Appendix B
Topics Not Requiring Detailed Environmental Analysis

ESA

APPENDIX B

Topics Not Requiring Detailed Environmental Analysis

B.1 Introduction

The environmental impact report (EIR) for the Tiscornia Marsh Habitat Restoration and Sea Level Rise Adaptation Project (Proposed Project, or Project) evaluates the environmental effects of the restoration of former tidal marshlands and improvement of a shoreline levee on a 28-acre site at the confluence of San Rafael Creek and San Rafael Bay. Sections 3.2 through 3.6 of the EIR address topics for which the Project components could have a significant impact, and that require detailed environmental analysis. This appendix addresses topics for which it was found that the Project components would not have a significant impact, or where project components could have a significant impact but where a detailed environmental analysis is not required to understand the potential significant impact. The topics considered in this appendix include:

- Agriculture & Forestry Resources
- Cultural Resources
- Energy
- Geology & Soils
- Hazards & Hazardous Materials
- Land Use & Planning
- Mineral Resources
- Noise & Vibration
- Population & Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities & Service Systems
- Wildfire

B.2 Agriculture & Forestry Resources

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

Environmental Setting

The California Department of Conservation (DOC) administers the Farmland Mapping and Monitoring Program (FMMP), California's statewide agricultural land inventory. Through this mapping effort, the DOC classifies farmland into four categories: Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance. The Project site is designated as other land, with Urban and Built-Up Land located immediately adjacent to the Project site, as indicated by the DOC (DOC 2016).

The Williamson Act, also known as the California Land Conservation Act of 1965, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open-space use. There are no active Williamson Act contracts within the Project site (DOC 2019).

Forest land is defined as native tree cover greater than 10 percent. Timberland is forest land available for harvest and has the capacity to be harvested over a long period of time. No forest lands or timberlands are located within the Project site.

Discussion

a) through e) Would the Project 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? Would the Project conflict with existing zoning for agricultural use, or a Williamson Act contract? Would the project 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))? Would the Project result in the loss of forest land or conversion of forest land to non-forest use? Would the Project involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use? (*No Impact*)

The Proposed Project is not zoned for agriculture (it is zoned Parks/Open Space, Planned Development, and Water Zoning Districts with a Wetlands Overlay and a Canalfront Review Overlay); further, it is not located in an area that contains any Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or Williamson Act contracts. The nearest farmland includes Farmland of Local Importance, approximately 4 miles north and 3.5 miles south of the Project site. Similarly, the Project site does not include any existing forest land, timberland, or timberland zoned Timberland Production; nor do any exist near the Project site. For these reasons, construction and operation of the Proposed Project would not involve the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use, nor would it conflict with an active Williamson Act contract. Further, the Proposed Project would not result in the conversion of existing forest or timberland, or conflict with existing agricultural or forestry land policies or zoning. Therefore, there would be **no impact** on farmland and forestry resources.

Cumulative Impacts

f) Would the Project in combination with reasonably foreseeable future projects, result in significant cumulative impacts on farmland and forestry resources? (*No Impact*)

The geographic scope for cumulative impacts on farmland and forestry resources consists of the Project site and immediate vicinity.

As discussed above for issues a) through e), there are no known farmland or forestry resources in or near the Project site. There are reasonably foreseeable future projects, specifically the Pickleweed Field and Park Project and the Schoen Park Conversion to Parking, in the Project vicinity. However, there are no known cumulative projects that would affect farmland or forestry resources, given the lack of such resources in the Project vicinity. Therefore, the Proposed Project, in combination with other reasonably foreseeable future projects, would not result in significant cumulative impacts on farmland and forestry resources.

References

California Department of Conservation (DOC). 2016. California Important Farmland Finder. Available: https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed May 21, 2021.

California Department of Conservation (DOC). 2019. Williamson Act Program. Available: https://www.conservation.ca.gov/dlrp/wa. Accessed November 18, 2020.

B.3 Cultural Resources

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less-than-Significant Impact with Mitigation*	*Less-than-significant Impact*	*No Impact*
CULTURAL RESOURCES — Would the Project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

Environmental Setting

Cultural resources staff with Environmental Science Associates (ESA) conducted a records search at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS) on March 17, 2020 (File No. 19-1643) (NWIC 2020). The records search included a review of cultural resources and studies in the Project vicinity. The purpose of the records search was to: (1) determine whether known architectural or archaeological resources have been recorded within the Project site or a 0.5-mile radius; (2) assess the likelihood of unrecorded cultural resources based on historical references and the distribution of nearby sites; and (3) develop a context for the identification of historical themes.

ESA also reviewed the Built Environment Resources Directory (BERD) for Marin County, which contains information on resources of recognized historical significance—including those evaluated for listing in the National Register of Historic Places (National Register), the California Register of Historical Resources (California Register), the California Inventory of Historical Resources, California Historical Landmarks, and California Points of Historical Interest. Historic maps and aerial imagery were also examined.

Based on the NWIC records search, there are no previously recorded archaeological resources within the Project site. The nearest pre-contact indigenous archaeological resources are a series of four shellmounds recorded on the north side of San Rafael Creek on a promontory between two low-lying valleys. These sites (CA-MRN-81, -82, -88, and -91) are all shellmounds recorded by N.C. Nelson during his intensive survey of the San Francisco Bay in the early 20th century (Nelson 1909). Five recent cultural resources studies have been completed within and adjacent to the Project site; no cultural resources have been identified within the Project site.

ESA completed a surface survey of the Project site in May 2020. All areas of proposed ground disturbance were walked in narrow transects to provide an overall assessment of existing conditions. The Project site is entirely disturbed and developed fill adjacent to the existing Tiscornia Marsh. The levee segments provided access to the outer perimeter of the reclaimed land. As anticipated from the environmental context, no pre-contact indigenous cultural materials or other evidence of past human use or occupation was identified within the Project site.

The Tiscornia Marsh shoreline levee was documented on a Department of Parks and Recreation 523 form. The earthen levee includes two segments: a northern portion adjacent to San Rafael Creek (documented as Marin County Levee 42 in the National Levee Database [NLD][1]), and a portion east of Pickleweed Park (documented as Marin County Levee 12 in the NLD). There are no discerning features associated with the levees. Currently, the levee segments are used as trails along the creek and bay. The levee appears to have been constructed in several phases, with the initial construction of a levee along San Rafael Creek, looping the point in the north, and extending to the south. Additional levee construction occurred in the 1940s, 1970s, and 1980s.

The Tiscornia Marsh shoreline levee was evaluated according to the criteria for listing in the National and California Registers and has been recommended Not Eligible for listing (ESA 2020). Archival review of the levee did not indicate any significant association between the levee and significant events or individuals in history. The levee is a product of flood control and land reclamation and appears to be a part of the levee construction around San Rafael Creek and the Bay implemented by the City of San Rafael (City). The levee was instrumental in the establishment of the useable reclaimed land that currently constitutes the Canal District of the City; however, the levee is not a recognizable feature that promotes association with the development of the neighborhood (Criterion A/1). Research did not indicate any important persons associated with the design or construction of the levee (Criterion B/2). The levee is a typical standard utilitarian structure that has been modified and maintained, and does not represent the work of a master engineer or embody unique architectural characteristics (Criterion C/3). Finally, there are no known features associated with the levee, and the levee would not yield information important to history (Criterion D/4). The levee is not considered a historic property or a historical resource, and no additional consideration of this resource is recommended for the Proposed Project.

Discussion

a) Would the Project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5? (*Less-than-Significant Impact*)

CEQA Guidelines Section 15064.5 requires the lead agency to consider the effects of a project on historical resources. A historical resource is defined as any building, structure, site, or object listed in or determined to be eligible for listing in the California Register, or determined by a lead agency to be significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, or cultural annals of California. The following discussion focuses on architectural and structural resources. Archaeological resources, including those that are potentially historical resources according to CEQA Guidelines Section 15064.5, are addressed below under issue b).

As a result of the records search, background research, and a site survey, it was determined that no historical resources are present within the Proposed Project site. The Tiscornia Marsh shoreline levee has been evaluated and is not considered a historical resource for the purposes of CEQA. As such, there are no architectural or structural resources on the Proposed Project site that

[1] The National Levee Database is an online map maintained by the U.S. Army Corps of Engineers (USACE) and the Federal Emergency Management Agency (FEMA). The map is available at https://levees.sec.usace.army.mil/#/.

qualify as historical resources, as defined in CEQA Guidelines Section 15064.5, and impacts would be **less than significant**.

b) Would the Project cause a substantial adverse change in the significance of an archaeological resource as defined in Section 15064.5? (*Less-than-Significant Impact with Mitigation*)

CEQA Guidelines Section 15064.5 requires the lead agency to consider the effects of a project on archaeological resources. A significant impact would occur if a project would cause a substantial adverse change to an archaeological resource through physical demolition, destruction, relocation, or alteration of the resource.

As a result of the records search, background research, and a site survey, it was determined that no known archaeological resources are present within the Project site. Based on the survey results and environmental context, there is a low potential that unknown archaeological resources could be discovered during Project implementation.

In the unlikely event that a previously unrecorded archaeological resource were identified during Project ground-disturbing activities and found to qualify as a historical resource or a unique archaeological resource, any impacts on the resource resulting from the Project could be **potentially significant**.

Based on the analysis presented above, implementation of **Mitigation Measure CUL-1: Cultural Resources Awareness Training and Inadvertent Discovery of Archaeological Resources or Tribal Cultural Resources** would reduce potentially significant impacts to **less than significant with mitigation incorporated**. In the event of an inadvertent discovery of an archaeological or tribal cultural resource, this mitigation would ensure that work is halted in the vicinity until a qualified archaeologist can make an assessment and provide additional recommendations if necessary, including contacting Native American tribes.

> **Mitigation Measure CUL-1: Cultural Resources Awareness Training and Inadvertent Discovery of Archaeological Resources or Tribal Cultural Resources**
>
> Prior to authorization to proceed, a qualified archaeologist, defined as an archaeologist meeting the U.S. Secretary of the Interior's Professional Qualification Standards for Archeology, shall conduct a training program for all construction and field workers involved in site disturbance. On-site personnel shall attend a mandatory pre-Project training that shall outline the general archaeological sensitivity of the area and the procedures to follow in the event an archaeological resource and/or human remains are inadvertently discovered.
>
> If pre-contact or historic-era archaeological resources are encountered during Project implementation, all construction activities within 100 feet shall halt, and a qualified archaeologist shall inspect the find within 24 hours of discovery and notify the City of the initial assessment. Pre-contact archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil ("midden") containing heat-affected rocks, artifacts, or shellfish remains; stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-era materials

might include building or structure footings and walls, and deposits of metal, glass, and/ or ceramic refuse.

If the City determines, based on recommendations from a qualified archaeologist and a Native American representative (if the resource is pre-contact indigenous related), that the resource may qualify as a historical resource or unique archaeological resource (as defined in CEQA Guidelines Section 15064.5) or a tribal cultural resource (as defined in Public Resources Code [PRC] Section 21080.3), the resource shall be avoided if feasible. Consistent with Section 15126.4(b)(3), this may be accomplished through planning construction to avoid the resource, incorporating the resource within open space, capping and covering the resource, or deeding the site into a permanent conservation easement.

If avoidance is not feasible, the City shall consult with appropriate Native American tribes (if the resource is pre-contact indigenous related), and other appropriate interested parties to determine treatment measures to avoid, minimize, or mitigate any potential impacts to the resource pursuant to PRC Section 21083.2, and CEQA Guidelines Section 15126.4. This shall include documentation of the resource and may include data recovery (according to PRC Section 21083.2), if deemed appropriate, or other actions such as treating the resource with culturally appropriate dignity and protecting the cultural character and integrity of the resource (according to PRC Section 21084.3).

c) Would the Project disturb any human remains, including those interred outside of formal cemeteries? (*Less-than-Significant Impact with Mitigation*)

The records search and background research determined that no human remains are known to exist within the Project site. Therefore, the Proposed Project is not anticipated to impact human remains, including those interred outside of formal cemeteries.

However, while unlikely, if any previously unknown human remains were encountered during ground-disturbing activities, any impacts on the human remains resulting from the Proposed Project could be **potentially significant**.

Based on the analysis presented above, implementation of **Mitigation Measure CUL-2: Inadvertent Discovery of Human Remains** would reduce potentially significant impacts to **less than significant with mitigation**. This measure shall comply with applicable state laws, including Section 7050.5 of the Health and Safety Code. This would require work to halt in the vicinity of a find and the immediate notification of the County coroner. If the coroner determines that the human remains are Native American, they would notify the California Native American Heritage Commission (NAHC), who shall appoint a Most Likely Descendant (PRC Section 5097.98).

Mitigation Measure CUL-2: Inadvertent Discovery of Human Remains

If potential human remains are encountered, all work shall halt within 100 feet of the find and the City shall be contacted by on-site construction crews. The City shall contact the Marin County coroner in accordance with PRC Section 5097.98 and Health and Safety Code Section 7050.5. If the coroner determines that the remains are Native American, the coroner shall contact the NAHC. As provided in PRC Section 5097.98, the NAHC shall identify the person or persons believed to be the Most Likely Descendant (MLD). The MLD shall make recommendations for the means of treating, with appropriate dignity, the human remains and any associated grave goods, as provided in PRC Section 5097.98.

Cumulative Impacts

d) Would the Project, in combination with reasonably foreseeable future projects, result in significant cumulative impacts on archeological resources or human remains? (*Less-than-Significant Impact with Mitigation*)

The geographic scope for cumulative effects on archeological resources and human remains consists of the Project site and immediate vicinity. Federal and state laws protect cultural resources in most cases, either through project redesign to ensure the preservation of the resource, or by requiring archaeological recovery of a sample of the significant data represented by an archaeological resource.

As discussed above, there are no known archaeological resources within the Project site. While there is the potential for the Project to encounter archaeological resources, which could include prehistoric archeological features or deposits, the Project is not expected to result in significant impacts even if archaeological resources are found. There are reasonably foreseeable future projects, specifically the Pickleweed Field and Park Project and the Schoen Park Conversion to Parking, that could impact the same archaeological resources as the Proposed Project, if any such resource is identified. However, these projects would involve the implementation of similar types of mitigation measures described above, which would reduce potential for impacts on these resources and any other as-yet undiscovered resources to a less-than-significant level. Therefore, the Proposed Project, in combination with other reasonably foreseeable future projects, would result in a **less-than-significant cumulative impact** on archeological resources and human remains.

References

Environmental Science Associates (ESA). 2020. *Tiscornia Marsh Restoration and Sea Level Rise Adaptation Project, Cultural Resources Inventory and Evaluation Report.* Prepared for Marin Audubon Society. August 2020.

Nelson, Nels C. 1909. *Shellmounds of the San Francisco Bay Region.* University of California Publications: American Archaeology and Ethnology.

Northwest Information Center (NWIC). 2020. California Historical Resources Information System Database Search. File No. 19-1643, March 17, 2020. Confidential files at ESA.

B.4 Energy

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less-than-Significant Impact with Mitigation*	*Less-than-Significant Impact*	*No Impact*
ENERGY — Would the Project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

Environmental Setting

Consistent with PRC Section 21100(b)(3), this impact analysis evaluates the potential for the Proposed Project to result in a substantial increase in energy demand and wasteful use of energy during Project construction and operation and maintenance. The impact analysis is informed by Appendix G of the CEQA Guidelines. The potential impacts are analyzed based on an evaluation of whether construction energy use estimates for the Proposed Project would be considered excessive, wasteful, or inefficient. Operational energy use would be negligible once the Proposed Project is complete because of the limited use of energy for the public access and recreation facilities, as well as maintenance activities.

Discussion

a) Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? (*Less than Significant*)

The analysis in this section utilizes the energy input assumptions used to complete the analyses in Section 3.3, *Air Quality*, and Section 3.5, *Greenhouse Gas Emissions* of the EIR. Because the California Emissions Estimator Model (CalEEMod) program used for those analyses does not quantify the fuel volume or type for construction-related sources, additional calculations were completed and are summarized below.

Construction of the Proposed Project would result in fuel consumption from the use of construction tools and equipment, truck and barge trips to haul material, and vehicle trips generated from construction workers commuting to and from the site. Project construction is expected to consume a total of approximately 135,657 gallons of diesel fuel from construction equipment and vendors, hauling, water truck trips, and marine engines and 387 gallons of gasoline fuel from commuting construction workers.

Construction activities and corresponding fuel energy consumption would be temporary and localized, as the use of diesel fuel and heavy-duty equipment would not be a long-term condition of the Proposed Project. The total fuel use during the construction period would be equivalent to less than 3.4 percent of the total diesel fuel sold in Marin County in 2019, and approximately 0.0004 percent of the gasoline fuel sold in Marin County (CEC 2020). In addition, there are no

unusual Project characteristics that would require the use of construction equipment or haul vehicles that are less energy efficient necessary for similar construction efforts in other parts of the state. In conclusion, construction-related fuel consumption by the Proposed Project would not result in inefficient, wasteful, or unnecessary energy use that would be expected of other construction efforts in the region. The impact on energy resources during the construction phase of the Proposed Project would be **less than significant**.

b) Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency? (*Less than Significant*)

The transportation sector is a major end-user of energy in California, accounting for approximately 39 percent of total statewide energy consumption in 2019 (U.S. Energy Information Administration 2019). In addition, energy is consumed in connection with the construction and maintenance of transportation infrastructure, such as streets, highways, freeways, rail lines, and airport runways. California's 30 million vehicles consume more than 16 billion gallons of gasoline and more than 3 billion gallons of diesel each year, making California the second largest consumer of gasoline in the world (CEC 2014).

With respect to transportation energy, existing energy standards are promulgated through the regulation of fuel refineries and products, such as the Low Carbon Fuel Standard (LCFS), which mandates a 10 percent reduction in the non-biogenic carbon content of vehicle fuels by 2020. All on-road vehicles used for hauling and worker trips would operate subject to these regulations. Additionally, there are other regulatory programs with emissions and fuel efficiency standards established by the U.S. Environmental Protection Agency (EPA) and California Air Resources Board (CARB), such as Pavley II/LEV III from California's Advanced Clean Cars Program and the Heavy-Duty (Tractor-Trailer) Greenhouse Gas (GHG) Regulation. CARB has set a goal of 4.2 million Zero Emissions Vehicles (ZEV) on the road by the year 2030 (CARB 2016). Further, construction sites, including the Proposed Project, need to comply with state requirements designed to minimize idling and associated emissions, which also minimizes use of fuel. Specifically, idling of commercial vehicles and off-road equipment would be limited to 5 minutes in accordance with the Commercial Motor Vehicle Idling Regulation and the Off-Road Regulation (California Code of Regulations, 2005. Title 13, Chapter 10, 2485, updated through 2014).

The City of San Rafael adopted the Final Draft Climate Change Action Plan 2030 (CCAP 2030), which establishes a new interim target of reducing GHG emissions by 40 percent below 1990 levels by 2030, and outlines the steps that residents, businesses, and the City can take to reach that goal. Potentially applicable actions of the CCAP 2030 for a construction project would be WR-C3 (Construction & Demolition Debris and Self-Haul Waste), which requires all loads of construction & demolition debris and self-haul waste to be processed for recovery of materials as feasible. The Proposed Project would not involve waste disposal as no demolition is proposed. Excavated materials would be reused on-site. Therefore, the Proposed Project would be consistent with energy-related measures of the CCAP 2030. In conclusion, the Proposed Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and impacts would be **less than significant**.

Cumulative Impacts

c) Would the Project, in combination with reasonably foreseeable future projects, result in significant energy impacts? (*Less than Significant*)

The geographic scope of potential cumulative effects with respect to energy resources includes the Pacific Gas & Electric Company's (PG&E's) electric grid and natural gas transmission system that would serve the Project, areas from which transportation fuels would be provided, and the cumulative projects discussed in Section 3.0 of the EIR. Eight foreseeable cumulative projects have been identified within the City of San Rafael.

There is no significant cumulative condition to which the Project could contribute related to the use of large amounts of fuel or energy in a wasteful or inefficient manner. Given that the Proposed Project would have no measureable electrical demand during or after construction and the relatively small percentage of the Project's fuel and energy use compared to existing fuel and energy use in the region, the Project's less-than-significant incremental impacts related to the use of fuel or energy in a wasteful or inefficient manner are not expected to combine with the incremental impacts of other projects to cause an adverse cumulative impact. There would be no operational electricity or natural gas requirements of the Project. Energy demand during Project construction would be temporary.

The eight cumulative projects could require increased construction and, in some cases, operational energy demand. Peak and base energy demands, therefore, could cause or contribute to adverse cumulative conditions. However, the cumulative projects would be subject to the same applicable federal, state, and local energy efficiency requirements (e.g., the state's Title 24 requirements) that would be required of the Project, which would result in efficient energy use during their construction and operation. Adverse Project-related impacts on electricity demand would be negligible, and would not significantly impact peak or base power demands during construction, operation, or maintenance. Accordingly, the Project's less-than-significant incremental contribution to cumulative peak and base demands would not be cumulatively considerable.

References

California Air Resources Board (CARB). 2016. *Mobile Source Strategy*, May 2016. Available: https://www.arb.ca.gov/planning/sip/2016sip/2016mobsrc.htm. Accessed June 2021.

California Energy Commission (CEC). 2014. Summary of California Vehicle and Transportation Energy. Available: http://www.energy.ca.gov/almanac/transportation_data/summary.html#vehicles. Accessed June 2021.

California Energy Commission (CEC). 2020. 2019 California Annual Retail Fuel Outlet Report Results (CEC-A15), obtained from Energy Almanac, Transportation Energy Data, Facts, and Statistics webpage. Available: http://www.energy.ca.gov/almanac/transportation_data/. Accessed July 5, 2021.

U.S. Energy Information Administration. 2019. California State Profile and Energy Estimates: Consumption by Sector. Available: http://www.eia.gov/state/?sid=CA#tabs-2. Accessed June 9, 2021.

B.5 Geology & Soils

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

Environmental Setting

The greater San Francisco Bay Area is located in an area of high seismic activity due to its tectonic setting. Surface rupture can occur when the ground surface is displaced due to fault movement at the earth's surface during seismic events. Such hazards are generally assumed to occur in the vicinity of an active fault trace as they represent an existing plane of weakness. Active faults in the region include the San Andreas Fault, 10 miles to the west of the Project site, and the Hayward Fault, 7 miles east of the Project site. While fault rupture has not occurred in the vicinity of the Project site, the above-noted San Andreas and Hayward Fault Zones pose a risk of surface rupturing (DOC 2021).

The Working Group on California Earthquake Probabilities (WGCEP), comprised of the U.S. Geological Survey (USGS), the California Geological Survey (CGS), and the Southern California Earthquake Center, evaluates the probability of one or more earthquakes of Mw 6.7 or higher (on the Moment Magnitude Scale) occurring in the State of California over the next 30 years. As a

whole, the San Francisco Bay Area has an estimated 72 percent chance of experiencing an earthquake of Mw 6.7 or higher over the next 30 years; among the various active faults in the region, the Hayward and Calaveras Faults are the most likely to cause such an event (WGCEP 2015a). The Proposed Project is located in an area with high earthquake shaking potential, rated as "Severe" shaking severity on the Modified Mercalli Intensity scale for both the San Andreas and Hayward faults (MTC and ABAG 2006).

The Hayward Fault Zone extends northwest approximately 55 miles from San Jose to Point Pinole. It is a right-lateral, strike-slip fault and is designated as an Alquist-Priolo Earthquake Fault Zone. The fault is active, producing large historic earthquakes, fault creep, and abundant geomorphic evidence of fault rupture. The Hayward Fault Zone has a 13.71 percent probability of generating an earthquake with a magnitude equal to or greater than 6.7 Mw over the next 30 years (WGCEP 2015b).

The San Andreas Fault is a major northwest-trending, right-lateral, strike-slip fault zone. The fault zone extends for about 600 miles from the Gulf of California in the south to Cape Mendocino in the north. The San Andreas is not a single fault trace but rather a system of active faults that diverges from the main fault south of the City of San Jose, California. The San Andreas Fault Zone has produced numerous large earthquakes, including the 1906 San Francisco earthquake. The San Andreas Fault Zone has a 5.5 percent probability of generating an earthquake in the Bolinas segment with a magnitude equal to or greater than 6.7 Mw over the next 30 years (WGCEP 2015b).

The State of California, through the Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act), prohibits the development of structures for human occupancy across active fault traces without an adequate geotechnical study to demonstrate that the hazard is not present (Hart 1997).[2] Under the Alquist-Priolo Act, the CGS (formerly the California Division of Mines and Geology) establishes zones on either side of an active fault that delineate areas considered most susceptible to surface fault rupture. These zones are referred to as fault rupture hazard zones and are shown on official maps published by the CGS. The closest active fault to the Project site mapped under the Alquist-Priolo Act is the Hayward fault, which is oriented northwest-southeast and is located approximately 7 miles east of the Project site, well outside of the respective fault rupture hazard zone for the Hayward Fault (DOC 2021). The San Andreas Fault is also mapped under the Alquist-Priolo Act in the area of Bolinas. This segment of the San Andreas fault is approximately 10.5 miles west of the Project site.

[2] The Alquist-Priolo Act designates zones that are most likely to experience fault rupture, although surface fault rupture is not necessarily restricted to those specifically zoned areas. The zones are defined by the CGS. An active fault is defined by the State of California as a fault that has had surface displacement within Holocene time (approximately the last 11,000 years). A potentially active fault is defined as a fault that has shown evidence of surface displacement during the Quaternary (last 1.6 million years), unless direct geologic evidence demonstrates inactivity for all of the Holocene or longer. This definition does not, of course, mean that faults lacking evidence of surface displacement are necessarily inactive. Sufficiently active is also used to describe a fault if there is some evidence that Holocene displacement occurred on one or more of its segments or branches. A structure for human occupancy is one that is intended for supporting or sheltering any use or occupancy, which is expected to have a human occupancy rate of more than 2,000 person hours per year (Hart, 1997).

Liquefaction is a phenomenon where saturated subsurface soils lose strength because of increased pore pressure and exhibit properties of a liquid rather than those of a solid. In general, the soils most susceptible to liquefaction are clean, loose, uniformly graded, saturated and fine-grained, and occur close to the ground surface, usually at depths of less than 50 feet. Liquefaction risk maps show that soils in the Project site have a moderate risk for liquefaction, with a very small amount of very high susceptibility soils on the southwest edges of the Project site, primarily where the ecotone slope would be (MTC and ABAG 2006).

Discussion

a.i) Would the Project 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.) (*No Impact*)

The Project site is not located within an Alquist-Priolo fault zone. Therefore, **no impact** related to the rupture of a known earthquake fault would occur during Project construction or operations.

a.ii) Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking? (*Less than Significant*)

As discussed previously, the region will likely experience a large regional earthquake within the operational life of the Proposed Project. There is a potential for strong to very strong intensity groundshaking at the Project site that would be associated with such an earthquake. The intensity of such an event would depend on the causative fault and the distance to the epicenter, the magnitude, and the duration of shaking. Intense groundshaking and high ground accelerations would affect the entire area around the Project site. However, the restoration and enhancement of marsh habitats would not require protection from seismic shaking because no structures would be constructed. The Proposed Project would not be expected to substantially increase visitation to the site due to shoreline levee/trail improvements, as compared to existing conditions. In addition, the use of trails would not expose people to significant risk associated with strong seismic groundshaking because the Proposed Project would not include structures on the trail that could increase risk or injury. Therefore, impacts relative to seismic shaking during Project construction and operation would be **less than significant**.

a.iii) Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction? (*Less than Significant*)

Seismic shaking can also trigger seismic-induced ground failures caused by liquefaction, and soils at the Project site are known to have a moderate risk for liquefaction. While seismic-induced liquefaction may damage trails and restored habitat areas, the damage would not result in risks to people, and the damaged trails and habitat could be easily repaired. As discussed in Chapter 2, *Project Description*, the Proposed Project would be constructed in stages to limit stress on the Bay Mud (Hultgren-Tillis Engineers 2021). In addition, any access roads and/or crane pads

required on the existing mudflat would be constructed in stages in accordance with geotechnical recommendations to avoid soil failures (e.g., creating mud waves). During the operational phase, the Project would not change the risk of liquefaction or ground failure from existing conditions, which include the same structure types. Therefore, impacts relative to seismic-induced ground failure such as liquefaction would be **less than significant**.

a.iv) Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides? (*Less than Significant*)

Landslides generally consist of any type of ground movement that occurs primarily due to gravity acting on an over-steepened slope and can occur due to excessive precipitation, man-made activities, or induced by seismic activity. Areas that are more prone to landslides include old landslides, the bases or tops of steep or filled slopes, and drainage hollows. The Project site is in an alluvial plain, formed where San Rafael Creek meets San Rafael Bay. The relatively flat topography of this area makes landslides unlikely in the Project site; landslide risk maps show no risk areas in the Project site (MTC and ABAG 2006). In addition, the Project's wetland restoration activities would not create slopes susceptible to landsliding. Therefore, the Proposed Project would not increase the exposure of people or associated structures to an increased risk of loss, injury, or death at the Project site, during construction or operations, due to seismically induced landslides, and impacts would be **less than significant**.

b) Would the Project result in substantial soil erosion or the loss of topsoil? (*Less than Significant*)

Construction

Construction of the Proposed Project would have the potential to result in soil erosion during excavation; trenching; grading; or construction of levees, a rock jetty, and a coarse beach. Because the overall footprint of construction activities would exceed 1 acre, the Proposed Project would be required to comply with the National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges of Storm Water Runoff Associated with Construction and Land Disturbance Activities (*Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ*) (Construction General Permit) and the local stormwater ordinances. For more details about the Construction General Permit and Stormwater Pollution Prevention Plan (SWPPP), please refer to Impact 3.6-1 in EIR Section 3.6, *Hydrology and Water Quality*. These state and local requirements were developed to ensure that stormwater is managed and erosion is controlled on construction sites.

The Construction General Permit requires preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP), which requires applications of Best Management Practices (BMPs) to control runon and runoff from construction work sites. The BMPs would include, but would not be limited to, physical barriers to prevent erosion and sedimentation, construction of sedimentation basins, limitations on work periods during storm events, use of infiltration swales, protection of stockpiled materials, and a variety of other measures that would substantially reduce or prevent erosion from occurring during construction. Compliance with existing regulations would result in **less-than-significant impacts** associated with soil erosion during construction.

Operation

Once constructed, the restored wetland habitats would be largely self-maintaining after the initial period of vegetation establishment. As described in EIR Section 2.4, *Operations and Maintenance*, maintenance for the tidal marsh, ecotone slope, and coarse beach during the 3- to 5-year establishment period would include the removal of invasive plants using localized herbicides or mechanical means, and temporary irrigation of ecotone slope plantings. In addition, the new and improved flood protection levees and trails would require periodic inspection to identify maintenance and adaptive management needs. Physical and biological monitoring would be conducted at Project completion and at 1, 3, 5, and 10 years post-construction. At a minimum, levees would be inspected annually to identify any localized settlement, rodent holes, or other conditions that could compromise the levee integrity. With compliance with existing regulations and implementation of the adaptive management activities, impacts associated with erosion would be **less than significant.**

c) Would the Project 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*)

As described above for issues a.iii and a.iv, impacts relative to liquefaction, lateral spreading (a ground failure associated with liquefaction), and landslides would be less than significant. Subsidence and collapse are ground failures that can occur as a result of groundwater or oil extraction. Neither construction nor operation of the Proposed Project includes the extraction of groundwater or oil and would not otherwise create soil that is unstable. Therefore, impacts would be **less than significant**.

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

Soils within the Project site primarily include xerorthents, fill with a small amount of urban land – xerorthents complex, 0 to 9 percent slopes. Typically, xerorthents are loamy, are well drained, and have a low potential to expand. Permeability and available water capacity vary. Surface runoff is very rapid, and the hazard of erosion is moderate. The soils are also subject to subsidence. Geotechnical Investigation (Hultgren-Tillis Engineers 2021; included in Draft EIR Appendix E) indicated that the site is underlain by Bay Mud, which has expansive properties. The presence of expansive soils would not prevent the restoration of tidal habitat. While expansive soils may cause cracks in trails, the cracks would be a minor nuisance that would be easily repaired with minor maintenance, assuming the cracks were large enough to become an issue. In addition, soils used for levee improvements would be imported from an upland source, which would further minimize the expansive properties of the soils at the Project site. Therefore, impacts relative to expansive soils would be **less than significant**.

e) Would the Project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? (*No Impact*)

The Proposed Project does not include the construction or operation of septic or wastewater disposal systems; therefore, there would be **no impact**.

f) Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? (*No Impact)*

Paleontological resources are the fossilized evidence of past life found in the geologic record. Despite the tremendous volume of sedimentary rock deposits preserved worldwide, and the enormous number of organisms that have lived through time, the preservation of plant or animal remains as fossils is an extremely rare occurrence. Because of the infrequency of fossil preservation, fossils—particularly vertebrate fossils—are considered to be nonrenewable resources. Because of their rarity and the scientific information, they can provide, fossils are highly significant records of ancient life.

Rock formations that are considered of paleontological sensitivity are those rock units that have yielded significant vertebrate or invertebrate fossil remains (SVP 2010). These include, but are not limited to, sedimentary rock units that contain significant paleontological resources anywhere within its geographic extent. The Project site is underlain by artificial fill over Late Holocene-age Bay Mud (NRCS 2021). These types of geologic deposits are too young (i.e., less than 5,000 years old) to have fossilized the remains of organisms, or to have preserved vertebrate fossils. While the Bay Mud may contain a variety of marine invertebrate remains and organic matter (mollusks, clams, fomanifera, microorganisms, etc.), such remains would not have been buried long enough to become fossilized, are likely to commonly exist in other Bay Mud deposits around the Bay Area, and would not be considered significant or unique. For these reasons, in accordance with Society of Vertebrate Paleontology standards, the younger Holocene deposits that would be disturbed for construction and operation of the Project would have no paleontological sensitivity. Therefore, the Proposed Project would have **no impact** on unique paleontological resources.

Cumulative Impacts

g) Would the Project, in combination with reasonably foreseeable future projects, result in significant cumulative impacts related to geology, soils, or paleontological resources? (*Less than Significant*)

For geology and soils, the geographic scope consists of the area that could be affected by Proposed Project activities and the areas affected by other projects whose activities could directly or indirectly affect the geology and soils of the Project site. The analysis above indicated no rare or special geological features or soil types on the Project site that would be affected by Project activities and no other known activities or projects with activities that affect the geology and soils of this site. In addition, the Proposed Project, as with all foreseeable projects, would be required to comply with the applicable state and local requirements. such as the Construction General Permit. Therefore, the Proposed Project's contribution to cumulative geotechnical and soil impacts is **less than significant**.

For paleontological resources, the cumulative study area is the geographical area of the City of San Rafael, which is the geographical area covered by the City's General Plan, including all goals and policies included therein. Future development in the City could include excavation and grading that could potentially affect paleontological resources. However, as noted above, the Project would not result in an impact on paleontological resources. Therefore, the Proposed Project's contribution to the cumulative destruction of known and unknown paleontological resources throughout the City would not be cumulatively considerable.

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B.6 Hazards & Hazardous Material

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less-than-Significant Impact with Mitigation*	*Less-than-Significant Impact*	*No Impact*
HAZARDS & HAZARDOUS MATERIALS — Would the Project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☒	☐

Environmental Setting

The study area for the impact analysis of hazards and hazardous materials includes the Project site, which itself includes the construction storage area and construction staging area. The Project site is immediately south of San Rafael Creek, and to the east is San Rafael Bay. The Project site includes the Tiscornia Marsh property, with approximately 500 feet of shoreline levee/trail, as well as the currently diked salt marsh within Pickleweed Park, with approximately 1,800 feet of shoreline levee/trail, and a portion of former Schoen Park (now a vacant lot). The Project site also includes two existing PG&E towers and boardwalk, as well as a City stormwater drain and sanitary sewer line to the west of Pickleweed Park and the diked marsh (see Chapter 2, *Project Description*, Figure 2-2). The stormwater drain runs adjacent to the Bay Trail on the west side of Pickleweed Park, while the sanitary sewer line generally runs parallel to it before dog-legging into the soccer field and heading back toward the shoreline, where both utilities outfall into the creek. The Project site is generally characterized by flat marsh areas adjacent to earthen levees.

Hazardous Materials

Materials and waste may be considered hazardous if they are poisonous (toxic); can be ignited by open flame (ignitable); corrode other materials (corrosive); or react violently, explode, or generate vapors when mixed with water (reactive). The term *hazardous material* is defined in law

as any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment (California Health and Safety Code, Section 25501[o]). In some cases, past uses can result in spills or leaks of hazardous materials to the ground, resulting in soil and groundwater contamination. The use, storage, transportation, and disposal of hazardous materials are subject to numerous federal, state, and local laws and regulations.

Information about hazardous materials sites on the Project site was collected by reviewing the California Environmental Protection Agency's Cortese List data resources and the State Water Resources Control Board's GeoTracker list. The Cortese List data resources provide information regarding facilities or sites identified as meeting the requirements for inclusion on the Cortese List. The Cortese List is updated at least annually, in compliance with California regulations (California Government Code Section 65962.5), and includes federal Superfund sites, state response sites, non-operating hazardous waste sites, voluntary cleanup sites, and school cleanup sites. The GeoTracker list shows underground storage tanks. Based on a review of the Cortese List conducted in June 2021, no active listed sites are located within 0.25 mile of the Project site (DTSC 2021). One site, the Bahia Vista Elementary School (21880002), is a School Investigation site with no action required as of August 12, 2004 (DTSC 2021).

Soil Contamination and Naturally Occurring Asbestos

Marin is among the identified counties where ultramafic bedrock materials are present. These bedrock materials contain naturally occurring asbestos particles or fibers, which could be disturbed during excavation activities. However, no serpentine soils are present on the Project site, which indicates that the site is not underlain by materials that contain naturally occurring asbestos.

Proximity to Wildfire Hazards Zones

The Project site is located within a Local Responsibility Area, which are lands on which neither the state nor the federal government has any legal responsibility for providing fire protection. The California Department of Forestry and Fire Protection (CAL FIRE) has designated the land within the Project site as Non-Very High Fire Hazard Severity Zone (Non-VHFHSZ) (CAL FIRE 2008).

Proximity to Airports and Schools

The Project site is located 3 miles southeast of the San Rafael Airport. The San Rafael Airport is a private airport primarily located within the City of San Rafael, but also has a small portion within unincorporated Marin County.

The Project site is adjacent to the Pickleweed Children's Center, a pre-school. Bahia Vista Elementary School is located approximately 300 feet south of the Project site.

Discussion

a, b) Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? (*Less than Significant*)

Construction

During the construction phase, equipment would use fuels, oils, and lubricants, which are all commonly used in construction. The routine use or an accidental spill of hazardous materials could result in inadvertent releases, which could adversely affect construction workers and the environment.

Construction activities would be required to comply with numerous hazardous materials regulations designed to ensure that hazardous materials are transported, used, stored, and disposed of in a safe manner to protect worker safety, and to reduce the potential for a release of construction-related fuels or other hazardous materials into the environment, including stormwater and downstream receiving water bodies. Contractors would be required to prepare and implement Hazardous Materials Business Plans (HMBPs) as per the California Hazardous Materials Release Response Plan and Inventory Law of 1985, which requires that hazardous materials used for construction be used properly and stored in appropriate containers with secondary containment to contain a potential release. The California Fire Code also requires measures for the safe storage and handling of hazardous materials.

Construction associated with the Project would disturb more than 1 acre of land surface, affecting the quality of stormwater discharges into waters of the U.S. The Project would, therefore, be subject to the *NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities* (Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ). The Construction General Permit requires the development and implementation of a SWPPP that includes specific BMPs designed to prevent sediment and pollutants from contacting stormwater and from moving off site into receiving waters. The SWPPP would list the hazardous materials (including petroleum products) proposed for use during construction; describe spill prevention measures, equipment inspections, equipment, and fuel storage; identify protocols for responding immediately to spills; and describe BMPs for controlling site runoff. Additionally, the SWPPP must contain a visual monitoring program, a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs. For more details about the Construction General Permit and SWPPP, please refer to Impact 3.6-1 in EIR Section 3.6, *Hydrology and Water Quality*.

In addition, the transportation of hazardous materials would be regulated by the United States Department of Transportation (USDOT), California Department of Transportation (Caltrans), and the California Highway Patrol (CHP). Together, federal and state agencies determine driver training requirements, load labeling procedures, and container specifications designed to minimize the risk of accidental release.

Finally, in the event of a spill that releases hazardous materials at the Project site, a coordinated response would occur at the federal, state, and local levels. The Marin County Hazardous Materials Response Team (HMRT) is a joint-powers authority team that responds to significant hazardous materials incidents, isolates and denies entry to non-equipped personnel, evacuates injured parties, identifies the materials, and assists with the removal of the materials.

The required compliance with the numerous laws and regulations discussed above that govern the transportation, use, handling, and disposal of hazardous materials would limit the potential for creation of hazardous conditions due to the use or accidental release of hazardous materials, and, therefore, the impact would be **less than significant**.

Operation

Once constructed, the restored wetland habitats are expected to be largely self-maintaining after the initial period of vegetation establishment. As described in EIR Section 2.4, *Operations and Maintenance*, maintenance for the tidal marsh, ecotone slope, and coarse beach during the 3- to 5-year establishment period would include the removal of invasive plants using localized herbicides or mechanical means, and temporary irrigation of ecotone slope plantings. The California Department of Pesticide Regulation (DPR), California Code of Regulations (Title 3. Food and Agriculture) Division 6. Pesticides and Pest Control Operations (Sections 6000 – 6960) regulates the use of herbicides. In addition, the new and improved flood protection levees and trails would require periodic inspection to identify maintenance and adaptive management needs. At a minimum, levees would be inspected annually to identify any localized settlement, rodent holes, or other conditions that could compromise the levee integrity. The required compliance with the numerous laws and regulations discussed above that govern the transportation, use, handling, and disposal of hazardous materials would limit the potential for the creation of hazardous conditions due to the use or accidental release of hazardous materials, and, therefore, the impact would be **less than significant**.

c) Would the Project 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*)

Construction

During the construction phase, construction equipment and vehicles would use low toxicity materials including gasoline, diesel fuel, oil, and lubricants, which are all commonly used in construction. These low toxicity materials would be used throughout the Project site. While two schools are located within 0.25 mile of the Proposed Project, the low toxicity of the materials associated with the Proposed Project and required compliance with the laws and regulations discussed above that govern the transportation, use, handling, and disposal of hazardous materials would reduce impacts on area schools to a **less-than-significant** level.

Operation

Once constructed, the restored wetland habitats are expected to be largely self-maintaining after the initial period of vegetation establishment. However, maintenance for the tidal marsh, ecotone slope, and coarse beach during the 3- to 5-year establishment period would include the removal of invasive plants using localized herbicides or mechanical means, and temporary irrigation of

ecotone slope plantings. The required compliance with the laws and regulations discussed above that govern the transportation, use, handling, and disposal of hazardous materials would limit the potential for the creation of hazardous conditions due to the use or accidental release of hazardous materials, and, therefore, the impact would be **less than significant**.

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

There are no hazardous materials sites that are listed on the Cortese List within the Project site. Therefore, there would be **no impact** related to construction or operation of the Proposed Project.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area? (*No Impact*)

The Project site is located approximately 3 miles southeast of the closest airport, the San Rafael Airport. The Project site is therefore not located within an airport land use plan or within 2 miles of a public or private airport. In addition, no structures would be constructed as a part of the Proposed Project that could interfere with height restrictions on structures near airports. Therefore, there would be **no impact** related to the construction or operation of the Proposed Project.

f) Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? (*Less than Significant*)

Construction

There is no emergency response plan or evacuation plan actions specific to the Project site or immediate vicinity; the nearest designated evacuation route is Point San Pedro Road (on the north side of San Rafael Creek from the Project site), which serves as a primary wildfire evacuation route (Marin County 2016). Construction activities would occur within the habitat area to be restored and not on public roads. Spinnaker Point Drive, Canal Street, and other nearby City streets may be used for access but would not require closure or restriction of any lanes. Thus, Project construction would not impair implementation of an adopted emergency response plan or emergency evacuation plan. Further, while not required to reduce a hazards impact, as described in greater detail under issue c) of Section B.13, *Transportation*, Mitigation Measure TRAN-1 would be implemented to minimize potentially hazardous conditions associated with construction trucks accessing the proposed construction staging area. The Traffic Control Plan would require temporary signing, lighting, and traffic control devices to indicate the presence of heavy vehicles and construction traffic, which would support implementation of an adopted Emergency Response Plan or Emergency Evacuation Plan.

Materials and equipment would be transported to and from the site via barge. In addition to the use of a barge, in-water work would occur in an area with existing boating and personal boat docks. As such, water traffic would occur near the Project site, including the barge and in-water work. Boat traffic may be temporarily reduced during construction for safety reasons, but boaters would be able to pass around the Project site. Because of the temporary nature of the Proposed

Project, the limited size of the Proposed Project, and San Rafael Creek and San Rafael Bay near the Project site remaining passable to boaters during Project construction, the Project would not impair implementation of an adopted emergency response plan or emergency evacuation plan. Thus, the impact would be **less than significant**.

Operation

Once constructed, the restored wetland habitats are expected to be largely self-maintaining after the initial period of vegetation establishment. Maintenance for the tidal marsh, ecotone slope, and coarse beach during the 3- to 5-year establishment period would include the removal of invasive plants using localized herbicides or mechanical means, and temporary irrigation of ecotone slope plantings. In addition, the new and improved flood protection levees and trails would require periodic inspection to identify maintenance and adaptive management needs. Access for maintenance and inspections would occur via Spinnaker Point Drive and Canal Street, but would not require the closure or restriction of any lanes. Therefore, the impact would be **less than significant.**

g) Would the Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires? (*Less than Significant*)

Construction

As discussed in the *Environmental Setting*, the Project site is located within a Local Responsibility Area and is designated by CAL FIRE as Non-VHFHSZ. The use of mechanized equipment during construction could cause a wildfire if spark-arresting equipment is not installed on hot surfaces such as mufflers. However, the California Vehicle Code, Section 38366, requires spark-arresting equipment on vehicles that travel off-road. This code applies to the Proposed Project, and vehicles that work in off-road areas would be required to have spark-arresting equipment to reduce the risk of wildfires. Therefore, the impact would be **less than significant**.

Operation

Once constructed, the Proposed Project would involve the removal of invasive plants using localized herbicides or mechanical means, and temporary irrigation of ecotone slope plantings. In addition, the new and improved flood protection levees and trails would require periodic inspection to identify maintenance and adaptive management needs. As discussed previously, vehicles that work in off-road areas would be required to have spark-arresting equipment to reduce the risk of wildfires. Therefore, the impact would be **less than significant**.

Cumulative Impacts

h) Would the Project, in combination with reasonably foreseeable future projects, result in significant cumulative impacts related to hazards and hazardous materials? (*Less than Significant*)

The cumulative impact area for hazardous materials consists of the area that could be affected by Proposed Project activities, such as the release of hazardous materials, and the areas affected by other projects whose activities could directly or indirectly affect the presence or fate of hazardous materials on the Project site. Typically, only projects adjacent to or abutting the Project site are

considered because of the limited potential impact area associated with the release of hazardous materials into the environment.

The contribution of hazardous materials use and hazardous waste disposal with implementation of the Proposed Project is minimal, and combined hazardous materials effects from past, present, and reasonably foreseeable projects within the City and immediate area would not be significant. As previously stated, Project construction and operation would involve the use of potentially hazardous materials (e.g., localized herbicides, solvents, and diesel and petroleum fuels), that when used correctly and in compliance with existing laws and regulations, would not result in a significant hazard to visitors or workers in the vicinity of the Project site. Impacts associated with the potential to encounter unknown hazardous debris and waste that may exist on site during construction would be reduced to a less-than-significant level through environmental review pursuant to CEQA. Furthermore, the Proposed Project and all other projects in the cumulative area are required to comply with the existing regulations related to hazards and hazardous materials. Consistency with federal, state, and local regulations would prevent the Proposed Project, as well as other projects, from creating cumulative impacts in terms of hazards and hazardous materials.

Impacts associated with hazardous soils, hazardous groundwater, and the use of hazardous materials on site would be controlled through application of regulatory compliance measures. For the reasons outlined above, implementation of the Proposed Project would not result in an incremental contribution to cumulative impacts related to hazards and hazardous materials that are cumulatively considerable; therefore, cumulative hazards and hazardous materials impacts are considered **less than significant.**

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B.7 Land Use & Planning

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less-than-Significant Impact with Mitigation*	*Less-than-Significant Impact*	*No Impact*
LAND USE & PLANNING — Would the Project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

Environmental Setting

As discussed in EIR Chapter 2, *Project Description*, the Proposed Project would restore former tidal marshlands and improve a shoreline levee at the confluence of San Rafael Creek and San Rafael Bay. The Project site is along the north boundary of the Canal neighborhood in Central San Rafael. Tiscornia Marsh is bounded on the west by the Al Boro Community Center and Pickleweed Park. To the north is the mouth of San Rafael Creek, and to the east is San Rafael Bay (Bay). The location of former Schoen Park (removed by the City in 2019) lies south of the Tiscornia Marsh shoreline levee, on the southeastern portion of the Project site, bordered by Spinnaker Point Drive (refer to Figure 2-2).

The Project site is designated in the San Rafael General Plan 2040 (General Plan) as Parks, Recreation, and Open Space and as Conservation (City of San Rafael 2021) and is zoned as Parks/Open Space, Planned Development, and Water Zoning Districts with a Wetlands Overlay and a Canalfront Review Overlay (City of San Rafael 2021).

Discussion

a) Would the Project physically divide an established community? *(No Impact)*

As indicated above, the Project site is along the north boundary of the Canal neighborhood in Central San Rafael. While the Proposed Project would set back a levee to restore and enhance wetlands, this is contained within the Project site and would not divide or otherwise go through any neighborhoods or communities. Therefore, neither construction nor operation of the Proposed Project would physically divide an established community, and there would be ***no impact***.

b) Would the Project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? *(No Impact)*

The General Plan and zoning designations within San Rafael are identified above. Implementation of the Proposed Project would restore former tidal marshlands and improve a shoreline levee and would not conflict with the current designations of Parks, Recreation, and Open Space; Conservation; or Parks/Open Space. As part of this analysis, the General Plan Land Use Element's goals and policies, as well as the San Rafael Shoreline Park Master Plan (1989)were reviewed for any potential conflict that the Proposed Project could have with specific

policies whose purpose it is to avoid or mitigate environmental effects. Goal 1 of the Land Use Element is related to "Well-Managed Growth and Change," with a focus on growing in a way that balances community needs, the environment, fiscal stability, and quality of life. Goal 2 is related to "A Complete Community," focused on balanced and diverse land uses (City of San Rafael 2021). Neither construction nor operation of the Proposed Project would induce growth or alter San Rafael's balance and diversity. Further, the Land Use Element makes clear that the City's Zoning Ordinance establishes regulations and standards to ensure that the policies, goals, and objectives of the General Plan are carried out. For the Parks/Open Space District (with Wetland Overlay and Canalfront Review Overlay), the Zoning Ordinance provides that public improvements (such as levees) and public recreation facilities and trails are permitted by right, and that wildlife preserves or sanctuaries are conditionally permitted (City of San Rafael Municipal Code, Title 14, Chapters 14.07, 14.10, 14.11, 14.13, and 14.15). Neither the Water District, Planned Development District, or Canalfront Review Overlay District regulations conflict with these allowable uses. Because the Proposed Project would not conflict with the General Plan's goals or the regulations set forth by the Zoning Ordinance, there would be ***no impact***.

Cumulative Impacts

c) Would the Project, in combination with reasonably foreseeable future projects, result in significant cumulative impacts on land use? (*No Impact*)

The geographic scope of potential cumulative land use impacts encompasses the Project site and its vicinity. Cumulative scenario projects include the Pickleweed Field and Park Project and the Schoen Park Conversion to Parking. However, the Project and cumulative projects would replace existing land uses, or result in a new land use that is compatible with existing zoning and land use plans, and would not physically divide an established community. Therefore, there would be no cumulative impact, and the Project's contribution to cumulative land use impacts would not be cumulatively considerable.

References

City of San Rafael. 2004. City of San Rafael General Plan 2020, Land Use Map, November 15, 2004.

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B.8 Mineral Resources

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

Environmental Setting

The City of San Rafael General Plan identifies the San Rafael Rock Quarry and McNear Brick and Block properties as the only locally important mineral resource located within the City of San Rafael (City of San Rafael 2021). These properties are located at Point San Pedro, approximately 2.5 miles northeast of the Project site, and mineral resources have not been identified within the Proposed Project site. No active mines or mineral plants have been identified within the Proposed Project site (USGS 2003).

Discussion

a, b) Would the Project 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? Would the Project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan? (*No Impact*)

There are no known mineral resources and no active mines or mineral plants located within the Proposed Project site. The closest mineral resource is the San Rafael Rock Quarry and McNeary Brick and Block properties, located approximately 2.5 miles to the northeast of the Proposed Project site, at the north end of San Rafael Bay. Project construction and operation would not directly affect this resource, nor would Project construction activities affect the operation of that quarry given the distance between the Project site and the quarry. 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 would not result in the loss of availability of a locally important mineral resource recovery site. **No impact** would occur.

Cumulative Impacts

c) Would the Project, in combination with reasonably foreseeable future projects, result in significant cumulative impacts on mineral resources? (*No Impact*)

For mineral resources, the geographic scope consists of the area that could be affected by Proposed Project activities and the areas affected by other projects whose activities could directly or indirectly affect the mineral resources of the region. The analysis above indicates no mineral

resources on the Project site. Therefore, the Proposed Project would not contribute to cumulative mineral resource impacts and there would be **no impact**.

References

City of San Rafael. 2021. City of San Rafael General Plan 2040. Adopted August 2021.

U.S. Geological Survey (USGS). 2003. Active Mines and Mineral Plants in the U.S. Available: https://mrdata.usgs.gov/mineplant/. Accessed July 7, 2021.

B.9 Noise & Vibration

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less-than-Significant Impact with Mitigation*	*Less-than-Significant Impact*	*No Impact*
NOISE & VIBRATION— Would the Project:				
a) Result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Result in generation of excessive ground-borne vibration or ground-borne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Environmental Setting

Noise Terminology

Noise is generally defined as unwanted sound. Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level), which is measured in decibels (dB), with 0 dB corresponding roughly to the threshold of human hearing and 120 dB to 140 dB corresponding to the threshold of pain.

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude (sound power). The sound pressure level, therefore, constitutes the additive force exerted by a sound corresponding to the frequency/sound power level spectrum.

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

When a new noise is introduced to an environment, the human reaction can be predicted by comparing the new noise to the ambient noise level, which is the existing noise level comprised of all sources of noise in a given location. In general, the more a new noise exceeds the ambient noise level, the less acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur (Caltrans 2013).

- Except in carefully controlled laboratory experiments, a change of 1-dB cannot be perceived.

- Outside of the laboratory, a 3-dB change is considered a just-perceivable difference.
- A change in level of at least 5-dB is required before any noticeable change in human response would be expected.
- A 10-dB change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response.

The perceived increases in noise levels described above are applicable to both mobile and stationary noise sources. These relationships occur in part because of the logarithmic nature of sound and the decibel system. The human ear perceives sound in a non-linear fashion; hence, the decibel scale was developed. Because the decibel scale is based on logarithms, two noise sources do not combine in a simple additive fashion, rather logarithmically. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA.

Noise exposure is a measure of noise over a period of time. Noise level is a measure of noise at a given instant in time. Community noise varies continuously over a period of time with respect to the contributing sound sources of the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with the individual contributors unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources such as traffic and atmospheric conditions. What makes community noise constantly variable throughout a day, besides the slowly changing background noise, is the addition of short duration single-event noise sources (e.g., aircraft flyovers, motor vehicles, sirens), which are readily identifiable to the individual receptor. These successive additions of sound to the community noise environment vary the community noise level from instant to instant, requiring the measurement of noise exposure over a period of time to legitimately characterize a community noise environment and evaluate cumulative noise impacts.

This time-varying characteristic of environmental noise is described using statistical noise descriptors. The most frequently used noise descriptors are summarized below:

L_{dn}: A 24-hour day and night A-weighted noise exposure level, which accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night ("penalizing" nighttime noises). Noise between 10:00 p.m. and 7:00 a.m. is weighted (penalized) by adding 10 dB to take into account the greater annoyance of nighttime noises.

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

L_{eq}: The energy-equivalent sound level is used to describe noise over a specified period of time, typically one hour, in terms of a single numerical value. The L_{eq} is the constant sound level, which would contain the same acoustic energy as the varying sound level, during the same time period (i.e., the average noise exposure level for the given time period).

L_{max}: The instantaneous maximum noise level for a specified period of time.

Vibration Terminology

As described in the Federal Transit Administration's (FTA) Transit Noise and Vibration Impact Manual, ground-borne vibration can be a serious concern for nearby neighbors, causing buildings to shake and rumbling sounds to be heard (FTA 2018). In contrast to airborne noise, ground-borne vibration is not a common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of ground-borne vibration are trains; buses and heavy trucks on rough roads; and construction activities such as blasting, sheet pile-driving, and operating heavy earth-moving equipment.

Several different methods are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal, which is measured in inches per second. The PPV is most frequently used to describe vibration impacts on buildings. The root mean square (RMS) amplitude is most frequently used to describe the effect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation (VdB) is commonly used to express RMS. The decibel notation acts to compress the range of numbers required to describe vibration. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receptors for vibration assessment include structures (especially older masonry structures), people who spend a lot of time indoors (especially residents, students, the elderly and sick), and vibration-sensitive equipment such as hospital analytical equipment and equipment used in computer chip manufacturing.

The effects of ground-borne vibration include the movement of the building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. In extreme cases, the vibration can cause damage to buildings. Building damage is not a factor for most projects, with the occasional exception of blasting and pile-driving during construction, which would not occur under the Proposed Project. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by only a small margin.

Sensitive Receptors

Human response to noise varies considerably from one individual to another. Effects of noise at various levels can include interference with sleep, concentration, and communication, and can cause physiological and psychological stress and hearing loss. Given these effects, some land uses are considered more sensitive to ambient noise levels than others. In general, residences, schools, hospitals, and nursing homes are considered to be the most sensitive to noise. Places such as churches, libraries, and cemeteries (where people tend to pray, study, and/or contemplate) are also sensitive to noise. Commercial and industrial uses are considered the least noise-sensitive.

The Proposed Project is located within the City of San Rafael, with existing residences on the south side of Spinnaker Point Drive as close as 150 feet from proposed setback levee and ecotone construction. Additionally, existing residences along the terminus of Sorrento Way would be adjacent to a proposed staging area and approximately 200 feet from the proposed new levee for the diked marsh. The nearest sensitive receptors to the proposed temporary crane platform, which

would be installed via vibratory hammer, are residences at the terminus of Sea Way, approximately 470 feet across the creek to the northwest.

Existing Noise Setting

The noise environment surrounding the Project site is influenced by vehicular traffic along U.S. 101/I-580, approximately 1.3 miles to the southwest and Point San Pedro Road, approximately 800 feet to the northwest. According to the Draft update to the San Rafael General Plan Noise Element, the Project environs are located outside of (lower than) the 60 dBA L_{dn} noise contour from roadway sources (City of San Rafael 2021).

Regulatory Framework

City of San Rafael General Plan 2040

The Noise Element of City of San Rafael's General Plan 2040 contains the following policies and programs addressing noise and vibration relevant to the Proposed Project:

> ***Policy N-1.9: Maintaining Peace and Quiet.*** Minimize noise conflicts resulting from everyday activities such as construction, sirens, yard equipment, business operations, night-time sporting events, and domestic activities.
>
> > *Program N-1.9A:* Noise Ordinance. Maintain and enforce the noise ordinance, which addresses common noise sources such as amplified music, mechanical equipment use, and construction. Updates to the ordinance should be periodically considered in response to new issues (for example, allowing portable generators during power outages).
> >
> > *Program N-1.9B: Construction Noise.* Establish a list of construction best management practices (BMPs) for future projects and incorporate the list into San Rafael Municipal Code Chapter 8.13 (Noise) The City Building Division shall verify that appropriate BMPs are included on demolition, grading, and construction plans prior to the issuance of associated permits.

City of San Rafael Municipal Code

Chapter 8.13 of the San Rafael Municipal Code establishes general noise limits within the city. These noise standards are not to be exceeded at the property plane of the receiving property types or zones, with some exceptions. Standard exceptions to general noise limits are identified for construction and would therefore be applicable to the Proposed Project. Per Section 8.13.050(A), for any construction project on property within the city, the construction, alteration, demolition, maintenance of construction equipment, deliveries of materials or equipment, or repair activities otherwise allowed under applicable law shall be allowed between the hours of 7:00 a.m. and 6:00 p.m., Monday through Friday, and 9:00 a.m. and 6:00 p.m. on Saturdays, provided that the noise level at any point outside of the property plane of the project shall not exceed 90 dBA. All such activities shall be precluded on Sundays and holidays.

Discussion

a) Would the Project result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? (*Less than Significant*)

The Proposed Project is located within the jurisdiction of the City of San Rafael.

Construction Impacts

As discussed above, the City of San Rafael has established allowable construction hours within its municipal code. Project construction activities are proposed to occur from approximately 8:00 a.m. to 5:00 p.m., Monday through Friday. Section 8.13.050(A) of the San Rafael Municipal Code restricts construction activities to between 7:00 a.m. and 6:00 p.m., Monday through Friday, and 9:00 a.m. and 6:00 p.m. on Saturdays. The proposed construction activities would be consistent with the time restrictions of the City ordinance, provided that the noise level at any point outside of the property plane of the Project shall not exceed 90 dBA.

Although there would be no long-term operational noise sources following construction, the construction of the Proposed Project could result in a substantial temporary increase in ambient noise levels in the Project vicinity above levels existing without the Proposed Project.

Construction noise levels at and near the Project site would fluctuate depending on the type, number, and duration of use of various pieces of construction equipment. Given the low level of construction-related vehicle trips associated with hauling (approximately one truck trip per hour during the levee improvement phase) and commuting workers, these trips would not be expected to raise ambient noise levels along haul routes. **TableB-1** shows typical noise levels produced by various types of construction equipment that would operate during the construction of the Proposed Project.

The operation of each piece of equipment throughout the Project site would not be constant throughout each phase or workday, as equipment would be turned off when not in use. Over a typical workday, the equipment would operate at different locations, and all of the equipment would not operate concurrently at the same location within the Project site. To quantify construction-related noise exposure that would occur at the nearest sensitive receptors, it was assumed that the two loudest pieces of construction equipment would operate at the same time at the closest location of the Project site to the nearest off-site sensitive receptors. **Table B-2** presents the highest L_{eq} noise levels that sensitive receptors could be exposed to at each of the construction sites.

TABLE B-1
REFERENCE CONSTRUCTION EQUIPMENT NOISE LEVELS – (50 FEET FROM SOURCE)

Type of Equipment	L_{max}, dBA	Hourly L_{eq}, dBA/Percent Used[a]
Bulldozer	85	81/40
Front Loader	80	76/40
Excavator	85	81/40
Dump Truck	84	80/40
Water Truck	84	80/40
Compactor	80	73/20
Tug Boat	87	87/NA
Work Boat	NA	72/NA
Dragline	NA	85/NA
Crane	85	77/16
Pile Driver (vibratory)	101	88/20

NOTE:
a. "Percent used" were obtained from the FHWA Roadway Construction Noise Model User's Guide.

SOURCE: FHWA 2006.

TABLE B-2
ESTIMATED NOISE LEVELS AT SENSITIVE RECEPTORS DURING PROPOSED PROJECT CONSTRUCTION

Receptor	Distance to Nearest Sensitive Receptor (feet)	Two Loudest Pieces of Construction Equipment	Combined Noise level from 50 feet (dBA L_{eq})[a]	Attenuated Noise Level (dBA L_{eq})[b]	Exceed 90 dBA Leq (yes or no)?
Phase 1A: Site Preparation					
Sorrento Way	1,390	Pile Driver, Crane	93.9	65.0	No
Community Center	1,000	Pile Driver, Crane	93.9	67.8	No
Sea Way	470	Pile Driver, Crane	93.9	74.4	No
Phase 1B: Initial Beach Construction					
Sorrento Way	1,200	Dozer, Excavator	80.2	52.6	No
Community Center	530	Dozer, Excavator	80.2	59.7	No
Sea Way	400	Dozer, Excavator	80.2	62.2	No
Spinnaker Point Drive	300	Dozer, Excavator	80.2	64.7	No
Phase 2A: Levee Improvements and Marsh Reconstruction					
Sorrento Way	150	Dozer, Excavator	80.2	70.7	No
Community Center	330	Dozer, Excavator	80.2	63.9	No
Sea Way	440	Dozer, Excavator	80.2	61.4	No
Spinnaker Point Drive	300	Dozer, Excavator	80.2	64.7	No
Phase 2B: Drying and Shaping					
Sorrento Way	150	Dozer, Excavator	80.2	70.7	No
Community Center	330	Dozer, Excavator	80.2	63.9	No
Sea Way	440	Dozer, Excavator	80.2	61.4	No
Spinnaker Point Drive	610	Dozer, Excavator	80.2	58.5	No

TABLE B-2 (CONT.)
ESTIMATED NOISE LEVELS AT SENSITIVE RECEPTORS DURING PROPOSED PROJECT CONSTRUCTION

Receptor	Distance to Nearest Sensitive Receptor (feet)	Two Loudest Pieces of Construction Equipment	Combined Noise level from 50 feet (dBA L_{eq})[a]	Attenuated Noise Level (dBA L_{eq})[b]	Exceed 90 dBA Leq (yes or no)?
Phase 3A: Levee Lift and Diked Marsh Restoration					
Sorrento Way	150	Dozer, Excavator	80.2	70.7	No
Community Center	330	Dozer, Excavator	80.2	63.9	No
Sea Way	440	Dozer, Excavator	80.2	61.4	No
Spinnaker Point Drive	610	Dozer, Excavator	80.2	58.5	No
Phase 3B: Site Restoration					
Sorrento Way	150	Dozer, Excavator	80.2	70.7	No
Community Center	330	Dozer, Excavator	80.2	63.9	No
Sea Way	440	Dozer, Excavator	80.2	61.4	No
Spinnaker Point Drive	300	Dozer, Excavator	80.2	64.7	No

NOTES:

a. Reference construction equipment noise levels were obtained from Caltrans' Roadway Construction Noise Level (RCNM).
b. Assumed an attenuation rate of 7.5 dB per doubling of distance (i.e., soft site), to account for interning terrain and structures.

SOURCE: FHWA 2006.

As shown in Table B-2, construction activities of all phases of the Proposed Project would generate noise levels at the nearest sensitive receptors below the 90 dBA criterion of Section 8.13.050(A) of the San Rafael Municipal Code. The temporary increase in ambient noise levels would cause a **less-than-significant impact**.

Operation Impacts

Once all construction activities are completed, the Proposed Project would not create any new permanent noise sources (e.g., pumps, generators). Periodic maintenance of the levee and restoration areas would be similar to existing conditions. Therefore, operation and maintenance of the Proposed Project would not generate a substantial increase in noise levels in excess of standards established in the local general plan or noise ordinance. This would result in **no impact** from project operations and maintenance.

b) Would the Project result in the generation of excessive ground-borne vibration or ground-borne noise levels? (*Less than Significant*)

The construction of the Proposed Project would include compaction and pile driving, which can generate significant levels of vibration. Therefore, vibration impacts from these onsite construction activities have been evaluated.

For adverse human reaction, the analysis applies the "strongly perceptible" threshold of 0.9 inch/second PPV for transient sources (Caltrans 2020). A threshold of 0.3 inch/second PPV is used to assess damage risk for all other buildings (Caltrans 2020). There are no historic structures in the

vicinity of the Project site that could be adversely affected by Project construction-related vibration.

The potential use of a pile driver and compactor during construction of the Proposed Project would be expected to generate the highest vibration levels during construction. According to the Caltrans *Transportation and Construction Vibration Manual*, both impact pile driving and vibratory pile driving typically generate vibration levels of 0.65 inch/second PPV at a distance of 25 feet (Caltrans 2020). There are single-family residences located 470 feet north of the proposed temporary crane platform where driving of piles would occur. These single-family residences would be exposed to a vibration level of less than 0.026 inch/second PPV, well below the applied human annoyance and building damage threshold. Compaction activities for the new levee would occur as close as 150 feet east of existing residences at the terminus of Sorrento Way. These single-family residences would be exposed to a vibration level of less than 0.029 inch/second PPV, also well below the applied human annoyance and building damage threshold. Consequently, existing sensitive receptors and structures near the Project site would not be affected by substantial ground-borne vibration during Project construction, and there would be no activities during Project operations that involve compaction, pile driving, or other vibratory equipment. Therefore, the impact with respect to the generation of excessive vibration would be considered **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? (*No Impact*)

The Proposed Project is located over 3 miles southeast of where the City of San Rafael operates a general aviation airport. Given this distance from the nearest operating airport and the fact that the Proposed Project would not locate new noise-sensitive land uses within 3 miles of a private or public airport, Proposed Project construction and operation would not expose people residing or working in the Proposed Project area to excessive noise levels. **No impact** would occur.

Cumulative Impacts

d) Would the Project, in combination with reasonably foreseeable future projects, result in significant noise or vibration impacts? (*Less than Significant*)

The geographic scope of analysis for cumulative noise and vibration construction impacts encompasses sensitive receptors within approximately 1,000 feet of the Project site.[3] Beyond 1,000 feet, the contributions of noise from other projects would be greatly attenuated through both distance and intervening structures, and their contribution would be expected to be minimal.

[3] This screening threshold distance was developed based on stationary source noise attenuation equations (Caltrans, 2013) and the combined noise level generated by typical construction phases for a given project (assuming multiple pieces of equipment) at a distance of 50 feet. Using the attenuation equations, the maximum noise level of 89 dBA for both excavation and finishing would diminish to below 65 dBA at 1,000 feet. A receptor experiencing noise levels of 89 dBA from two adjacent construction sites would experience a cumulative noise level of 91 dBA (the acoustical sum of 89 dBA plus 89 dBA), which would still be below 65 dBA at 1,000 feet, which, hence, is used as the geographic scope.

There are eight foreseeable cumulative projects within the City of San Rafael. All but three of the listed cumulative projects are sufficiently distant to not meaningfully contribute to construction noise impacts.

Of the three cumulative projects within 1,000 feet of the Project site, one is the adjacent Pickleweed Field and Park Project to be constructed between 2021 and 2025. This project would convert the field at Pickleweed to synthetic turf for year-round access and install several other recreation features; it would likely involve the limited use of off-road construction equipment, and would not be expected to require the use of vibration-generating construction equipment.

Another project is San Rafael Creek Operations and Maintenance, which would involve dredging of the creek to a depth of the -8 feet mean lower low water line to the mouth of San Rafael Creek, adjacent to Tiscornia Marsh. This project has no established timeline for dredging activity. This project would likely involve the limited use of dredging equipment and possibly trucks or barges to transport dredged materials, and would not be expected to require the use of vibration-generating construction equipment.

The third is construction of improvements to Schoen Park. The modifications would create approximately 20 new parking spaces in the previous footprint of Schoen Park. This project is scheduled to begin in 2021 and would likely be completed prior to the 2023 commencement of construction of the proposed Project

The Proposed Project's construction is assumed to occur over a period of approximately 275 work days, commencing in September 2023 and finishing in December 2025, so it could coincide with the construction schedule for the nearest two cumulative projects identified above.

As shown in Table B-2, the construction activities of the Proposed Project would generate noise levels of up to 74.4 dBA at the nearest receptors, which is below the 90 dBA criterion of Section 8.13.050(A) of the San Rafael Municipal Code. It is unlikely that either of the two other projects, individually, would result in an equivalent intensity of construction activity as that of the Proposed Project. However, if it were conservatively assumed that each of these two projects would generate the same noise levels as those of the Proposed Project, the resultant noise level would be up to 79.2 dBA, which would still be below the 90 dBA criterion of Section 8.13.050(A) of the San Rafael Municipal Code. Consequently, the cumulative noise impact would be less than significant. As stated above, neither of the two cumulative projects would be expected to involve the use of vibration-generating construction equipment. Therefore, because the Proposed Project would have a less-than-significant construction impact with respect to vibration, as discussed above, the cumulative vibration impact would also be **less than significant.**

References

California Department of Transportation (Caltrans). 2013. Technical Noise Supplement to the Traffic Noise Analysis Protocol. September 2013.

California Department of Transportation (Caltrans). 2020. Transportation and Construction Vibration Guidance Manual. April 2020.

City of San Rafael. 2021. San Rafael 2040 General Plan. August 2021.

Federal Highway Administration (FHWA). 2006. FHWA Roadway Construction Noise Model User's Guide. January 2006.

Federal Transit Administration (FTA). 2018. Transit Noise and Vibration Impact Manual. September 2018.

B.10 Population & Housing

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less-than-Significant Impact with Mitigation*	*Less-than-Significant Impact*	*No Impact*
POPULATION & HOUSING — Would the Project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Environmental Setting

As of July 1, 2019, there were approximately 258,826 and 58,440 people in Marin County and the City of San Rafael, respectively (United States Census Bureau 2020).

Discussion

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

The Proposed Project would restore and reconstruct former tidal marshlands and improve a shoreline levee along the north boundary of the Canal neighborhood in Central San Rafael. Project activities would not include changes in land uses that would result in new residences or business, nor would the Project extend roads or other infrastructure that could result in new areas that could be developed. It is anticipated the Proposed Project would occur in three phases, over at least 3 years, and that 19 construction workers would be employed. However, given the location of the Project site and its proximity to several population centers, the regional labor pool could likely meet the construction workforce requirements. Therefore, the Proposed Project would not result in substantial unplanned population growth in the area, and there would be **no impact.**

b) Would the Project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? (*No Impact*)

The Proposed Project would restore and reconstruct former tidal marshlands on parcels currently owned by the Marin Audubon Society and the City of San Rafael. Land use on the Project site is mainly comprised of tidal marsh and diked pickleweed marsh, neither of which contain residences or housing of any kind. The Project would therefore not displace existing people or housing, necessitating the construction of replacement housing elsewhere. There would be **no impact.**

Cumulative Impacts

c) Would the Project, in combination with reasonably foreseeable future projects, result in significant cumulative impacts on population and housing? (*No Impact*)

The geographic scope of potential cumulative population and housing use impacts encompasses the Project site and its vicinity. Cumulative scenario projects include the Pickleweed Field and Park Project and the Schoen Park Conversion to Parking. However, the Project and cumulative projects would replace existing land uses, or result in a new land use that is compatible with existing zoning and land use plans. None of the projects would require or draw new populations to the area, remove existing housing, or require the addition of new housing. Therefore, there would not be a cumulative impact, and the Project's contribution to cumulative population and housing impacts would not be cumulatively considerable.

References

United States Census Bureau. 2020. Quick Facts: Marin County and San Rafael city, California. Accessible: https://www.census.gov/quickfacts/fact/table/marincountycalifornia,sanrafaelcitycalifornia/PST045219. Accessed on May 24, 2021.

B.11 Public Services

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

Environmental Setting

Emergency fire and medical services and disaster response within the City of San Rafael are provided by the San Rafael Fire Department. The Fire Department administers seven neighborhood fire stations with 90 personnel to provide these services within City limits and other areas as defined through contracts and mutual aid agreements with bordering areas. The City of San Rafael Police Department is responsible for areas within the City limits. The Police Department has an Operational Division providing uniformed police services 24 hours per day and an Administrative Division providing criminal investigations, training, and dispatch. The Police Department has 60 full-time sworn personnel and 22 full-time non-sworn personnel. In the event of an emergency at the Project site, the City of San Rafael Police Department and San Rafael Fire Department would respond.

San Rafael City Schools (SRCS) include the San Rafael Elementary School District and the San Rafael High School District. There are nine elementary schools, two comprehensive 9–12 high schools, and one continuation high school. SRCS serves more than 7,200 students. Both districts are governed by a school board and district office administration.

Exclusive of open space lands, there are 40 classified parks in San Rafael's Park System. These parks include regional, community, neighborhood, pocket, and special use parks. The City has 4.17 acres of parkland per 1,000 residents. The parkland serves over 73,300 residents from the City and surrounding unincorporated areas (City of San Rafael 2021).

Discussion

a.i (Fire Protection) 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 government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection? (*Less than Significant*)

Construction for the Project would be intermittent and temporary, requiring an approximate 6-month construction window over the course of 3 to 4 years and involving approximately 19 construction workers on any given day. These workers would likely be sourced from the local workforce, but either way they would not relocate to communities nearby the Project site for this short-term work. Therefore, Project construction would not significantly increase the demand for fire protection services throughout the Project vicinity due to population growth and would not change any uses on the site. For these reasons, the Project would not be expected to substantially affect the San Rafael Fire Department's ability to maintain service ratios, response times, or other performance objectives or require new or physically altered facilities. For this reason, and because Project operations would be consistent with existing conditions, the Project's impact with respect to fire services would be **less than significant.**

a.ii (Police Protection) 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 government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police protection? (*Less than Significant*)

As referenced in a.i, construction for the Project would be intermittent, with only 19 construction workers on site at a given time. The Project would therefore not be expected to substantially affect the City of San Rafael Police Department's ability to maintain service ratios, response times, or other performance objectives or require new or physically altered facilities. The Project's impact with respect to the provision of police protection during construction and operations would be **less than significant.**

a.iii (Schools) 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 government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for schools? *(No Impact)*

The Proposed Project would result in a small temporary increase of construction worker employees at the Project site. Construction workers would most likely be from the region, and the Project would not require an increase of permanent construction employees such that new or expanded school facilities would be required. For these reasons, and because Project operations would be consistent with existing conditions, the Project would have **no impact** with respect to schools.

a.iv (Parks) 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 government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for parks? (*Less than Significant*)

The Project site includes unpaved segments of the Bay Trail at the existing levee crest. The Proposed Project would improve and pave these trail segments upon the final lift of the improved levee and setback levee segments and would add educational signage. For the reasons described for issue a.i above, the Project would not result in increased population such that there would be additional demand for park facilities during or after construction, and the completed Project would actually expand accessibility to the trail segments within the Project site. Impacts related to increased or expanded public access are addressed in Section B.12, *Recreation*. The Project's impacts related to new or expanded park facilities to maintain acceptable service ratios would be **less than significant.**

a.v (Other Public Facilities) 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 government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for other public facilities? (*Less than Significant*)

The Proposed Project would not involve the employment of new permanent employees or residents, and Project operations would be consistent with existing conditions; therefore, it is not expected to increase the use of other public facilities (such as libraries or hospitals), and the impact with respect to other public facilities would be **less than significant.**

Cumulative Impacts

b) Would the Project, in combination with reasonably foreseeable future projects, result in significant cumulative impacts on public services? (*Less than Significant*)

The geographic scope of potential cumulative public services impacts encompasses the Project site and its vicinity. Cumulative scenario projects include the Pickleweed Field and Park Project and the Schoen Park Conversion to Parking. However, the Project and cumulative projects would replace existing land uses, or result in a new land use that is compatible with land use, and would not result in an increase in population or visitation that would require the construction of new public service facilities. Therefore, a cumulative public services impact would not occur, and the Project's contribution to cumulative public services impacts would not be cumulatively considerable.

References

City of San Rafael. 2021. City of San Rafael General Plan 2040. August 2021.

B.12 Recreation

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

Environmental Setting

There are 19 City parks within the City of San Rafael (City of San Rafael 2021). These parks help make up the City's existing 3,455 acres of parks and open space that vary in size and amenities.

The Project site contains existing facilities such as recreational trails along the shoreline levee and a City-owned pond. Located adjacent to the Project site is the Al Boro Community Center and adjoining Pickleweed Park soccer field.

Discussion

a, b) 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? 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? (*Less than Significant with Mitigation*)

The Project includes the construction and operation of a recreational resource, the implementation of which could cause adverse physical effects on the environment. The impacts that could result from Project construction and operation are addressed in the corresponding topical sections of the EIR. However, as described below, construction and operation of the Project is not expected to have substantial adverse effects related to increased use of nearby parks or facilities such that deterioration or degradation would occur. The Proposed Project would include changes to the existing shoreline levee that traverses the Project site, which is currently used as a recreational trail. Project activities for the shoreline levee improvements would result in the shoreline levee/ trail around the diked marsh being lowered and breached to restore tidal inundation. This portion of the shoreline trail would be replaced with a new levee and trail along the north side of the soccer field, approximately 200 to 400 feet behind the location of the existing perimeter levee. During Project construction, the levee trail would be closed to access; however, use of the soccer field and Pickleweed Park play areas and community facility would not be affected. Trail users would be able to continue along the Bay Trail by utilizing the pedestrian sidewalk along Spinnaker Point Drive during construction of the new levee trail. While Project construction activities would interrupt the use of the levee trail, with the availability of trail detour options and the overall availability of recreation opportunities in the Project vicinity, recreation use during

construction would continue in the Project vicinity, and it is not anticipated that existing recreation users would instead use other recreation resources at a level that would result in the deterioration of or damage to other nearby recreation facilities.

Following completion of construction of the new levee, the new levee, the raised levee on the east side of the existing soccer field, and the setback levee on the south side of Tiscornia Marsh would all include asphalt-paved trails at the levee crest (whereas the existing trail segments are unpaved), and new signage and seating would be added that do not currently exist. Given that the existing recreational trail within the Project site would be replaced by a similar but slightly shorter trail following completion of Project construction, implementation of the Proposed Project would not result in the increased use of existing neighborhood and regional parks or other recreational facilities that would result in substantial physical deterioration of the facilities. Additionally, the Proposed Project would not result in an increase in use of existing recreational facilities or require the construction or expansion of recreational facilities because construction activities along the shoreline levee would be temporary and would not permanently disrupt or displace recreational activities on the trail. Therefore, impacts would be **less than significant.**

Cumulative Impacts

c) Would the Project, in combination with reasonably foreseeable future projects, result in significant cumulative impacts on recreation resources? (*Less than Significant*)

The geographic scope of potential cumulative recreation impacts encompasses the Project site and its vicinity, as well as park and recreational facilities, including parks, trails, and other public recreation facilities, within the vicinity of the Project site.

As described above, the Project would result in the temporary closure of access to the levee trail during construction of the new levee and levee trail. During the construction period, it is anticipated that local users would detour along the pedestrian sidewalk along Spinnaker Point Drive to continue along the Bay Trail. Cumulative scenario projects that could result in a restriction of access to recreational opportunities include the Pickleweed Field and Park Project and the Schoen Park Conversion to Parking. The potential for active construction on elements of these projects that would affect access to recreational facilities during the same period as the Project is expected to be limited. Even if closures to recreational facilities were to co-occur with the Project, several other parks and recreational facilities in the vicinity would remain open and unaffected by construction of the Project or of the cumulative scenario projects. Therefore, the Project's contribution to a cumulative loss of recreational opportunities, or to cumulative increases in the use of parks or recreational facilities, would not be cumulatively considerable and would be **less than significant.**

References

City of San Rafael. 2021. Visitors – Parks & Outdoor Activities. Available: https://www.cityofsanrafael.org/parks-outdoor-activities/. Accessed June 7, 2021.

B.13 Transportation

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

Environmental Setting

The Project site is located along the north boundary of the Canal neighborhood in Central San Rafael (see Figures 2-1 and 2-2 in the EIR). Regional access to the Project site is provided from the U.S. 101/I-580 Interchange approximately two-thirds of a mile to the southwest at the Bellam Boulevard on- and off-ramps. Bellam Boulevard, Kerner Boulevard, and Canal Street/Spinnaker Point Drive is used for local access between the freeway on- and off-ramps and the Project site.

Regional Access

U.S. 101 is an eight-lane (three general-purpose and one high-occupancy vehicle lane in each travel direction) interstate highway in the Project vicinity, running north and south through Marin County all the way to Washington State to the north and Los Angeles to the south. It carries an average annual daily traffic (AADT) volume of approximately 202,000 vehicles in the Project vicinity (Caltrans 2020). I-580 is a four-lane interstate highway (two general-purpose lanes in each travel direction) in the Project vicinity, running east and west between U.S. 101 in San Rafael and I-5 in the Central Valley. It carries an AADT volume of approximately 66,200 vehicles in the Project vicinity (Caltrans 2020). U.S. 101 provides access to the Project site via a full-access interchange at Bellam Boulevard.

Local Access

Bellam Boulevard is identified in the City's General Plan as a major arterial, and has five lanes (three westbound and two eastbound travel lanes) in the Project vicinity (City of San Rafael 2021). It is approximately 0.7-mile long, with a terminus to the west at Auburn Street where it continues as Woodland Avenue, and to the east at Catalina Boulevard where it continues as Baypoint Village Drive. Kerner Boulevard is a two-lane, north-south local roadway (i.e., no General Plan classification) that is approximately 1-mile long and terminates at Canal Street to the north and dead-ends approximately 1,500 feet south of Irene Street to the south. It only operates one-way, in the northbound travel direction, south of Bellam Boulevard. Canal Street is a two-lane, east-west local roadway (i.e., no General Plan classification) that is approximately 1-mile long and dead-ends approximately 250 feet west of Harbor Street to the west and at Bahia Way to the east, where it

continues as Spinnaker Point Drive. Access to the Proposed Project's construction staging area would be provided off of Spinnaker Point Drive.

Transit, Bicycle, and Pedestrian Facilities

Marin Transit, the public transit service provider in San Rafael, operates the following six bus routes in the Project vicinity, with bus stops located on Kerner Boulevard approximately 200 feet south of Canal Street (Marin Transit 2020):

- Route 23 Canal – Downtown Fairfax
- Route 23X Canal – Fairfax Manor
- Route 29 Canal – Marin Health
- Route 35 Canal – Novato
- Route 36 Canal – Marin City
- Route 135 Canal – Downtown San Rafael

There are sidewalks on both sides of Canal Street/Spinnaker Point Drive, the road that would be used to access to the Proposed Project construction staging area, as well as crosswalks across Canal Street at Kerner Boulevard, Bahia Way, and Portsmouth Cove. Near the Project site, the City's Bicycle & Pedestrian Master Plan identifies Class I multi-use paths (off-street facilities exclusively dedicated to the use by bicyclists, pedestrians, and other non-motorized travel such as roller skaters and skateboarders) connecting Bellam Boulevard with Canal Street/Spinnaker Drive and along the San Rafael Bay connecting Pickleweed Park to the San Francisco Bay Trail (City of San Rafael 2018). There are also existing Class III bike routes (travel lanes shared between people bicycling and driving that are usually low speed and have little traffic) on Canal Street west of Kerner Boulevard and on Bellam Boulevard between U.S. 101 and Playa Del Rey.

Discussion

a) Would the Project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities? (*Less than Significant*)

Construction Impacts

Traffic Operating Conditions

As described in EIR Chapter 2, *Project Description*, the Proposed Project would restore former tidal marshlands and improve a shoreline levee on a 28-acre site at the confluence of San Rafael Creek and San Rafael Bay. Construction activities would involve coarse beach construction, eroded tidal marsh reconstruction, diked marsh restoration, shoreline levee improvements, and ecotone slope development. Direct traffic impacts from construction of the Proposed Project would be short term and temporary. The duration of impacts related to short-term disruption of traffic flow and potential increased congestion generated by construction vehicles would be limited to the period of time needed to complete construction of the Proposed Project components.

Construction activities that would generate off-site traffic would include the daily arrival and departure of construction workers, and the import or export of materials (i.e., soil, coarse beach material) throughout the construction period. Although there are no designated truck routes in the vicinity of the Project site, it was assumed that workers and haul trucks would travel to/from the Project site via U.S. 101, Bellam Boulevard, Kerner Boulevard, and Canal Street/Spinnaker Point Drive (City of San Rafael 2021). This routing assumption takes into consideration the fact that the origins and destinations of workers and haul trucks would mostly be outside of the local area and would; therefore, use U.S. 101 and the Bellam Boulevard ramps; the overall distance of possible routes, and the and suitability of local roadways to accommodate Project-generated vehicle trips. Exact truck haul routes would be defined by the construction contractor and approved by the City of San Rafael Public Works Department as part of the Construction Traffic Control Plan (see Impact discussion c).

As stated in EIR Chapter 2, *Project Description*, construction of the Proposed Project would occur in three phases, over at least 3 years, beginning in 2023. For the purposes of the transportation analysis, the overlap of phases requiring the highest number of on-road truck haul trips and construction workers was evaluated using detailed construction scheduling and phasing information used to model emissions for Air Quality (see EIR Appendix C). Estimated maximum daily truck and worker trips for the Proposed Project by construction component are listed below in **Table B-3** for the 3-month construction period (63 work days) during Phase 2 when construction activities generating truck trips would overlap, which represents a worst-case scenario for potential traffic impacts. Please note that this table represents a subset of the total estimated earthwork volumes shown in Table 2-4 of EIR Chapter 2, *Project Description*, as it includes only those excavation and fill project elements that would generate truck trips during the 3-month overlap. Construction activities during the remainder of the approximately 3-year construction period would generate fewer vehicle trips than described below.

TABLE B-3
MAXIMUM DAILY CONSTRUCTION VEHICLE TRIPS

Project Element	Total Volume of Material (CY)	Truck Trips[a]	Worker Trips
Levee Improvements: Imported soil for levee construction	18,000	16	9
Eroded Tidal Marsh Reconstruction: On-site excavation of levee foundation and placement in the eroded marsh	6,000	0[b]	10
Eroded Tidal Marsh Reconstruction: Imported dredged material	25,000	0[c]	
	Total	***16***	***19***

NOTES:

CY = cubic yards.

a. Assumes truck hauling capacity of 18 CYs.
b. All activity would be constructed by trucks operating on site and, therefore, would not generate any truck trips to or from the Project site.
c. Dredged material would be transported by barge and, therefore, would not generate any truck trips to or from the Project site.

SOURCE: ESA 2021.

As shown in Table B-3, the maximum number of truck trips generated by construction activity at the Project site would be 16 daily round trips, or 32 one-way trips (16 inbound, 16 outbound). Truck trips would be spread over the course of an approximately 8-hour work day rather than occurring all at once. The maximum number of construction workers on site at any given time would be 19, which would generate 38 daily one-way trips, conservatively assuming that all workers would drive-alone and would not carpool. Construction workers would commute to and from the worksite primarily before or after peak traffic hours; parking for worker vehicles and construction vehicles would be available in the designated on-site staging area within the Project site.

While other phases of Proposed Project construction would also generate vehicle trips for construction workers commuting and trucks hauling material to and from the Project site, the total number of daily vehicle trips would be lower than the numbers listed above in Table B-3. For instance, approximately 23,200 cubic yards (CY) of the 26,000 CY of material needed to construct the coarse beach would be transported to the Project site during Phase 1. Although it is expected that this construction activity would be completed using water-borne transport (i.e., barge), an assumption was made that it could be transported by truck to allow the construction contractor flexibility with respect to transport method, and to provide a worst-case scenario for the evaluation of on-road traffic impacts in case trucks are used. Coarse beach materials would be imported to the Project site over the course of 77 work days; assuming a truck hauling capacity of 18 CY (same assumption used for imported soil for levee improvements in Table B-3), then approximately 17 daily round trips, or 34 one-way trips (17 inbound, 17 outbound) could be required in the unlikely scenario that all coarse beach material were to be transported via truck. Although this number is marginally higher than the number of truck trips described above for Phase 2, the maximum number of construction workers on site at any given time during Phase 1 when coarse beach material is being imported to the Project site would be lower (12), resulting in a lower overall number of vehicle trips than described above for Phase 2.

It should be noted that all 9,500 CY of excavated material is expected to be reused on site; however, if timing, soil quality, or other currently unknown considerations limit the ability for the construction contractor to reuse all of the soil on site, then some excavated material may need to be exported from the Project site by truck. Any such removal by truck would not, however, generate any new truck trips because, once emptied, trucks used to import material (either soil or coarse beach material) would be used to export any excavated materials that cannot be balanced on site.

Construction-generated traffic would be temporary and, therefore, would not result in any long-term degradation in operating conditions on any locally used roadways for the Proposed Project. The impact of construction-related traffic would be temporary and result in intermittent reduction of the capacities of streets in the Project vicinity because of the slower movements and larger turning radii of construction trucks compared to passenger vehicles. Drivers could experience delays if they were traveling behind a heavy truck; however, as noted above, only 32 trucks per day (16 inbound, 16 outbound) are expected to travel to/from the Project site during the peak of construction activities, and those truck trips would occur over the course of the 8-hour work day. In the context of the AADT described above in the *Environmental Setting* section, construction-related traffic from the Proposed Project would not be substantial in relation to traffic flow

conditions on U.S. 101, I-580, or local access roadways. The Proposed Project trips would fall within the daily fluctuations of traffic volumes on U.S. 101 and I-580 (not perceptible to the average motorist), and so while the traffic generated by construction activities would be noticeable (i.e., would represent a higher percent increase in traffic volumes) on the local-serving roadways serving the construction site, the effect on traffic flow would be **less than significant**.

Pedestrian, Bicycle, and Transit Facilities

Access to the construction staging area, which would be located in the empty lots adjacent to the Community Center and east of former Schoen Park as shown in Figure 2-5 of the EIR (Chapter 2, *Project Description*) would be provided via an existing gated driveway located on Spinnaker Point Drive. There are no designated bicycle facilities or transit stops adjacent to the construction staging area, but there is a sidewalk.

Construction of the Proposed Project would neither directly nor indirectly eliminate existing or planned alternative transportation corridors or facilities (i.e., bike paths, lanes, etc.), including changes in policies or programs that support alternative transportation, nor construct facilities in locations where future alternative transportation facilities may be planned. The Proposed Project would not conflict with adopted policies, plans, and programs supporting alternative transportation.

As described above for traffic operating conditions, construction activities associated with the Proposed Project would not generate traffic volume increases that would significantly affect traffic flow on area roadways. The performance of public transit, in-street bicycle, and pedestrian facilities in the area likewise would not be adversely affected (see Section B.12, *Recreation*, related to Project effects on the recreational trail on the shoreline levee that traverses the Project site and the San Francisco Bay Trail), and the impact would be **less than significant**.

Operational Impacts

The primary source of vehicle trips generated by Proposed Project operations would be for monitoring and maintenance, and for adaptive management, which may be conducted if the Proposed Project is not performing as anticipated. The types of activities associated with Proposed Project operations and maintenance are described in detail in EIR Chapter 2, *Project Description*, and would include maintenance of the tidal marsh, ecotone slope, and course beach during the 3- to 5-year establishment period, annual levee inspections, and performance monitoring. The number of workers and equipment required to perform operations and maintenance activities would be lower than the number evaluated above for Proposed Project construction, and would generate no more than 20 one-way daily vehicle trips, which would include trips generated by both maintenance crews and equipment. Therefore, operation of the Proposed Project would not conflict with any adopted policies, plans, or programs related to public transit or bicycle and pedestrian facilities, nor would it affect the safety of such services/ facilities, and impacts would be **less than significant**.

b) Would the Project conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b)? (*Less than Significant*)

In accordance with Senate Bill (SB) 743, the new CEQA Guidelines Section 15064.3, subdivision (b) was adopted in December 2018 by the California Natural Resources Agency. These revisions to the CEQA Guidelines criteria for determining the significance of transportation impacts are primarily focused on projects within transit priority areas, and shifts the focus from driver delay to a reduction of greenhouse gas emissions, creation of multimodal networks, and promotion of a mix of land uses. Vehicle miles traveled, or VMT, is a measure of the total number of miles driven to or from a development and is sometimes expressed as an average per trip or per person.

The City Council adopted VMT screening criteria and thresholds in July 2020 (City of San Rafael 2021). According to this guidance, a detailed transportation VMT analysis is required for all land development projects, except those that meet one of seven designated screening criteria. A project that meets at least one of the screening criteria would be presumed to result in a less-than-significant VMT impact due to the project characteristics and/or location. The Proposed Project would meet the Small Developments criterion, which states that projects that generate fewer than 110 trips per day would result in a less-than-significant VMT impact. As stated above in the discussion of issue a), the Proposed Project would generate a maximum of 70 daily vehicle trips (32 one-way truck trips and 38 one-way construction worker trips) during Proposed Project construction and no more than 20 daily vehicle trips during Proposed Project operation/ maintenance. Since the Proposed Project meets screening the Small Developments criterion, the Proposed Project would result in a **less-than-significant** impact related to CEQA Guidelines Section 15064.3.

c) Would the Project 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 with Mitigation*)

The Proposed Project would not make any changes to public roadways. The land uses adjacent to and included in the Project vicinity include single- and multi-family residential, community uses (i.e., community center, library, park), and an elementary school. Due to the proximity of these uses to the Project site, this area is frequented by residents and visitors on a regular basis. As such, the temporary introduction of construction equipment required to construct the Proposed Project on roadways in and around the Project site would not be compatible with existing uses and would pose a potential safety hazard.

Although the number of trucks generated by Proposed Project construction would occur relatively infrequently, they would need to cross a sidewalk to access the construction staging area. Due to the presence of Bahia Vista Elementary School, the San Francisco Bay Trail, and other public/ community facilities that could generate pedestrian and bicycle activity in the vicinity of the Project Site, the introduction of trucks turning into/out of the construction staging area may result in unsafe conditions for pedestrians using the sidewalk and bicyclists traveling in the roadway. Therefore, construction of the Proposed Project could conflict with adopted policies, plans, or programs related to bicycle and pedestrian facilities, or affect the safety of such services/facilities, and impacts would be **potentially significant**.

Mitigation Measure TRAN-1: Construction Traffic Control Plan. Prior to the issuance of construction permits, the construction contractor shall prepare and submit a Construction Traffic Control Plan to the City of San Rafael Public Works Department for approval. The Construction Traffic Control Plan must be prepared in accordance with the California Department of Transportation Manual on Uniform Traffic Control Devices and must address, at a minimum, the following issues:

1) Defining truck haul routes to/from the Project that avoid residential streets, to the extent feasible.
2) Placing temporary signing, lighting, and traffic control devices if required, including, but not limited to, appropriate signage along access routes to indicate the presence of heavy vehicles and construction traffic.
3) Provision of construction personnel at driveway on Spinnaker Point Drive leading to the construction staging area to direct traffic, pedestrians, and bicyclists while trucks are turning into and out of the driveway.
4) Notification of all construction activities with San Rafael City Schools at least 2 months in advance, so that it may make proper accommodations for any possible limitations to access at Bahia Vista Elementary School. San Rafael City Schools shall be notified of the timing, location, and duration of construction activities. The construction contractor shall be required to ensure that construction of the Proposed Project does not inhibit vehicle, bicycle, pedestrian, and/or school bus service through the inclusion of such provisions in the construction contract.

With implementation of Mitigation Measure TRAN-1, potentially hazardous conditions associated with construction trucks accessing the proposed construction staging area would be minimized. Therefore, the impact would be reduced to a **less-than-significant** level.

d) Would the Project result in inadequate emergency access? (*Less than Significant*)

The Proposed Project is located in an area with multiple access roads allowing adequate egress/ ingress to the Project site in the event of an emergency. Additionally, as part of the Proposed Project, internal access roadway improvements would be implemented. Therefore, the Proposed Project would allow for adequate emergency access.

As described above for issue a), Project-related operational traffic would not cause a significant increase in congestion and would not significantly affect roadway operations. Furthermore, the Proposed Project would not require the closures of public roads, which could inhibit access by emergency vehicles. During construction of the Proposed Project, heavy construction-related vehicles could interfere with emergency response to the site or emergency evacuation procedures in the event of an emergency (e.g., slowing vehicles traveling behind the truck). However, construction-related traffic from the Proposed Project would not be substantial in relation to traffic flow conditions on U.S. 101, I-580, or local access roadways. As such, the impact would be **less than significant**.

Cumulative Impacts

e) Would the Project, in combination with reasonably foreseeable future projects, result in significant cumulative impacts on transportation? (*Less than Significant with Mitigation*)

The geographic scope for this analysis is the roadway network in the vicinity of the Project site that would be affected by the Proposed Project.

Construction Impacts

Impacts on traffic associated with construction (e.g., an intermittent reduction in street and intersection operating capacity, potential conflicts with pedestrians/ bicyclists, overlap with construction of nearby related projects) are typically considered as potential short-term impacts. As noted above, the Project would result in a potentially significant traffic impact during construction activities. However, with implementation of Mitigation Measure TRAN-1, construction impacts on transportation facilities would be reduced to a less-than-significant level. Each of the identified cumulative projects listed in Table 3.1-1 (see EIR Section 3.1.4, *Approach to Cumulative Impact Analysis*) would be required to comply with jurisdictional requirements regarding haul routes and would implement mitigation measures and/or include project characteristics, such as traffic controls and scheduling, notification, and safety procedures, to reduce potential traffic impacts during construction. Accordingly, Proposed Project-related contributions to cumulative construction traffic conditions during construction would be **less than significant with mitigation.**

Operational Impacts

As described above in the impact discussion of the Proposed Project, operation and maintenance associated with the Proposed Project would result in a minimal amount of daily vehicle trips. This is due to the fact that the Proposed Project, once constructed, would require infrequent and minor maintenance, which would not result in any discernable effect on study area roadway operations. Additionally, operation of the Proposed Project would not alter the permanent configuration (alignment) of area roadways or introduce any barriers to travel. For these reasons, the Proposed Project would not result in any operational impacts and would not cause or contribute to any cumulative effects related to these transportation issues. Accordingly, Proposed Project-related contributions to cumulative construction traffic conditions during operation would be **less than significant.**

> **Mitigation Measure TRAN-1: Construction Traffic Control Plan (refer to Project Impact Issue c)**

References

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B.14 Tribal Cultural Resources

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less-than-Significant Impact with Mitigation*	*Less-than-Significant Impact*	*No Impact*
TRIBAL CULTURAL RESOURCES —				
a) Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC 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) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k), or	☐	☒	☐	☐
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

Environmental Setting

The description of existing cultural, archaeological, and historical resources is included above in Section B.3, *Cultural Resources.*

Discussion

a.i) Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC 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 PRC Section 5020.1(k) (*Less than Significant with Mitigation*)

Tribal cultural resources are: (1) sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are listed, or determined to be eligible for listing, in the California Register of Historical Resources (California Register), or local register of historical resources, as defined in PRC Section 5020.1(k); or (2) a resource determined by the CEQA lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in PRC Section 5024.1(c). For a cultural landscape to be considered a tribal cultural resource, it must be geographically defined in terms of the size and scope of the landscape (PRC Section 21074[b]). A historical resource, as defined in PRC Section 21084.1, unique archaeological resource, as defined in PRC Section 21083.2(g), or non-unique archaeological resource, as defined in PRC Section 21083.2(h), may also be a tribal cultural resource.

Through background research at the Northwest Information Center of the California Historical Resources Information System, no known archaeological resources that could be considered tribal cultural resources, listed or determined eligible for listing in the California Register, or included in a local register of historical resources as defined in PRC Section 5020.1(k), pursuant to PRC Section 21074(a)(1), would be impacted by the Proposed Project.

According to the requirements of PRC Section 21080.3.1(b), one tribe, the Federated Indians of Graton Rancheria, requested consultation regarding the Proposed Project. The City had a meeting with tribal representatives in March 2020. The City provided to the tribe a description of the Project and the results of a cultural resources inventory and evaluation report completed for the Project (ESA 2020). No additional comments were received.

Based on the analysis presented above, the City did not identify any tribal cultural resources listed or eligible for listing in the California Register, nor did they determine any resources to be significant pursuant to criteria set forth in Subdivision (c) of PRC Section 5024.1. In the event that cultural materials are identified during Project implementation that are determined to be tribal cultural resources, implementation of **Mitigation Measure CUL-1: Cultural Resources Awareness Training and Inadvertent Discovery of Archaeological Resources or Tribal Cultural Resources**, outlined above in Section B.3, *Cultural Resources,* would reduce potentially significant impacts to less than significant with mitigation incorporated. This mitigation would ensure that work is halted in the vicinity of a find until a qualified archaeologist and a Native American tribal representative can make an assessment and provide additional recommendations.

a.ii) Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC 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 PRC Section 5024.1. In applying the criteria set forth in Subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. (*Less than Significant with Mitigation*)

For the same reasons stated in the analysis of potential impacts on tribal cultural resources above for issue a.i, impacts would be potentially significant, but implementation of **Mitigation Measure CUL-1** would reduce impacts to **less than significant with mitigation incorporated**.

Cumulative Impacts

b) Would the Project, in combination with reasonably foreseeable future projects, result in significant cumulative impacts on tribal cultural resources? (*Less than Significant with Mitigation*)

The geographic scope for cumulative effects on tribal cultural resources consists of the Project site and immediate vicinity. Federal and state laws protect tribal cultural resources in most cases,

either through project redesign to ensure the preservation of the resource, or by requiring consultation with Native American tribes regarding the treatment of resources.

As described above for issue a.i, there are no known tribal cultural resources within the Project site. While there is the potential for the Project to encounter archaeological resources, which could include prehistoric archeological features or deposits considered tribal cultural resources, the Project would not be expected to result in significant impacts even if such resources are found. There are reasonably foreseeable future projects, specifically the Pickleweed Field and Park Project and the Schoen Park Conversion to Parking, that could impact the same tribal cultural resources as the Proposed Project, if any such resource is identified. However, these projects would involve the implementation of similar types of mitigation measures described above, which would reduce the potential for impacts on these resources and any other as-yet undiscovered resources to a less-than-significant level. Therefore, the Proposed Project, in combination with other reasonably foreseeable future projects, would result in a **less-than-significant cumulative impact** on tribal cultural resources.

References

Environmental Science Associates (ESA). 2020. *Tiscornia Marsh Restoration and Sea Level Rise Adaptation Project, Cultural Resources Inventory and Evaluation Report.* Prepared for Marin Audubon Society. August 2020.

B.15 Utilities & Service Systems

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less-than-Significant Impact with Mitigation*	*Less-than-Significant Impact*	*No Impact*
UTILITIES & SERVICE SYSTEMS — Would the Project:				
a) Require or result in the relocation or construction of new or expanded, water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

Environmental Setting

Existing utilities at the Project site include two Pacific Gas & Electric Company (PG&E) transmission line towers in the northeastern portion of the site, as well as a City stormwater drain and sanitary sewer line to the west of Pickleweed Park and the diked marsh. The stormwater drain runs adjacent to the Bay Trail on the west side of Pickleweed Park, while the sanitary sewer line runs generally parallel to it before dog-legging into the soccer field and heading back toward the shoreline, where both utilities outfall into the creek.

Potable water in the City of San Rafael is managed by the Marin Municipal Water District (MMWD), with 75 percent of water coming from the Mt. Tamalpais watershed west of Marin and the rest from the Russian River System in Sonoma County, managed by Sonoma County Water Agency (SWCA). The City of San Rafael utilizes the Las Gallinas Sanitary District, Central Marin Sanitation Agency, and San Rafael Sanitation District to manage wastewater.

The Marin Hazardous and Solid Waste Joint Powers Authority, known as Zero Waste Marin, is comprised of representatives from all over Marin County, including the City Manager of San Rafael. Zero Waste Marin administers waste diversion initiatives in support of meeting the County's goal of reducing landfilled waste to zero by 2025 and ensures the County's compliance with the California Integrated Waste Management Act and its recycling and waste reduction mandates.

Discussion

a) Would the Project require the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? *(Less than Significant)*

As stated in the Environmental Setting section above, the Project site currently supports two PG&E towers, a stormwater drain, and a sanitary sewer. The Project does not include any modifications to the PG&E towers or sanitary sewer line. These utilities would be maintained in place in their existing condition throughout Project construction and post-construction, and would not require relocation, construction, or expansion due to the Project.

While construction work would not require the relocation of any power lines, construction would have the potential to damage power lines and expose construction workers to hazardous conditions, particularly through the use of vertical construction equipment such as cranes. To avoid this potential damage, construction workers would follow the Power Line Safety standards from the Department of Industrial Relations.[4] These include:

- Identifying the work zone.
- Determine if any part of the equipment, load line, or load (including rigging and lifting accessories), if operated up to the equipment's maximum working radius in the work zone, could get closer than 20 feet to a power line.
- Preventing encroachment/electrocution.
- Providing training to operators and crew members.

There are two design options for tying the west end of the new levee into the shoreline that may involve some modification of the stormwater drain. The west levee tie-in option 1 includes extending the new levee directly west to the shoreline, cutting off the stormwater drain where it intersects with the levee and installing the trash capture device within the new levee, at the storm drain's new terminus. This would require that a small stormwater outlet channel be excavated to the north of the new levee through the tidal marsh and into the creek. The second option (west levee tie-in option 2) includes constructing the new levee along the existing path and shoreline, leaving the stormwater drain as is, and installing the trash capture device at the current drain terminus at the shoreline. Neither of these options would require a change in capacity or service of the stormwater line, nor would result in its relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage facilities.

No other utilities or telecommunication facilities would be affected in the course of the construction or operation of the Proposed Project. Project operations would include levee maintenance and repair, invasive species control, and biological monitoring. For the reasons

[4] Subchapter 4. Construction Safety Orders, Article 15. Cranes and Derricks in Construction. § 1612.1. Power Line Safety (Up to 350 kV) - Equipment Operations. Available: https://www.dir.ca.gov/title8/1612_1.html.

presented, Project construction and operation would have a **less-than-significant impact** related to the expansion or relocation of utility services that could result in environmental effects.

b) Would the Project have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years? *(Less than Significant)*

Project construction would require the intermittent use of potable water for drinking use and sanitary needs at the construction site over the course of an approximately 6-month construction window for 3 to 4 years. Project construction would also require water for dust control, which the construction contractor would obtain from available water sources near the Project site and/or would store on the Project site, as needed, for dust suppression.

At the completion of Phase 1 of the Project, new plants would be planted on the new levee, lowered levee, and ecotone slopes. Irrigation water would be required for the new plants in upland and transition zones. The water used would be delivered by temporary drip irrigation, used only from April through October for the first 3 years, or until plants have matured. Water supplies to serve the irrigation would be purchased by the landscaping contractor from local sources of water and stored on site in tanks to be pumped through the irrigation system, or through temporary connections to the adjacent Pickleweed Park landscape irrigation system.

Post-construction operations would not require water use beyond the temporary irrigation of upland and transitional vegetation plantings, which would be limited to efficient drip irrigation of any areas requiring additional plantings. Given that the Project has relatively minimal demands for water supply during construction and no long-term water use requirements, there would be a **less-than-significant impact** on water supplies available to serve the Project.

c) Would the Project result in a determination by the wastewater treatment provider which serves the Project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments? (Less than Significant)

Neither construction nor operation of the Proposed Project would generate wastewater or disrupt wastewater services. As described for issue a) above, the sanitary sewer line on the west side of the Project site would be maintained in place in its existing condition throughout Project construction and post-construction, and would not require relocation, construction, or expansion, or experience any disruption in service. The Project would restore tidal wetland habitat and modify and improve the existing levee and trail system, but no element of the Project would install a system with wastewater requirements or increase the residential or employment population of the area, as described in Section B.10, *Population & Housing*. As such, new sources of wastewater discharge would not be created, and an increase in capacity to serve short- or long-term Project demands would not be necessary. The Project would have **no impact** on wastewater treatments systems or capacity.

d) Would the Project be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs and would not impair the attainment of solid waste reduction goals? *(Less than Significant)*

The Project would generate approximately 9,500 CY of excavated material from earthwork involved with developing the new tidal channel during diked marsh restoration and removal of foundation soils for levee improvements. The intent is to store excavated material on site for reuse in the marsh reconstruction phase, but any contaminated or otherwise unusable soils would be off-hauled and properly disposed of at an approved industrial and/or hazardous waste landfill in the area. However, even if all excavated material were removed from the site, the amount of off-hauled materials would be negligible and would not contribute substantially to landfill capacity reduction.

Project operations would support passive recreation activities on the site's trail system, including running, walking, hiking, and bird watching. These recreational uses may generate solid waste, but the intensity of recreational usage is expected to be consistent with existing conditions and would not be substantial compared to City-wide solid waste generation. Local landfill usage for the City of San Rafael is limited to the Potrero Hills Landfill and Redwoods Landfill. The Redwood Landfill is planned for closure in 2024, but the Potrero Hills Landfill has operational capacity through 2048, and the City also works with landfills across the state as needed. The Project would also comply with Zero Waste Marin's waste reduction goals, which support the solid waste reduction mandates of the state.

Due to the reasons presented, the Project would have a **less-than-significant impact** on the sufficiency of landfill capacity and solid waste reduction goals.

e) Would the Project comply with federal, state, and local management and reduction statues and regulations related to solid waste? *(Less than Significant)*

As stated for issue d) above, during Project construction, excavated soil would be used on site to the extent practicable. However, in the event that some soil was discovered to be contaminated or could otherwise not be used for the Project, this soil would be disposed of at the nearest landfill capable of accepting the excavated materials. The potential disposal need would be negligible and would not contribute substantially to landfill capacity reduction. Project operations would generate solid waste from visitors recreating along the Bay Trail system and would be limited to the number of visitors and hours of operation, which would be similar to current conditions. Therefore, solid waste generation would not be substantial compared to City-wide solid waste generation, nor would it vary significantly from existing conditions.

The Project would also comply with applicable local, state, and federal regulations concerning solid waste management, including the solid waste diversion initiatives administered by Zero Waste Marin. Impacts would be **less than significant.**

Cumulative Impacts

f) Would the Project, in combination with reasonably foreseeable future projects, result in significant cumulative impacts related to disruption of utility service or relocation of utilities? (*Less than Significant*)

The geographic scope of potential impacts on utilities and service systems is limited to the immediate Project vicinity where services could be disrupted and/or where utilities could require relocation. For landfill capacity, the geographic scope includes the service areas where disposal of construction-related waste could occur. As described above, the Project would not require additional facilities to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years. It would not combine with impacts from other cumulative scenario impacts and, therefore, would not result in a cumulatively considerable impact related to water supply and utilities. This impact would be **less than significant.**

With respect to solid waste, the Project could require disposal of excavated materials. However, none of the other projects identified in EIR Table 3.1-1 is anticipated to require disposal of large volumes of waste in landfills. Therefore, the waste disposal impacts of the Project would not combine with waste disposal impacts from other cumulative scenario projects, and would not result in a cumulatively considerable impact on solid waste.

B.16 Wildfire

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less-than-Significant Impact with Mitigation*	*Less-than-Significant Impact*	*No Impact*
WILDFIRE — If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

Environmental Setting

Wildfire is the outcome of several variables, primarily weather (temperature, humidity, and wind), vegetation, topography, and human influences, which combine to produce regional and local severity zones. The California Department of Forestry and Fire Protection (CAL FIRE) developed a fire hazards severity scale that considers vegetation, climate, and slope to evaluate the level of wildfire hazards, and identifies three levels of fire hazards severity (moderate, high, and very high) to indicate the severity of fire hazards in a particular geographic area.

The Proposed Project is located in a designated Local Responsibility Area (LRA) and falls within an Unzoned Federal Responsibility Area Fire Hazard Severity Zone (CAL FIRE 2021).

Discussion

a) Would the Project substantially impair an adopted emergency response plan or emergency evacuation plan? (*Less than Significant*)

As described in Section B.13, *Transportation*, the Proposed Project could result in an increase of construction phase, Project-related traffic. However, as described, the increased Project-related traffic would not cause a significant increase in congestion and would not significantly affect roadway operations. Additionally, the Proposed Project would not require the closures of public roads or block access along local roadways. For these reasons, the Proposed Project would not impair an adopted emergency response plan or emergency evacuation plan. This impact would be **less than significant.**

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose Project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? (*Less than Significant*)

The Proposed Project is not located within or near state responsibility areas or lands classified as very high fire hazard severity zones. Construction activities would require the use of heavy equipment, vehicles, and temporary storage areas that could lead to an increased risk of ignition, which could ignite a fire in an area with flammable vegetation or material. However, the risk of igniting a wildfire would be low because the Project site consists of highly eroded marshlands, a shoreline levee, and recreational trails, with relatively flat topography. Additionally, as described in Section B.6, *Hazards & Hazardous Materials*, contractors would be required to comply with hazardous materials storage and fire protection regulations, which would reduce the potential for wildfire. This impact would be **less than significant.**

c) Would the Project 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 on the environment? (*Less than Significant*)

The Proposed Project would result in the construction of approximately 600 feet of new levee on the south side of the existing diked marsh and restore approximately 1,100 feet of the shoreline levee. No new roads or other infrastructure would be installed as part of the Proposed Project. As mentioned in Section B.10, *Population and Housing*, the Proposed Project would not induce a need for housing or otherwise result in population growth in the area necessitating the installation of fuel breaks, water sources, power lines, or other utilities that may exacerbate fire risk, and the impact would be **less than significant.**

d) Would the Project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes? (*Less than Significant*)

The Project site consists of highly eroded marshland and has relatively flat topography. Under existing conditions, portions of the Project site (i.e., shoreline segments on the Tiscornia and Pickleweed Park properties) are currently at risk of overtopping during extreme coastal flood events, which would result in flooding of low-lying portions of the adjacent Canal neighborhood. Implementation of the Proposed Project would result in beneficial impacts on flooding by increasing the level of flood protection for the Canal neighborhood and other nearby communities of central San Rafael. While the restored wetland habitats would be largely self-maintaining, it is anticipated that operation and maintenance activities (i.e., removal of invasive plants and temporary irrigation of ecotone slope plantings) would be needed during the 3- to 5-year establishment period. Additional physical and biological monitoring would be conducted after construction of the Proposed Project and would occur at 1, 3, 5, and 10 years post-construction. However, these activities would not expose people or structures to significant risks, including flooding or landslide as a result of runoff, post-fire slope instability, or drainage changes. In addition, as stated above, the Project site contains flat topography and moist soils that would not exacerbate fire risk or create post-fire conditions involving slope instability, landslides, downslope or downstream flooding, or changes in drainage. Therefore, the Proposed Project

would not expose people or structures to significant post-fire changes, and this impact would be **less than significant.**

Cumulative Impacts

e) Would the Project, in combination with reasonably foreseeable future projects, result in significant cumulative impacts associated with wildfire? (*No Impact*)

The geographic scope of potential cumulative wildfire impacts encompasses the Project site and its vicinity. Cumulative scenario projects include the Pickleweed Field and Park Project and the Schoen Park Conversion to Parking. However, the Project and cumulative projects would replace existing land uses, or result in new land use that is compatible with existing land uses. The Project site and vicinity contain flat topography and moist soils that would not exacerbate fire risk or create post-fire conditions, and none of the cumulative project types would be associated with a high potential for wildfire ignition. Therefore, there would not be a cumulative impact, and the Project's contribution to cumulative wildfire impacts would not be cumulatively considerable.

References

California Department of Forestry and Fire Protection (CAL FIRE). 2021. California Fire Hazard Severity Zone Viewer. Available: https://gis.data.ca.gov/datasets/789d5286736248f69c4515c04f58f414. Accessed May 28, 2021.

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