at all times during construction for direct contractor(s) to use as needed. Ensure that supplies used from the emergency stockpiles are replaced within 48 hours. Remove materials used in construction of erosion control measures from the work site when no longer needed (property of the contractor).**
- **Design grading to be compatible with adjacent areas and result in minimal disturbance of the terrain and natural land features and minimize erosion in disturbed areas to the extent practicable.**
- **Divert runoff away from steep, denuded slopes or other critical areas with barriers, berms, ditches, or other facilities.**
- **Retain native trees and vegetation to stabilize hillsides, retain moisture, and reduce erosion.**
- **Limit construction, clearing of native vegetation, and disturbance of soils to areas of proven stability.**
- **Implement construction management and scheduling measures to minimize exposure to rainfall events, runoff, or flooding at construction sites.**
- **Conduct frequent site inspections (before and after significant storm events) to ensure that control measures are intact and working properly and to correct problems as needed.**
- **Install drainage control features (*e.g.*, berms and swales, slope drains) as necessary to avoid and minimize erosion.**
- **Install wind erosion control features (*e.g.*, application of hydraulic mulch or bonded fiber matrix).**

- **Prior to the start of ground-disturbing work (including vegetation clearing, grading, and equipment staging), the Project biologist, designated biologist, or other USACE-approved biologist will conduct a mandatory biological awareness training to field management and construction personnel on the importance of protecting sensitive natural resources (*i.e.*, listed species and designated critical and/or suitable habitat for listed species). Training will be conducted during pre-construction meetings so that construction personnel are aware of their responsibilities and the importance of compliance. All trainees will be required to sign a sheet indicating their attendance and completion of environmental training. These requirements also pertain to operations and maintenance personnel working in and adjacent to suitable habitat for listed species.**
- **All Project personnel will be educated on the types of sensitive resources located in the affected areas and the measures required to avoid and minimize effects on these resources. Materials covered in the training program will include environmental rules and regulations applicable to construction activities, requirements for limiting activities to approved work areas, timing restrictions, and avoidance of sensitive resource areas.**

As required by local, state, or federal regulations, the District will require that construction contractors develop a Spill Prevention, Containment, and Countermeasure Plan (SPCC Plan) for implementation at each site where ground-disturbing activities occur. Each SPCC Plan will comply with the regulatory requirements of the Spill Prevention, Control, and Countermeasure Rule (40 CFR Part 112) under the Oil Pollution Act of 1990. This rule regulates non-transportation-related onshore and offshore facilities that could reasonably be expected to discharge oil into navigable waters of the United States or adjoining shorelines. The rule requires the preparation and implementation of site-specific SPCC Plans to prevent and respond to oil discharges that could affect navigable waters. Each SPCC Plan will address actions used to prevent spills in addition to specifying actions that will be taken should any spills occur, including emergency notification procedures.

2. CHANGE the following on **Description of the Proposed Action**, specifically, within Sheets 22 and 23 of Attachment 1 referenced in the fourth paragraph of CHANGE #1 on p. 4 in the November 24, 2009, reinitiation entitled "Figures showing locations of Effects of the Napa River/Napa Creek Flood Reduction Project on Shallow Water Habitat" (pdf pages 36 and 37):

Remove all brown shading on the right (west) bank of map sheets and legend and remove the parenthetical legend notation for that shading reading "(rock to be used so will result in permanent shallow water habitat loss)."

3. CHANGE the following on **Description of the Proposed Action**, specifically, Attachment 2 referenced in the fourth paragraph of CHANGE #1 on p. 4 in the November 24, 2009, reinitiation entitled "Table summary of effects of the Napa River/Napa Creek Flood Reduction Project on Shallow Water Habitat" (pdf page 39):

From:

CONTRACT AREA	SWH IMPACTED PERM TEMP		SWH CREATED	SWH ENHANCED	INFORMATION SOURCE ²⁻¹	SHEET NUMBER
3/bypass ch-Trancas St	0.93 ¹¹				SGDM estimate	23
TOTALS	7.56	0.52	505.52	23.45		

To:

CONTRACT AREA	SWH IMPACTED PERM TEMP		SWH CREATED	SWH ENHANCED	INFORMATION SOURCE ²⁻¹	SHEET NUMBER
3/bypass ch-Trancas St	0.18				June 2024 Suppl. BA	
TOTALS	6.81	0.52	505.52	23.45		

4. REPLACE the language on **Status of the Species, Delta Smelt** (April 9, 1999, Biological Opinion pp. 5-8) in entirety, with the following:

Delta Smelt

The status of the species has been updated since the issuance of the April 9, 1999, Biological Opinion. Please refer to the 2022 delta smelt Species Assessment and Listing Priority Assignment Form of the Candidate Notice of Review for the status of the species. Electronic copies of this document are available at https://ecosphere-documents-production-public.s3.amazonaws.com/sams/public_docs/publication/4119.pdf (Service 2023).

In December 2021, the Service, along with the California Department of Fish and Wildlife, California Department of Water Resources, and U.S. Bureau of Reclamation, began releasing captively produced delta smelt into the Sacramento-San Joaquin River Delta in an experiment intended to help inform future supplementation of the species in the wild. Experimental release of captively produced, marked delta smelt continued for a third year from November 2023 through January 2024. During this third year a total of 91,468 delta smelt were released over 6 release periods in the Sacramento River at Rio Vista. A small subsample of those marked fish have also been recaptured. A fourth year of experimental release is planned for the winter 2024-2025. Delta smelt abundance is historically low and continues to trend downward with the exception of the brood stock experimentally released fish.

5. DELETE the section on **Status of the Species, Sacramento Splittail** in entirety (April 9, 1999, Biological Opinion pp. 8-10)

6. ADD the following new section to **Status of the Species** (April 9, 1999, Biological Opinion):

Longfin Smelt

The Service listed the longfin smelt DPS as endangered on July 30, 2024 (Service 2024a). For the comprehensive assessment of the longfin smelt DPS, please refer to the proposed listing rule at <https://www.govinfo.gov/content/pkg/FR-2024-07-30/pdf/2024-16380.pdf#page=1> and the *Species Status Assessment for the San Francisco Bay-Delta Distinct Population Segment of the Longfin Smelt* at <https://ecos.fws.gov/ServCat/DownloadFile/253023> (Service 2024b). Critical habitat has not yet been proposed.

7. CHANGE the following in the **INCIDENTAL TAKE STATEMENT, Amount or Extent of Take** (second and third paragraphs, p. 15 of April 9, 1999, Biological Opinion, as modified by p.8 of November 24, 2009, reinitiation):

From:

The Service anticipates that incidental take of delta smelt and splittail will be difficult to detect for the following reasons: the small size of delta smelt and splittail eggs and larvae; their occurrence in aquatic habitat that make them difficult to detect; and the low likelihood of finding dead or impaired specimens. Due to the difficulty in quantifying the number of delta smelt and incidental to the project in terms of acres of habitat that will become suitable for the species as a result of the action. Therefore, the Service estimates that 7.32 acres of brackish emergent marsh, 0.61 acres of tidal mudflats, 0.19 acre of Shaded Riverine Aquatic (SRA) cover, and 8.08 acres of shallow water habitat will become unsuitable as a result of the action. In addition, an unquantifiable number of delta smelt and Sacramento splittail may be killed, harmed, or harassed as a result of the temporary loss of 5 linear feet of suitable delta smelt and Sacramento splittail habitat associated with proposed future maintenance and remediation activities. The Service has developed the following incidental take statement based on the premise that the reasonable and prudent measures will be implemented. Upon implementation of the following reasonable and prudent measures, incidental take associated with the Napa River/Napa Creek Flood Reduction Project in the form 7.32 acres of brackish emergent marsh habitat, 0.61 acre of tidal mudflats, and 0.19 acre of SRA habitat of harm, harassment, or mortality on will become exempt from the prohibitions described under section 9 of the Act.

The Service anticipates that incidental take of delta smelt and Sacramento splittail will be difficult to detect for the following reasons: the small size of delta smelt and Sacramento splittail eggs and larvae; their occurrence in aquatic habitat that makes them difficult to detect; and the low likelihood of finding dead or impaired specimens. Due to the difficulty in quantifying the number of delta smelt and Sacramento splittail that will be taken as a result of the proposed action, the Service is quantifying take incidental to the project in terms of acres of habitat that will become unsuitable for the species as a result of the action. Therefore, the Service estimates that 300 square feet of shallow water habitat will become unsuitable as a result of the proposed

project. The Service has developed the following incidental take statement based on the premise that the reasonable and prudent measures will be implemented. Upon implementation of the following reasonable and prudent measures, incidental take associated with the project in the form of harm, harassment, or mortality on 300 square feet of shallow water habitat will become exempt from the prohibitions described under section 9 of the Act.

To:

The Service anticipates that incidental take of delta smelt and **longfin smelt** will be difficult to detect for the following reasons: the small size of delta smelt and **longfin smelt** eggs and larvae; their occurrence in aquatic habitat that make them difficult to detect; and the low likelihood of finding dead or impaired specimens. Due to the difficulty in quantifying the number of delta smelt and **longfin smelt** that will be taken as a result of the proposed action, the Service is quantifying take incidental to the project in terms of acres of habitat that will become suitable for the species as a result of the action. Therefore, the Service estimates that 7.32 acres of brackish emergent marsh, 0.61 acres of tidal mudflats, 0.19 acre of Shaded Riverine Aquatic (SRA) cover, and **7.33** acres of shallow water habitat will become unsuitable as a result of the action. In addition, an unquantifiable number of delta smelt and **longfin smelt** may be killed, harmed, or harassed as a result of the temporary loss of 5 linear feet of suitable delta smelt and **longfin smelt** habitat associated with proposed future maintenance and remediation activities. The Service has developed the following incidental take statement based on the premise that the reasonable and prudent measures will be implemented. Upon implementation of the following reasonable and prudent measures, incidental take associated with the Napa River/Napa Creek Flood Reduction Project in the form 7.32 acres of brackish emergent marsh habitat, 0.61 acre of tidal mudflats, 0.19 acre of SRA habitat, and **7.33 acres of shallow water habitat** of harm, harassment, or mortality on will become exempt from the prohibitions described under section 9 of the Act.

The Service anticipates that incidental take of delta smelt and **longfin smelt** will be difficult to detect for the following reasons: the small size of delta smelt and **longfin smelt** eggs and larvae; their occurrence in aquatic habitat that makes them difficult to detect; and the low likelihood of finding dead or impaired specimens. Due to the difficulty in quantifying the number of delta smelt and **longfin smelt** that will be taken as a result of the proposed action, the Service is quantifying take incidental to the project in terms of acres of habitat that will become unsuitable for the species as a result of the action. Therefore, the Service estimates that 300 square feet of shallow water habitat will become unsuitable as a result of the proposed project. The Service has developed the following incidental take statement based on the premise that the reasonable and prudent measures will be implemented. Upon implementation of the following reasonable and prudent measures, incidental take associated with the project in the form of harm, harassment, or mortality on 300 square feet of shallow water habitat will become exempt from the prohibitions described under section 9 of the Act.

8. ADD the following to follow the last paragraph of the **Effects of the Proposed Action** (April 9, 1999, Biological Opinion, p. 14):

Longfin Smelt

Like delta smelt, longfin smelt is a demersal species which migrates a short distance in early winter to spring to spawn in low salinity. This includes tidal areas of the lower portions of Bay area tributaries, including the Napa River and the proposed project area. Sampling over the last decade has verified the presence of longfin smelt in the project area and other tributaries west of the Delta, although the distribution of the species varies between years and with water year type (Parker et al. 2017). Growth and survival depend on outflow, temperature, food, and other factors. Habitat alteration such as with the use of rock rip rap placement as part of the proposed project can incrementally adversely affect the quality of spawning or rearing habitat for the species. Creation and enhancement of floodplain habitats in the low salinity zone (emergent brackish marsh, SRA cover, mudflat), such as what already has been done in substantial areas of the lower Napa River that are part of the project, will benefit longfin smelt for the same reasons described above for delta smelt.

Recently proposed project changes avoid an increment of habitat modification within shallow water habitat usable by longfin smelt that had been previously planned. Specifically, the previously estimated 0.93 acre of riprap placement within shallow water habitat upstream of the dry bypass will now be no more than 0.18 acre, to take place only around piers under the Lincoln Street bridge. The benefits of the overall project on shallow water habitat, previously estimated at 505.52 acres creation and 23.45 acres of enhancement and the construction for which is now substantially completed, greatly exceed the 6.81 acres of impact, including those remaining upstream of the dry bypass.

9. CHANGE the **Conclusion** (April 9, 1999, Biological Opinion p. 14):

From:

After reviewing the current status of the salt marsh harvest mouse, delta smelt, and splittail, the environmental baseline, the effects of the proposed project, and the cumulative effects, it is the Service's biological opinion that the proposed Napa River/Napa Creek Flood Reduction Project is not likely to jeopardize the continued existence of the harvest mouse, delta smelt, and splittail.

To:

After reviewing the current *Status of Species* for the harvest mouse, delta smelt, and longfin smelt, the *Environmental Baseline* for the Action Area, the *Effects of the Proposed Action*, and the *Cumulative Effects*, it is the Service's biological opinion that the Napa River/Napa Creek Flood Reduction Project, as proposed, is not likely to jeopardize the continued existence of the harvest mouse, delta smelt, and longfin smelt. The Service reached this conclusion because the project-related effects to the species, when added to the environmental baseline and analyzed in consideration of all potential cumulative effects, will not rise to the level of precluding recovery or reducing the likelihood of survival of the

species based on the following: (1) limited direct effects on listed species habitats from construction; (2) the likelihood that the proposed avoidance and minimization measures will substantially avoid effects on the species themselves; and (3) substantial net benefits to the species in the form of creation and enhancement of listed species habitats that greatly exceed the direct effects on such habitats.

10. CHANGE the **Reasonable and Prudent Measures** (April 9, 1999, Biological Opinion, p. 16):

From:

The Service believes the following reasonable and prudent measure is necessary and appropriate to minimize incidental take of the harvest mouse, delta smelt, and splittail:

1. The potential for harassment, harm, injury and mortality to the harvest mouse, delta smelt and splittail shall be minimized.

To:

All necessary and appropriate measures to avoid or minimize effects on the harvest mouse, delta smelt, and longfin smelt resulting from implementation of this project have been incorporated into the project's proposed conservation measures. Therefore, the Service believes the following reasonable and prudent measure is necessary and appropriate to minimize incidental take of the harvest mouse, delta smelt, and longfin smelt:

All conservation measures, as described in the biological assessment and restated here in the Project Description section of this biological opinion as well as those in the June 2024 supplemental biological assessment, shall be fully implemented and adhered to. Further, this reasonable and prudent measure shall be supplemented by the terms and conditions below.

11. CHANGE the following in **Terms and Conditions** (April 9, 1999, Biological Opinion, p. 17):

From:

11. Any spills of hazardous materials within delta smelt habitat shall be cleaned up immediately. Such spills shall be reported in post-construction compliance reports.

To:

11. Any spills of hazardous materials within delta smelt **and longfin smelt** habitat shall be cleaned up immediately. Such spills shall be reported in post-construction compliance reports.

12. ADD the following to citations to the **Literature Cited** (April 9, 1999, Biological Opinion):

National Marine Fisheries Service (NMFS). 2008. Interim Criteria for Injury of Fish to Pile Driving Operations, a White Paper. Issued May 15, 2006.

Parker, C., L. Lewis, A. Barrus, M. Willmes, M. Bisson, and J. A. Hobbs. 2017. Longfin Smelt Distribution: Abundance and Evidence of Spawning in San Francisco Bay Tributaries. Unpublished Poster Presentation. Department of Wildlife Fish and Conservation Biology, University of California, Davis. Available on the Internet at: chrome-extension://efaidnbmnnnibpcajpcgclefindmkaj/https://www.ogfishlab.com/wp-content/uploads/2017/10/Parker_SoE_2017_Final.pdf

(Service) U.S. Fish and Wildlife Service. 2023. Species Assessment and Listing Priority Assignment Form of the Candidate Notice of Review. U.S. Fish and Wildlife Service. San Francisco Bay-Delta Fish and Wildlife Office, Sacramento, California. 54 pp. https://ecosphere-documents-production-public.s3.amazonaws.com/sams/public_docs/publication/4119.pdf

_____. 2024a. Endangered and Threatened Wildlife and Plants; Endangered Species Status for the San Francisco Bay-Delta Distinct Population Segment of the Longfin Smelt. Federal Register Vol. 89, No. 146: 61029 - 61049. https://www.govinfo.gov/content/pkg/FR-2024-07-30/pdf/2024-16380.pdf#page=1

_____. 2024b. Species Status Assessment for the San Francisco Bay-Delta Distinct Population Segment of the Longfin Smelt. Version 2.0. U.S. Fish and Wildlife Service. San Francisco Bay-Delta Fish and Wildlife Office, Sacramento, California. 105 pp. + Appendices A-E. https://ecos.fws.gov/ServCat /DownloadFile/253023

REINITIATION—CLOSING STATEMENT

This concludes formal consultation on the Napa River/Napa Creek Flood Protection Project. As provided in 50 CFR §402.16,

(a) Reinitiation of consultation is required and shall be requested by the Federal agency, where discretionary Federal involvement or control over the action has been retained or is authorized by law and:

(1) If the amount or extent of taking specified in the incidental take statement is exceeded;

(2) If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered;

(3) If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion or written concurrence; or

(4) If a new species is listed or critical habitat designated that may be affected by the identified action.

(b) An agency shall not be required to reinitiate consultation after the approval of a land management plan prepared pursuant to 43 U.S.C. 1712 or 16 U.S.C. 1604 upon listing of a new species or designation of new critical habitat if the land management plan has been adopted by the agency as of the date of listing or designation, provided that any authorized actions that may affect the newly listed species or designated critical habitat will be addressed through a separate action-specific consultation. This exception to reinitiation of consultation shall not apply to those land management plans prepared pursuant to 16 U.S.C. 1604 if:

(1) Fifteen years have passed since the date the agency adopted the land management plan prepared pursuant to 16 U.S.C. 1604; and

(2) Five years have passed since the enactment of Public Law 115-141 [March 23, 2018] or the date of the listing of a species or the designation of critical habitat, whichever is later.

If you have any questions regarding this reinitiation, please contact Steven Schoenberg of my staff at (916) 930-5672 or at Steven_Schoenberg@fws.gov, or Stephanie Millsap at (916) 930-2658 or at Stephanie_Millsap@fws.gov.

Sincerely,

Donald Ratcliff
Field Supervisor

cc:

Dave Fluesch, Corps of Engineers, Sacramento, CA
Darren Howe, National Marine Fisheries Service, Sacramento, CA
Melanie Day, California Department of Fish and Wildlife, Sacramento, CA
Nicholas Magnuson, California Department of Fish and Wildlife, Stockton, CA
Jeremy Sarrow, Napa County Flood Control and Water Conservation District, Napa, CA

From: [Sarrow, Jeremy](#)
To: [David.W.Fluetsch](#)
Cc: [miranda.s.doutch](#); [Fisher, Linda](#); [Tannourji, Danielle](#)
Subject: RE: [Non-DoD Source] Re: NAPA Flood Project- NMFS Review
Date: Monday, October 21, 2024 9:43:33 AM

CAUTION: [EXTERNAL] This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

That's great news that NMFS completed their review of the revised project with the Corps and determined that the minor revisions do not warrant reinitiation of consultation and as you mentioned I think we are close to also closing the loop with USFWS.

Thanks for the update and keep me posted re: USFWS.

Cheers,

Jeremy Sarrow

Watershed and Flood Control Operations Manager
Napa County Flood Control & Water Conservation District
804 First Street, Napa, CA 94559
p: (707) 259-8204

From: Fluetsch, David W CIV USARMY CESPK (USA) <David.W.Fluetsch@usace.army.mil>
Sent: Monday, October 21, 2024 9:20 AM
To: Sarrow, Jeremy <Jeremy.Sarrow@countyofnapa.org>
Cc: Doutch, Miranda S CIV USARMY CESPK (USA) <Miranda.S.Doutch@usace.army.mil>; Fisher, Linda <Linda.Fisher@hdrinc.com>; Tannourji, Danielle <Danielle.Tannourji@hdrinc.com>
Subject: FW: [Non-DoD Source] Re: NAPA Flood Project- NMFS Review

[External Email - Use Caution]

Hi Jeremy,

I was on leave last week when NMFS responded positively to the Napa River BA and subsequent request to retract the consultation request. So this loop is now closed with NMFS.

I see that Steve Schoenberg submitted a draft amended BO from USFWS. I'll respond to that this week.

V/r,
Dave

David Fluetsch
Environmental Manager
U.S. Army Corps of Engineers, Sacramento District
Cell: 916-708-9496

From: Darren Howe - NOAA Federal <darren.howe@noaa.gov>
Sent: Wednesday, October 16, 2024 1:34 PM
To: Ha, PECK-LEONG E CIV USARMY CESPK (USA) <Peck.Ha@usace.army.mil>; Fluetsch, David W CIV USARMY CESPK (USA) <David.W.Fluetsch@usace.army.mil>; Harper, Marshall Kevin CIV USARMY CESPK (USA) <Marshall.K.Harper@usace.army.mil>
Cc: Brian Meux - NOAA Federal <brian.meux@noaa.gov>
Subject: [Non-DoD Source] Re: NAPA Flood Project- NMFS Review

Hi Peck, David, and Kevin,

Apologies for the long-delayed response; the reason for which was due to workload and procedural nuances. Regarding the former, the San Francisco Bay Branch is down a few positions at the moment, and is working through a backlog of projects. Regarding the latter, we don't technically *concur* with an action agency's determinations of no reinitiation needed or no effect, as action agencies aren't required to ask for our concurrence with such determinations. So, working quickly, Brian and I took your 9/19/24 email to be sufficient for the record, filed it, and moved on to the next thing. Apologies for any miscommunication.

All that said, we can confirm that your message is consistent with our previous coordination and consultation for this project and that we have no questions or concerns regarding the Corps' determination that these minor revisions do not warrant reinitiation of consultation. Also, per your request, we remain available for ongoing technical assistance during project implementation.

Thank you for the coordination. Feel free to reach out with any questions.

Regards,
Darren

On Fri, Oct 11, 2024 at 4:21 PM Brian Meux - NOAA Federal <brian.meux@noaa.gov> wrote:

Hi Peck,
Thank you for this, I'm the biologist assigned to this review. We are backlogged with a heavy workload and this project is still in process. Definitely high on the list, and will let you know when we have any developments.
Thanks,
Brian

Brian M. Meux
Fisheries Biologist
tel: 707-575-1253
brian.meux@noaa.gov

777 Sonoma Ave. Room 325
Santa Rosa, CA 95404
[West Coast Regional Office](#)

On Fri, Oct 11, 2024 at 1:48 PM Ha, PECK-LEONG E CIV USARMY CESPCK (USA)
<Peck.Ha@usace.army.mil> wrote:

Darren and Brian,
My apology that the local agency (Napa County) has reached out to you directly. We will
remind them of the appropriate coordinate/communication route.

Peck Ha
Environmental Planning Section
Supervisor, CESPCK-PDR-P
U.S. Army Corps of Engineers, Sacramento District
1325 J Street, Room 1061
Sacramento, California 95814
(916) 557-6617

From: Sarrow, Jeremy <Jeremy.Sarrow@countyofnapa.org>
Sent: Friday, October 11, 2024 9:46 AM
To: Harper, Marshall Kevin CIV USARMY CESPCK (USA) <Marshall.K.Harper@usace.army.mil>;
Darren Howe - NOAA Federal <Darren.Howe@noaa.gov>; brian.meux@noaa.gov
Cc: Fluetsch, David W CIV USARMY CESPCK (USA) <David.W.Fluetsch@usace.army.mil>; Ha,
PECK-LEONG E CIV USARMY CESPCK (USA) <Peck.Ha@usace.army.mil>
Subject: [Non-DoD Source] RE: NAPA Flood Project- NMFS Review

Greetings Darren and Brian and I hope you are both doing well.

Checking in to confirm your receipt of the request for concurrence below from Kevin at the
Corps.

Let us know if you have any questions and if there is anything we can do at this juncture to help
advance this topic.

Cheers,

Jeremy Sarrow
Watershed and Flood Control Operations Manager
Napa County Flood Control & Water Conservation District
804 First Street, Napa, CA 94559
p: (707) 259-8204

From: Harper, Marshall Kevin CIV USARMY CESPK (USA) <Marshall.K.Harper@usace.army.mil>
Sent: Thursday, September 19, 2024 9:18 AM
To: Darren Howe - NOAA Federal <Darren.Howe@noaa.gov>; brian.meux@noaa.gov
Cc: Sarrow, Jeremy <Jeremy.Sarrow@countyofnapa.org>; Fluetsch, David W CIV USARMY CESPK (USA) <David.W.Fluetsch@usace.army.mil>; Ha, PECK-LEONG E CIV USARMY CESPK (USA) <Peck.Ha@usace.army.mil>
Subject: NAPA Flood Project- NMFS Review

[External Email - Use Caution]

Hello Darren and Brian,

Thanks for recently meeting with the Napa River team and for suggesting the possibility of simply updating the USACE and NMFS files regarding design revisions to the Napa River/Napa Creek Flood Protection Project and consequently avoid reinitiating consultation.

USACE reviewed the original project description and design plans contained within Napa River/Napa Creek Flood Protection Project Biological Opinion (NMFS 1998), the Supplemental Biological Opinion (NMFS 2000), and the FSEIS/EIR (USACE and District 1999) and compared them to the revised proposed project description and design plans for the Napa River/Napa Creek Flood Protection Project– Floodwalls North of the Bypass (Project) presented in the Biological Assessment sent to your office in July 2024. The original project description proposed a combination of levees and floodwalls along the Project alignment north of the Oxbow Bypass in addition to bank and channel-wide RSP reinforcement under the Lincoln Ave. Bridge. The current proposed Project description has removed the need for levees and instead now includes only a floodwall setback from the top of bank and riparian zone and has minimized the use of RSP reinforcement to only the immediate area around the existing Lincoln Ave. Bridge abutments and piers; substantially decreasing the Project effects to listed fish species and their habitats than that which was previously designed and analyzed in the 1998 and 2000 BiOps. With no changes to the status of the covered species and no new or increased effects as analyzed in the original and supplemental BiOps for this Project, and after further discussion with NMFS, USACE now concludes that re-initiation under Section 7 of FESA is not necessary for the Napa River/Napa Creek Flood Protection Project – Floodwalls North of the Bypass. USACE would like to request concurrence from the office of National Marine Fisheries Service on this approach and continued technical assistance via email on this Project matter.

Please let us know if you have any questions.

Have a good day. Kevin

Kevin Harper

Chief, Environmental Resources Branch
Planning Division
U. S. Army Corps of Engineers, Sacramento District
Mobile: 602-315-3225
Office: 916-557-5328
marshall.k.harper@usace.army.mil

--

Darren Howe

he/him/his ([why is this important?](#))

San Francisco Bay Branch Supervisor

NOAA Fisheries West Coast Region

California Coastal Office

777 Sonoma Ave., Room 325

Santa Rosa, CA 95404

(707) 575-3152



Appendix H. Supplemental Fish and Wildlife Coordination Act Report



United States Department of the Interior



FISH AND WILDLIFE SERVICE

San Francisco Bay-Delta Fish and Wildlife Office
650 Capitol Mall, Suite 8-300
Sacramento, California 95814

In Reply Refer To:
2024-0043509

December 12, 2024

Mr. Kevin Harper
Chief, Environmental Resources Branch, Planning Division
U.S. Army Corps of Engineers, Sacramento District
1325 J Street
Sacramento, California 95814-2922

Subject: Supplemental Fish and Wildlife Coordination Act Report for the Napa River/Napa Creek Flood Protection Project Napa County, California; Floodwalls North of Bypass River Mile 15.5 to 17

Dear Kevin Harper:

Please find attached the subject report. If you have questions, please contact Steven Schoenberg of my staff at (916) 930-5672 or at Steven_Schoenberg@fws.gov, or Stephanie Millsap at (916) 930-2658 or at Stephanie_Millsap@fws.gov.

Sincerely,

Donald Ratcliff
Field Supervisor

cc:

Dave Fluesch, Corps of Engineers, Sacramento, CA
Darren Howe, National Marine Fisheries Service, Sacramento, CA
Melanie Day, California Department of Fish and Wildlife, Sacramento, CA
Nicholas Magnuson, California Department of Fish and Wildlife, Stockton, CA
Jeremy Sarrow, Napa County Flood Control and Water Conservation District, Napa, CA

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE

Supplemental Fish and Wildlife Coordination Act Report

NORTH OF DRY BYPASS FLOODWALL,
NAPA RIVER/NAPA CREEK FLOOD
PROTECTION PROJECT

PREPARED BY:

Steven Schoenberg, Senior Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
Watershed Planning Division
San Francisco Bay Delta Fish and Wildlife Office
Sacramento, California

PREPARED FOR:

U.S. Army Corps of Engineers
Sacramento District
Sacramento, California

December 2024

SUMMARY

Since the supplemental Final Environmental Impact Statement and original Fish and Wildlife Coordination Act report for the Napa River/Napa Creek Flood Protection Project were issued in 1999, additional design changes are now proposed for the last remaining, yet-to-be constructed elements of the project within and upstream of the dry bypass. This report includes a semi-quantitative analysis of each of those changes using direct observation, plan overlays, and review of prior reports and documents, including the status of mitigation already accomplished. It is our finding that in nearly all cases, the proposed changes for individual elements will result in less impact than the original design. The now proposed extended and set back floodwall or sheetpile wall will greatly reduce riparian impacts including subsequent vegetation maintenance upstream of Lincoln Street compared to that which would have occurred with the original levee raise design. Rock bank revetment is no longer proposed except for a very minor area around piers of the Lincoln Street bridge. A very minor additional increment of brackish emergent marsh loss (0.03 acre) will occur within the dry bypass. Mitigation completed to date has not yet met all performance standards but substantially exceeds impact in aerial extent and may, over time, exceed impacts in terms of habitat value.

INTRODUCTION

Pursuant to our Scope of Work for FY 2025 this report supplements the U.S. Fish and Wildlife Service's (Service) April 1999 Fish and Wildlife Coordination Act (FWCA) report on the Corps of Engineer's (Corps) Napa River/Napa Creek Flood Protection Project, concerning revisions to the design of remaining work within and upstream of the Dry Bypass. Previous completed work includes the South Wetlands Opportunity Area (SWOA) in 2000-2001, east bank floodplain terracing in downtown Napa in 2002-2005, west bank floodwalls in downtown Napa in 2008, various improvements in lower Napa Creek completed in 2013, and nearly all improvements associated with a dry bypass in 2015. Extensive mitigation and enhancement features incorporated within this work have also been completed and monitored. The Corps has proposed design changes to the remaining work within and upstream of the dry bypass. Among other considerations such as cost, an additional intent of these design changes is to further avoid and minimize impacts to fish and wildlife habitats where possible.

In this supplemental report, we evaluate the extent to which this intent would be accomplished. Our approach is semi-quantitative, which is to say the extent is limited to that needed to determine whether or not the project as modified would have the same or lessor impact on fish and wildlife habitat area and value compared to what had been previously proposed.

COORDINATION HISTORY

Our original FWCA report for the entire project was based on the project description and designs in the Corps' 1998 Final Supplemental General Design Memorandum and 1999 Final Supplemental Environmental Impact Statement/Environmental Impact Report. In our report, we used Habitat Evaluation Procedures (HEP) to quantitatively assess habitat effects of construction and operation over the project life (Service 1999). We anticipated gains in area and value for most habitat types. Because of this surplus, we did not recommend further mitigation beyond habitat enhancement measures already included within the project. Shortly thereafter, in 2000, we issued a short supplemental report focusing primarily on a new bridge for the Napa Valley Wine Train (NVWT). Again, we determined that the project as a whole would at least replace habitat area and value. In 2009, we issued another supplement and HEP evaluation that re-evaluated effects on riparian forest and shaded riverine aquatic (SRA) cover types due to the need to construct additional elements on Napa Creek deemed necessary to pass the design flow and/or prevent erosion, including: two bypasses, channel smoothing, riparian floodplain excavation/creation, daylighting several culverted sections, and other changes (Service 2009). Although effects included reduced vegetation density in some areas, we determined that the habitat area and value benefits on-site as part of the project still sufficiently offset these effects. Later, in November 2023, Corps staff notified the Service of pending project modifications and held an initial Agency meeting on these changes in January 2024. A Scope of Work for this supplemental FWCA report was finalized in August 2024.

The primary information used for this report is the Supplemental Biological Assessment (SBA) with attached plans received in July 2024 as part of a reinitiation of formal consultation, now concluded (Corps 2024; Service 2024). A site visit with the Corps and local sponsor was held on August 27, 2024. Several communications followed with the local sponsor responding to Service

questions on the precise differences in impact between the original and currently proposed project designs, in terms of both construction as well as subsequent maintenance. We also reviewed the most recent of monitoring reports which have been regularly communicated to the Service since first construction.

PROPOSED PROJECT

The scope of this supplemental report is to address changes to remaining work on the west bank of the Napa River from River Mile 15.5 to 17.0, specifically:

- Within the dry bypass where there is a gap between the Soscol Avenue and NVWT Bridge embankments, the original design was to close the gap with a new floodwall section and install a 350 cubic feet per second pump station land side of the floodwall to address interior drainage. The revision is to install an outfall control structure with a manually operated sluice gate in line with the new floodwall rather than a pump station to control that drainage. This will involve installing a vault structure on the water side of the new floodwall to direct drainage.
- South of Lincoln Avenue, the trail was designed waterward of the length between the Ace & Vine and Pet Hospital business parcels and went underneath Lincoln Avenue Bridge, with one floodgate between these businesses. The current design now has a stoplog structure south of Wall Street with the trail running landside of the floodwall and crossing Lincoln Avenue at grade and two floodgates, one for each business parcel.
- Previously, the design called for a grade and scour control structure consisting of 18-inch riprap spanning the entire width of the channel bottom under Lincoln Street Bridge. The current design specifies a reduced extent of riprap around the bridge piers only.
- North of Lincoln Avenue: The prior design included biotechnical bank erosion protection in two sections: one along some eroded bank in the vicinity of Station (STA) 858+00 and the second in the vicinity of STA 890+00 (pdf page 37 *in* USFWS 2019; p. 11 *in* USFWS 1999; the term "biotechnical" combines rock bank armoring with live plants and/or engineered habitat elements). All of this previously proposed bank erosion protection has been deleted in the current design. This design change has been made possible because the floodwall location has now been set back farther from the bank so that erosion which could take place in the future will not undermine the floodwall footings.
- Also north of Lincoln Avenue, the prior design specified raising the existing levee 3 feet around Lake Park Development. The recreational trail would have ramped over the raised levee, run waterside, and connected with the existing City of Napa trail at the north end of Lake Park Development. In the current proposed design, the raised levee has been replaced with a concrete floodwall or sheetpile floodwall. The work will also be several hundred feet shorter, terminating on high ground, instead of extending north to Elks Lodge.

CHANGE IN EFFECTS

Soscol to NVWT Bridge: The revised drainage feature and vault structure installation will disturb a 0.14-acre area of mostly upland vegetation and a small amount of seasonal wetland that is included in the footprint of the vault itself (Figure 1). The wetland loss is estimated to be 0.03 acre or less. This is a new impact not previously identified.



Figure 1. View of additional impact area south of NVWT bridge (Soscol Avenue bridge in background) within oxbow dry bypass. The newly proposed concrete vault would permanently impact a portion of the seasonal wetland visible in center of photograph.

Trail and floodgates south of Lincoln Avenue: Although there are minor changes, the location of the floodwall is within the same footprint of impacts that were originally proposed (Figure 2). The currently proposed design has the trail crossing the floodwall via the newly proposed stop log structure, then crossing Lincoln Avenue at grade. This would avoid any impact to riparian habitat at the expense of creating a trail undercrossing beneath Lincoln Avenue. This specific impact was not identified previously in our analysis of the prior design but is indicated in the SBA (p. 12 *in* Corps 2024).



Figure 2. Overlay of 1999 General Design Memorandum (GDM) design and currently proposed design impact area downstream of Lincoln Avenue (NCFCWCD 2024).

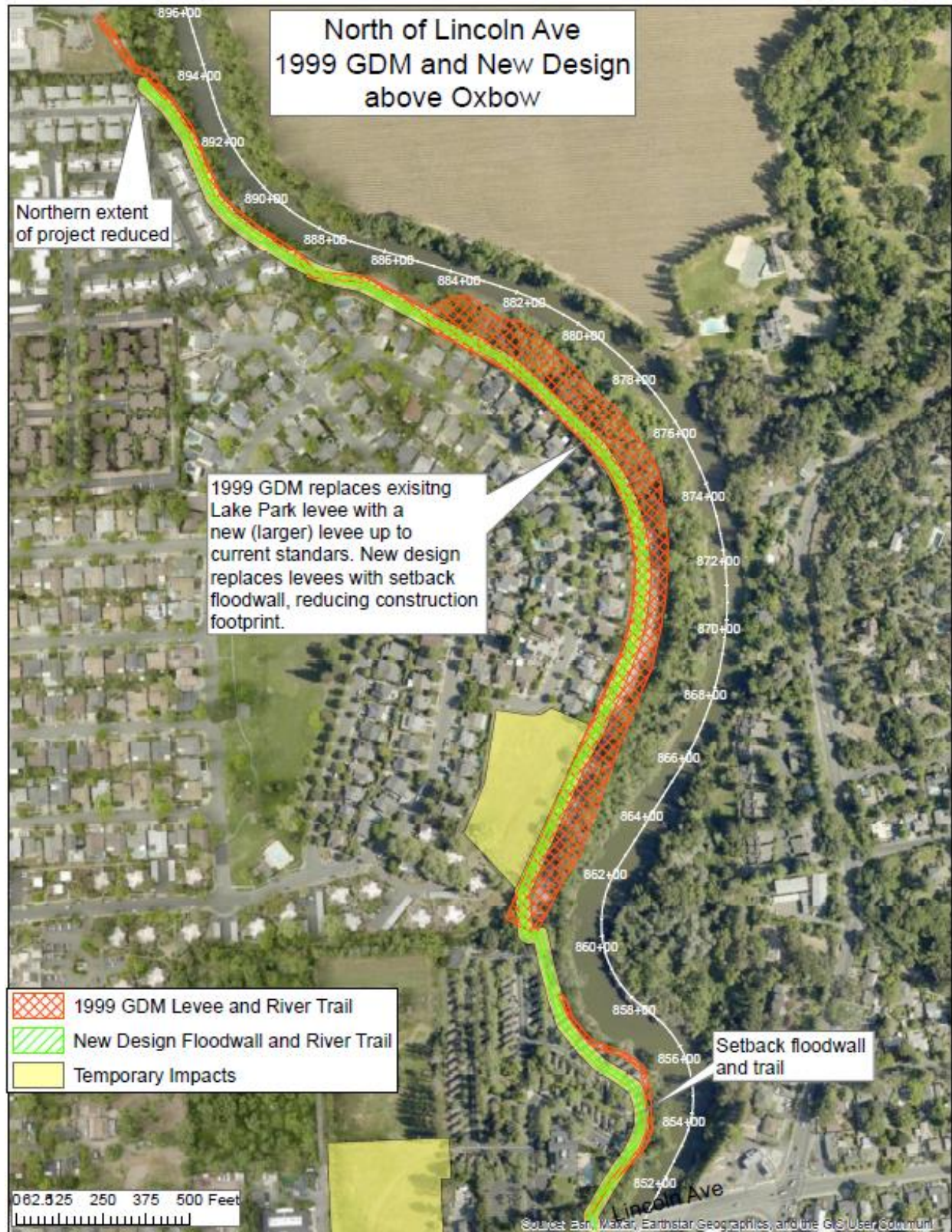


Figure 3. Overlay of 1999 GDM design and currently proposed design impact area upstream of Lincoln Avenue (NCFCWCD 2024).

Stone riprap under Lincoln Street Bridge: The prior design the Service evaluated included what is termed a 150-foot-wide submerged rock scour protection structure across the entire channel width (p. 14 *in* Service 1999). The current design involves placing riprap over about 40 x 50 feet (2,000 square feet; 0.05 ac) beyond the concrete aprons and piers which is less than half of that previously proposed (p. 12 *in* Corps 2024). This change will proportionately reduce the effect of such riprap on aquatic habitat.

Set back floodwall; eliminated rock bank protection north of Lincoln Street: Two biotechnical element sections in the 1999 design which have now been deleted were areas in which a rock toe would have been installed with enhancement structures such as root wads, pole plantings, or "lunkers" (i.e., a man-made structure in the bank where fish can hide). Rock fill was also deleted in one scour section (Figures 3, 4). Although there may have been some enhancement offset value of the biotechnical elements to fisheries and wildlife, avoiding impacts on natural banks is preferred over impacting the banks with rock and mitigating the impact. We estimate this change avoids the impact of installing riprap, either toe rock or bank scour fill, on at least 400 linear feet of bank. Where the floodwall is now proposed to be set back farther (~STAs 854+00 to 858+00), it will impact a smaller area of vegetation farther from the river edge as well as certain mobile home parcels.



Figure 4. Former design bank stabilization location, in the vicinity of STAs 858+00 to 860+00 (opposite bank, center of photograph). This element has been deleted in the new design.

Floodwall and/or sheetpile wall north of Lincoln Street: The most significant change in impact is the result of revising the section between STAs 860+00 and 884+00 from a raised levee to a floodwall. As shown in Figure 3, the prior levee raise design would have affected a large area of riparian forest within its footprint. The current design has a much narrower footprint. To the north of this floodwall is a section which has very little space between the floodwall and the riverbank (STAs 888+00 to 894+00). Here, a steel sheetpile I-shaped floodwall will be installed instead of a T-shaped concrete floodwall. All of these changes reduce temporary and permanent effects on habitat, especially riparian forest.

Considering all of these design changes together, the permanent riparian impact total is estimated to be reduced from 7.04 acres (1999 design) to 2.31 acres (currently proposed, or 2024, design) (NCFCWCD 2024). The 7.04 acres of riparian impact now estimated for the 1999 design is substantially larger than the 1.92 acres of riparian forest impact "above the oxbow" noted repeatedly in our 1999 FWCA report for that same design (pp. 31, 37, 40 *in* Service 1999); and which was used in the Habitat Evaluation Procedures analysis in that report. Although we have not attempted to fully reconcile why our 1999 report estimate was lower, we are confident that the estimates here, 7.04 acres for the 1999 design and 2.31 acres for the 2024 design, are correct based on the figure scales provided. It may have been that our 1999 report used a fixed impact width of 50 feet multiplied by the site length (p. A-2-1; assumption 5 *in* Service 1999) rather than the actual impact area from the construction drawings. Or, perhaps, some portion of riparian forest impact was previously considered "woodlands" and not differentiated above and below the oxbow. Nevertheless, it is clear that when comparing impacts today, the 2024 design has far less riparian impact than the 1999 design.

MITIGATION SUFFICIENCY

The above reanalysis warrants a limited discussion of the sufficiency of mitigation over the entire project. Upstream of the oxbow, we now estimate the 2024 design would have less riparian impact (2.31 acre) than the 1999 design would (7.04 acre, this supplemental report; previously estimated as a loss of 1.92 acres, net loss of -0.36 acre with 1.56-acre creation, *see* Table 3 *in* p. 40 of Service 1999). This 2.31-acre loss is more than the gross loss of 1.92 acres and the net loss of 0.36 acre, but it is not additional loss. Rather, it is avoidance of 4.73 acres of loss that was not accounted in our 1999 report. However, the 2.31 acres loss above the oxbow is still somewhat more than the 0.36-acre net loss previously estimated by about 2 acres. So, the further question remains as to whether this revised loss of 2.31 acres has been mitigated. Several factors need to be considered in assessing whether the project as a whole has adequately offset habitat impacts, including the remaining 2.31 acre increment of riparian forest loss that will occur with the proposed project:

- There has already been habitat creation accrued during project phases below the oxbow including 29.2 acres of riparian, 2.6 acres of SRA cover, 65.7 acres of what is termed high-value woodlands, and 635.8 acres of tidal wetland, seasonal wetland, mudflats, and grassland, largely in the SWOA (NCFCWCD 2022);
- Based on our review of the latest monitoring report, the aforementioned riparian, SRA, and woodland creation still show areas of suboptimal tree height and basal area NCFCWCD (2022). This may reflect site limitations on such cover as a result fluctuating salinity, age, or other factors.

- Some additional impact as well as further riparian forest creation, has occurred within the revised Napa Creek elements of the project; with a net surplus of about 0.4-acre riparian forest and 57% increase in riparian habitat value (Service 2009);
- Much of the 1.56 acre of formerly proposed riparian forest creation would have occurred in partially armored impacted areas now avoided in the current design; the Service typically prefers such avoidance to impact and mitigation;
- The permanent impact area (constructed feature plus standard maintenance of 15-foot vegetation free condition within and adjacent to both land and water sides of such features) is far less for the 2024 design than the prior 1999 design.
- The farther distance of the currently proposed floodwall from the active channel, including some vertical bank sections, make the floodway far less susceptible to damage during flood events that would require emergency measures including temporary rock bank revetment. Such emergency repairs diminish habitat value by limiting vegetative re-establishment.
- The only new impact without some on-site habitat benefit is the loss of 0.03 acre of seasonal wetland to accommodate the drainage vault feature water side of a floodwall section between Soscol and NVWT bridges. This only slightly increases the previously estimated impact on this cover type (44.18 acres), which remains far less than the 178.3 acres of seasonal wetland created in the SWOA downstream (NCFCWCD 2022).

Taking all of these considerations into account, we believe that the proposed design changes will incrementally avoid impacts to riparian and SRA cover compared to the original design. Additionally, the surplus in area of tidal wetland habitat creation is sufficient to offset the minor additional impact on seasonal wetland.

Whether the riparian habitat creation mitigates the impacts for all effects of the project cannot be easily confirmed from the monitoring. On one hand, monitoring has shown successively increased areas of riparian well beyond the 2-acre target (most recently, 29.2 acres; NCFCWCD 2022). However, the average tree height of 8.66 feet within that area is quite low for the age of establishment (2002-2006). The reported basal area of 1.58 square feet¹ is also extremely low for riparian forests (typically 50-75 square feet per acre). Both interim and final performance standard, to be assessed after 40 years, are planned to rely on comparison to reference sites which the 2022 monitoring report currently deems "unavailable". Notwithstanding these uncertainties, mitigation sufficiency is more likely with the proposed project redesign because impacts are reduced.

CONCLUSION

The proposed design changes to the Napa River/Napa Creek Flood Protection Project will partially avoid and hence reduce effects on fish and wildlife resources compared to the prior design. This is a consequence of a smaller area of permanent impacts on riparian and aquatic habitats, with one exception: a modest additional permanent effect on seasonal wetlands. Due to mitigation already completed that far exceeds this increment, no further mitigation is recommended. The Service has no additional recommendation in response to the proposed redesign.

¹ NCFCWCD (2022) reports this value as square feet without the denominator, however, the standard convention for basal area is feet squared per acre.

REFERENCES

- Napa County Flood Control & Water Conservation District [NCFCWCD]. 2022. Napa River Flood Protection Project 2022 Vegetation Monitoring Report. Prepared by Napa County Flood Control and Water Conservation District, Napa, California, with the assistance of Rincon Consultants, Inc., Oakland, California. December 2022. 50 pp + appendices.
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- U.S. Army Corps of Engineers [Corps]. 2024. Reinitiation Package consisting of: (a) Letter from Kevin Harper, Planning Division, U.S. Army Corps of Engineers, Sacramento District to Donald Ratcliff, Field Supervisor, U.S. Fish and Wildlife Service, Bay-Delta Fish and Wildlife Office [reinitiation of formal consultation under Section 7(a) of the Endangered Species Act], 3 pp; and (b) document entitled "U.S. Fish and Wildlife Service Supplemental Biological Assessment; Napa River/Napa Creek Flood Protection Project - Floodwalls North of the Bypass 75 pp + appendix (241 page 65% plan). Transmitted electronically by David Fluetsch, Sacramento District. July 8, 2024.
- U.S. Fish and Wildlife Service [Service]. 1999. Fish and Wildlife Coordination Act Report for the Napa River Flood Damage Reduction Project. Prepared by U.S. Fish and Wildlife Service, Sacramento Fish and Wildlife Office, for the U.S. Army Corps of Engineers, Sacramento District. April 27, 1999. 58 pp + appendices.
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