Screencheck Draft Initial Study / Proposed Mitigated Negative Declaration

San Quentin Pump Station Replacement Project

CITY OF SAN RAFAEL, MARIN COUNTY, CALIFORNIA

Prepared For:

City of San Rafael
Department of Public Works
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San Rafael, CA 94901
Contact: Theo Sanchez

Prepared By:

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Date: September, 2019

ENVIRONMENTAL CONSULTANTS

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Table of Contents

LIST OF FIGURES

LIST OF TABLES

APPENDICES

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BACKGROUND

1. **Project Title:** San Quentin Pump Station Replacement Project

2. **Lead Agency and Project Applicant:** City of San Rafael
   Department of Public Works
   111 Morphew Street
   San Rafael, California 94901

3. **Contact Person and Phone Number:** Theo Sanchez
   Tel: (415) 458-5326
   Email: Theo.Sanchez@cityofsanrafael.org

4. **Project Location:** Adjacent and north of the Target property at 123 Shoreline Parkway in the City of San Rafael, Marin County, California (see Figures 1 and 2)

5. **Surrounding Land Uses and Setting:**

The proposed project is located at Assessor's Parcel Number (APN) 009-010-25, directly north of and adjacent to the Target property at 123 Shoreline Parkway in San Rafael, Marin County (Figure 1). Project plans involve replacement of the deteriorated San Quentin Pump Station, demolition of the existing station, and improvements to the outfall pipe that extends from the pump station to San Rafael Bay. The project footprint is on City of San Rafael land and does not encroach on other properties, though lands of Kerner Blvd. LLC (APN 009-010-23) and Target Corporation (APN 009-320-51) are directly to the north and south, respectively.

The proposed project is located on former marshland, which continues to the north, west, and east of the project site before abutting San Rafael Bay approximately 0.20 miles to the east (Figure 2). The San Quentin Pump Station watershed is approximately 403 acres and flows into a storage basin created as part of the East San Rafael Drainage Assessment District.

Commercial properties including Target and Home Depot are located to the south and southwest of the project site, and Interstate 580 runs in a northwest-southeasterly direction approximately 0.32 miles southwest of the pump station. The San Quentin Disposal Site (SQDS), located immediately south of the site, was a permitted Class III landfill that accepted construction and landscape debris from 1968 to 1987. The Regional Water Quality Control Board (RWQCB) landfill closure report (2001) indicates the landfill does not extend onto the pump station site.

The zoning district designated for the project site is W-WO (Water District-Water Overlay District). The General Plan land use designation for the site is Conservation, and the land use designations in the project vicinity include Conservation to the north, Light Industry/Office to the south, Conservation and Light Industry/Office to the west, and Conservation and the San Rafael Bay to the east.

Sources: National Geographic, WRA | Prepared By: njander, 5/22/2019

Figure 1. Project Site Regional Location Map

San Quentin Pump Station Replacement Project
City of San Rafael, California

0 1 2 Miles

N

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Path: L:\Acad 2000 Files\27000\27342\GIS\ArcMap\Aerial.mxd

Sources: National Geographic, WRA | Prepared By: njander, 1/30/2019

Figure 2. Aerial Location Map

San Quentin Pump Station Replacement Project
City of San Rafael, California

0 250 500 Feet

N

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6. Existing System:

The San Quentin Pump Station was constructed in 1972 to serve a portion of east San Rafael that was envisioned as a major light industrial area extending toward the Richmond-San Rafael Bridge from the canal area. The pump station is underlain by artificial fill over Bay Mud, as it is located on former marshland that was reportedly filled in the 1960s as a part of the East San Rafael Drainage Assessment District. The pump station lifts storm water from the large low-lying detention ponds for discharge to San Rafael Bay. Views of the project site, including the pump station and detention ponds, are included in Figures 3 and 4.

The site is protected from inundation by a levee along and beneath the San Francisco Bay Trail along the San Rafael Bay. At the east end of the site, the outfall pipe lies under this levee before terminating in the outboard bank of the levee. The adjacent 20-foot-high embankment was constructed for the Target store in 2013 and is located immediately south of the outfall pipeline. Views of the surrounding land uses, including the San Rafael Bay and commercial uses, are included in Figure 5.

The existing pump station building is approximately 722 square feet in size, located 0.2 miles inland from the San Rafael Bay. It consists of a wet well, a pressure vault and associated controls, and two vertical pumps. To connect to the Bay, the pump station building is also associated with a 962-foot-long storm drainage pipe that discharges into the San Rafael Bay. Views of the pump station and project site can be seen in Figure 3.

In its 46 years of operation, the outfall pipe has become deteriorated to the point where leaks are noticeable at the ground surface when the pumps are in use. The pump station itself also shows signs of age and continues to settle in the fill differentially relative to the outfall pipe and site. Under the existing pump system, if the pump station loses power or one of the two pumps fail, then flooding occurs in the neighboring industrial areas and along Highway 580 leading to the Richmond-San Rafael Bridge.

7. Project Design Alternatives:

Pump Station Replacement Considerations

Several site locations for the proposed pump station were evaluated in the project design phase. Since the existing station must stay operational until the new station is ready to function, demolishing the station and building the new one in its place was not an option. One option considered was placing the new station immediately adjacent to the existing station, and the other option was moving the station closer to the Bay. The most cost-effective pump station location is typically at the low point of the watershed and, as indicated in the Environment Technical Memorandum (Appendix A, Sub-Appendix B), the existing pump station is already located at the low point. As part of the East San Rafael Drainage Assessment District project, the area was excavated to create a low point at the existing pump station.

View 1. View of the north and west side of the pump station, facing southeast, as it abuts marsh area. The Target store is in the background.

View 2. View of the north side of the pump station and utility poles, facing south.

View 3. View of the south side of the pump station, utility poles, and equipment access and turnaround circle, facing northwest.

View 4. View looking west-southwest toward the pump station from the gravel levee road, under which the outfall pipe runs toward the San Rafael Bay.

Figure 3. Views of the Project Site (Page 1 of 2)

San Quentin Pump Station Replacement Project
City of San Rafael, California

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View 1. View of the south and west side of the pump station, facing northeast.

View 2. View of the culvert directly south of the pump station, facing east.

View 3. View of the south side of the pump station and adjoining lagoon and grasses, facing north.

View 4. View of the electric undergrounding area directly southeast of the pump station adjacent to the turnaround area, facing northeast.

Figure 4. Views of the Project Site (Page 2 of 2)

San Quentin Pump Station Replacement Project
City of San Rafael, California

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View 1. View from the pump station toward the adjacent lagoon, marsh, and multi-family residential, mixed commercial area to the west.

View 2. View from the pump station toward the Home Depot store to the southwest of the site.

View 3. View from the levee road (that runs from the site to the bay) of the adjacent Target store property directly to the southeast of the site.

View 4. View of the San Rafael Bay and rip rap embankment to the east of the bay trail running along the eastern side of the site, facing southwest.

Figure 5. Views of the Surrounding Land Uses

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City of San Rafael, California

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Furthermore, while moving the pump station closer to the Bay would reduce the length of outfall pipe necessary and reduce the potential for long-term settlement relative to the outfall pipe, the area excavated for the lagoon surrounding the existing station is now considered sensitive habitat (wetland) and potential habitat for special-status wildlife species. Relocating the pump station closer to the Bay would require excavation and a net loss of wetland area for a new drainage channel, increasing costs related to mitigation and monitoring for this loss of wetland. Locating the pump station closer to the Bay would also place the station between the toe of the building pad for the Target store and the top of the bank of the storage pond. This is a narrow area and does not provide an easy staging area from which to build the pump station.

Outfall Pipe Replacement Considerations

Based on discussions with City maintenance crews, the existing 60-inch reinforced concrete pipe (RCP) leaks and has settled unevenly in the bay mud causing sags. Ground Penetrating Radar (GPR) and potholing were used to help locate potential pipe sags (Appendix A, CSW San Quentin Pump Station Basis of Design Report). Three sags were located, consisting of either a dislocated or broken pipe segment. The magnitude of the sags appears to be less than 12 inches. The locations of the existing pipe deficiencies and anomalies are approximate due to limited access for study.

Three potential options were studied to improve the 900 feet of discharge outfall pipe. These options include: 1) slip lining the existing 60-inch RCP with the new 48-inch diameter high-density polyethylene (HDPE) pipe; 2) installing a Cured in Place Pipe (CIPP) within the 60-inch RCP; and 3) open trench removal of the existing pipe and installing a new 48-inch diameter HDPE pipe. The outfall repairs would extend from the existing pump station eastward to just before the Bay Trail; project work is not proposed at the outfall into the Bay nor within 100 feet of the shoreline. Additionally, the contractor would be required to dewater the existing storm drain and maintain operation of the existing pump station while thoroughly cleaning and installing the new pipe.

8. Project Description:

Pump Station Replacement

Due to the sensitive habitat and staging and access considerations discussed previously, the chosen location for the new pump station construction is immediately south of the existing pump station. This would minimize wetland disturbance and provide the benefit of a relatively large construction staging area with good access.

Development of the new pump station would require the removal of approximately 60 feet of corrugated metal pipe (CMP) leading to an existing storm drain turning structure (to be preserved), as well as the removal of existing riprap rock, base rock, and asphalt and concrete pavement directly to the south of the existing station. This would be followed by installation of an approximately 2,105-square-foot concrete slab to be placed partially over the area of removed rock and concrete adjacent to the existing station. Pump station elements, such as new vertical and submersible pumping units, a pressure chamber, motor control centers, and electric equipment would be installed on top of the slab.

Once the new pump station is operational, the existing 722-square-foot station would be removed and disposed of, including the pump station walls and stairway, pumps, electric facilities, screens, pressure relief plumbing, and the wet well. In addition to these pump station elements, the overhead power lines and electrical poles surrounding the existing station would be disconnected and removed as well, all of which are situated on gravel within the project disturbance footprint. The proximity to the proposed pump station should not significantly affect the operation of the existing pump station during construction. Further design details can be viewed in the Site Plans (Figures 6-8).

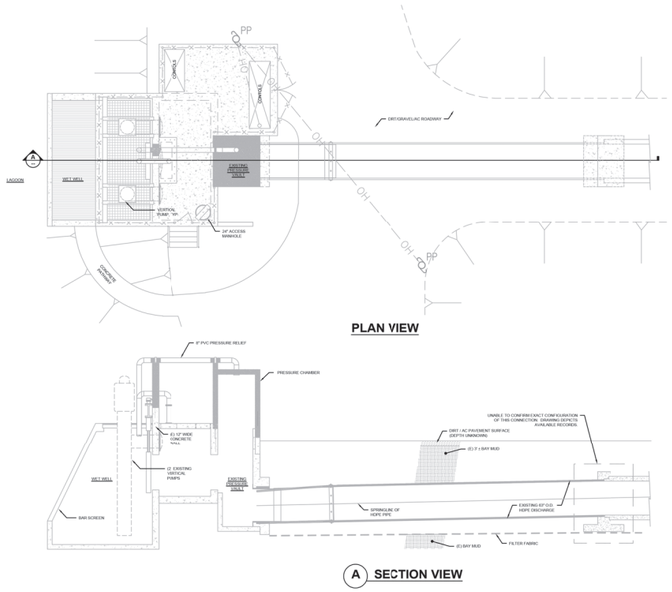
As indicated in the Draft Geotechnical Investigation Report (Appendix A, Sub-Appendix A), the planned pump station is feasible from a geotechnical standpoint. The weight of the new pump station is anticipated to be less than the weight of the excavated soil to build the pump station. The weight of the removed soil should offset the weight of the new pump station, minimizing additional settlement of the structure and causing it to "float" on the mud. Primary geotechnical considerations for the project include:

- Excavation through soft Bay Mud
- Providing appropriate temporary support for excavations
- Providing appropriate seismic and structural design for any new structures
- Providing for proper bedding and trench backfill
- Minimizing the extent of excavation and associated backfills for new manholes and other below-grade structures that are underlain by Bay Mud

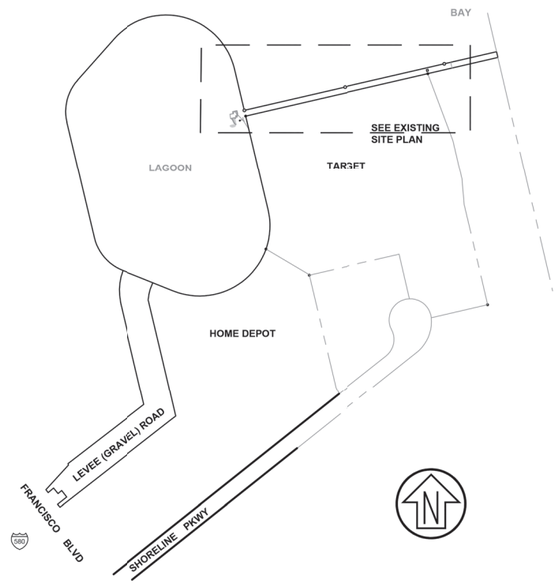
To provide enough pressure for the storm water discharged from the pumps to reach the Bay, water would be pumped into a pressure chamber, which would be connected to the outfall pipe. The proposed discharge assembly pressure box would be configured to better drive the outflow from the pump discharges to the outfall pipe through directed discharge assemblies and other miscellaneous equipment housed in the pump station and pressure chamber.

The pump station would use three vertical axial flow pumps to maximize efficiency. Utilizing three smaller pumps capable of discharging 66 cubic feet per second (cfs) provides flexibility and increases efficiency for the more frequent, smaller storm events while also providing capacity for the 100-year storm event. Utilizing three 100 cfs pumps provides more flexibility for larger storm events with increased pump rest time and a higher freeboard over the maximum 4-foot water surface elevation. A smaller high pressure (HP) submersible pump would be included in the final design as well, for nuisance water during dry weather season and maintenance purposes.

The Motor Control Center and other electrical components are currently housed outside the pump station. An electrical instrumentation and controls design would be incorporated in the final pump station design. Based upon initial review of the PG&E electrical facilities, the existing transformer would be a ground-mounted transformer and, as indicated in Site Plans (Figures 6-8), an area would be designated for an existing City-supplied portable generator. Alarm monitoring and controls would be determined by City staff and incorporated in the final design plans.



EXISTING PUMP STATION SITE PLAN & SECTION VIEW



PROPERTY MAP

CONTROL POINTS

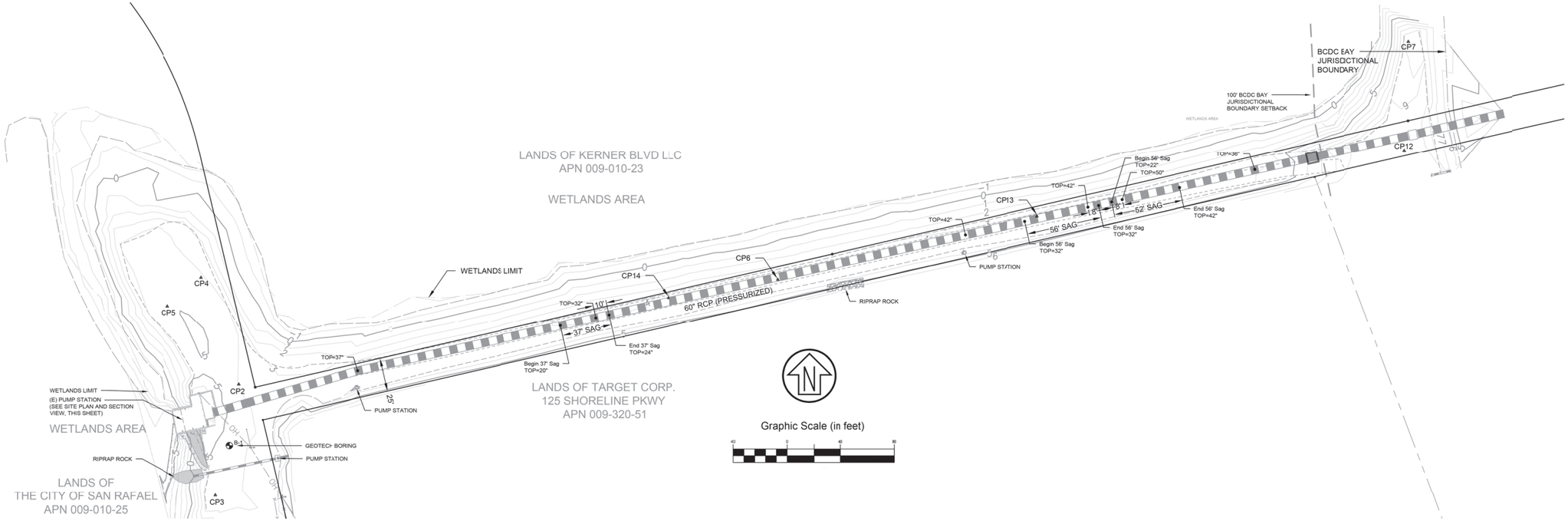
POINT NO.	NOTHING	EASTING	ELEVATION	DESCRIPTION
2	2176656.299812	5987083.060150	3.96	CP 60D
3	2176573.533388	5987065.644983	4.35	CP 60D
4	2176735.928568	5987055.085624	4.12	CP 60D
5	2176714.591922	5987030.066885	4.80	CP 60D
6	2176734.340642	5987484.616836	3.54	CP 60D
7	2176911.145372	5987954.962687	9.13	CP 60D
12	2176830.111457	5987951.950462	9.54	CP 60D
13	2176781.163349	5987678.220722	2.81	CP 60D
14	2176720.821334	5987403.134558	3.88	CP 60D

BASIS OF BEARINGS

BASIS OF BEARINGS FOR THIS MAP S N76°59'41"E BASED ON FOUND ¾" IRON PIPES ONE TAGGED LS 7237 AND THE OTHER HAVING AN ILLEGIBLE TAG. BOTH ACCEPTED AS THE CORNERS OF LOT 6, 2012 PM 96 [9], MARIN COUNTY RECORDS.

LEGEND

BOUNDARY
SET 1/2" REBAR CAP PLS 9387
FOUND MONUMENT



EXISTING SITE PLAN

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San Quentin Pump Station Replacement Project

City of San Rafael, California

Figure 6. Site Plan (1 of 3)

Date: November 2018
Source: CSW | ST2

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KEYNOTES

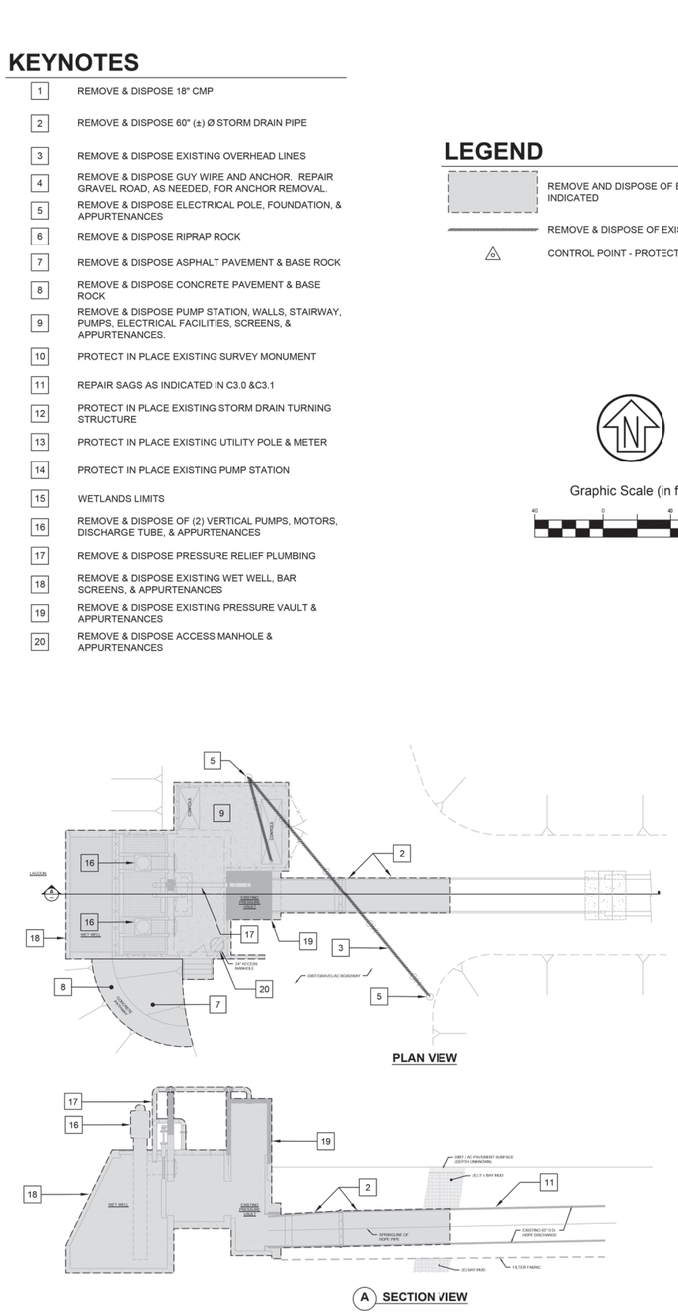
1	REMOVE & DISPOSE 18" CMP
2	REMOVE & DISPOSE 60" (±) Ø STORM DRAIN PIPE
3	REMOVE & DISPOSE EXISTING OVERHEAD LINES
4	REMOVE & DISPOSE GUY WIRE AND ANCHOR. REPAIR GRAVEL ROAD, AS NEEDED, FOR ANCHOR REMOVAL.
5	REMOVE & DISPOSE ELECTRICAL POLE, FOUNDATION, & APPURTENANCES
6	REMOVE & DISPOSE RIPRAP ROCK
7	REMOVE & DISPOSE ASPHALT PAVEMENT & BASE ROCK
8	REMOVE & DISPOSE CONCRETE PAVEMENT & BASE ROCK
9	REMOVE & DISPOSE PUMP STATION, WALLS, STAIRWAY, PUMPS, ELECTRICAL FACILITES, SCREENS, & APPURTENANCES.
10	PROTECT IN PLACE EXISTING SURVEY MONUMENT
11	REPAIR SAGS AS INDICATED IN C3.0 &C3.1
12	PROTECT IN PLACE EXISTING STORM DRAIN TURNING STRUCTURE
13	PROTECT IN PLACE EXISTING UTILITY POLE & METER
14	PROTECT IN PLACE EXISTING PUMP STATION
15	WETLANDS LIMITS
16	REMOVE & DISPOSE OF (2) VERTICAL PUMPS, MOTORS, DISCHARGE TUBE, & APPURTENANCES
17	REMOVE & DISPOSE PRESSURE RELIEF PLUMBING
18	REMOVE & DISPOSE EXISTING WET WELL, BAR SCREENS, & APPURTENANCES
19	REMOVE & DISPOSE EXISTING PRESSURE VAULT & APPURTENANCES
20	REMOVE & DISPOSE ACCESS MANHOLE & APPURTENANCES

LEGEND

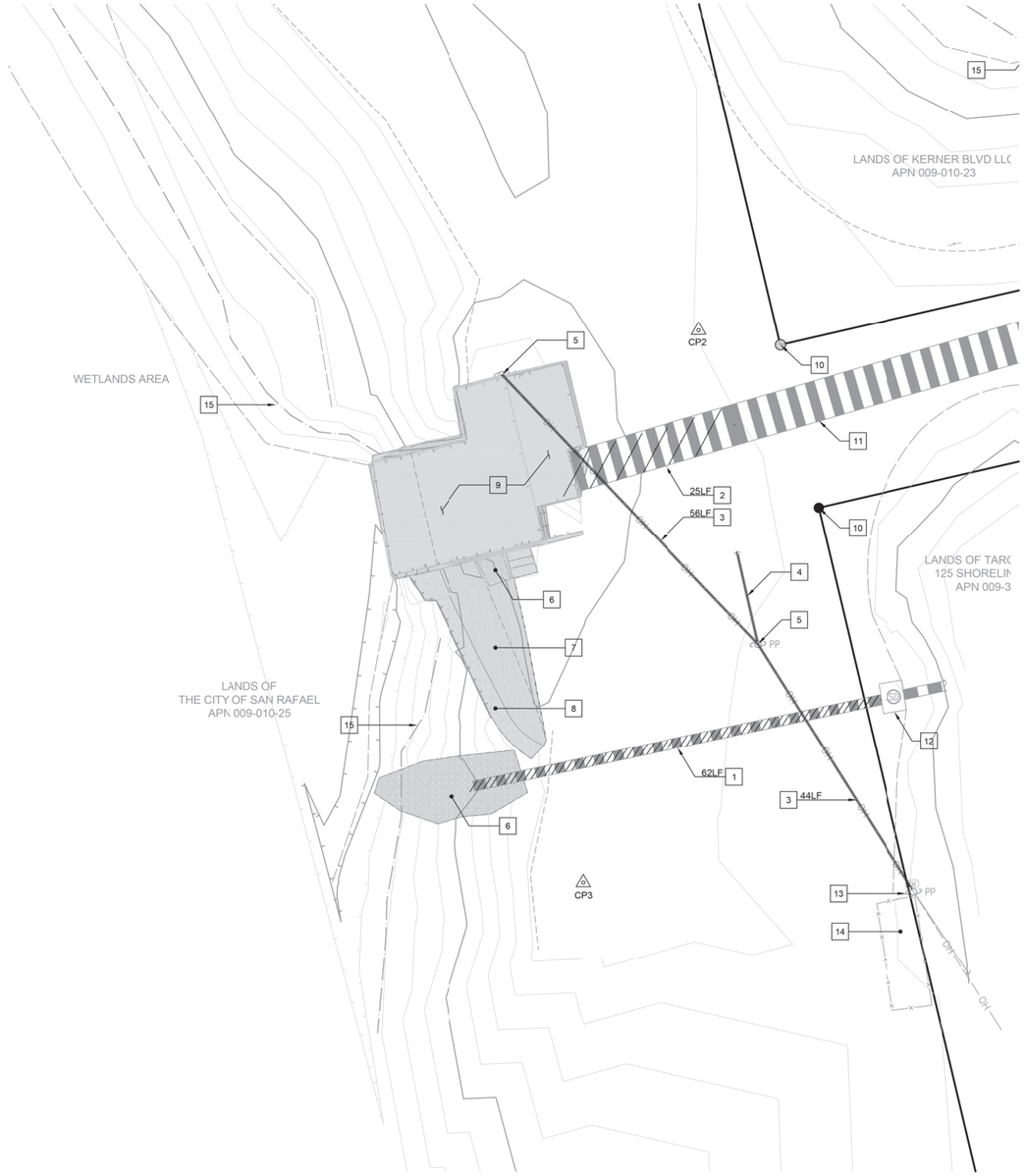
- REMOVE AND DISPOSE OF EXISTING FACILITIES AS INDICATED
- REMOVE & DISPOSE OF EXISTING UTILITY
- CONTROL POINT - PROTECT AS NEEDED

Graphic Scale (in feet)

40 0 40 80



EXISTING PUMP STATION SITE PLAN & SECTION VIEW



EXISTING SITE PLAN

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San Quentin Pump Station Replacement Project

City of San Rafael, California

Figure 7. Site Plan (2 of 3)

Date: November 2018
Source: CSW | ST2

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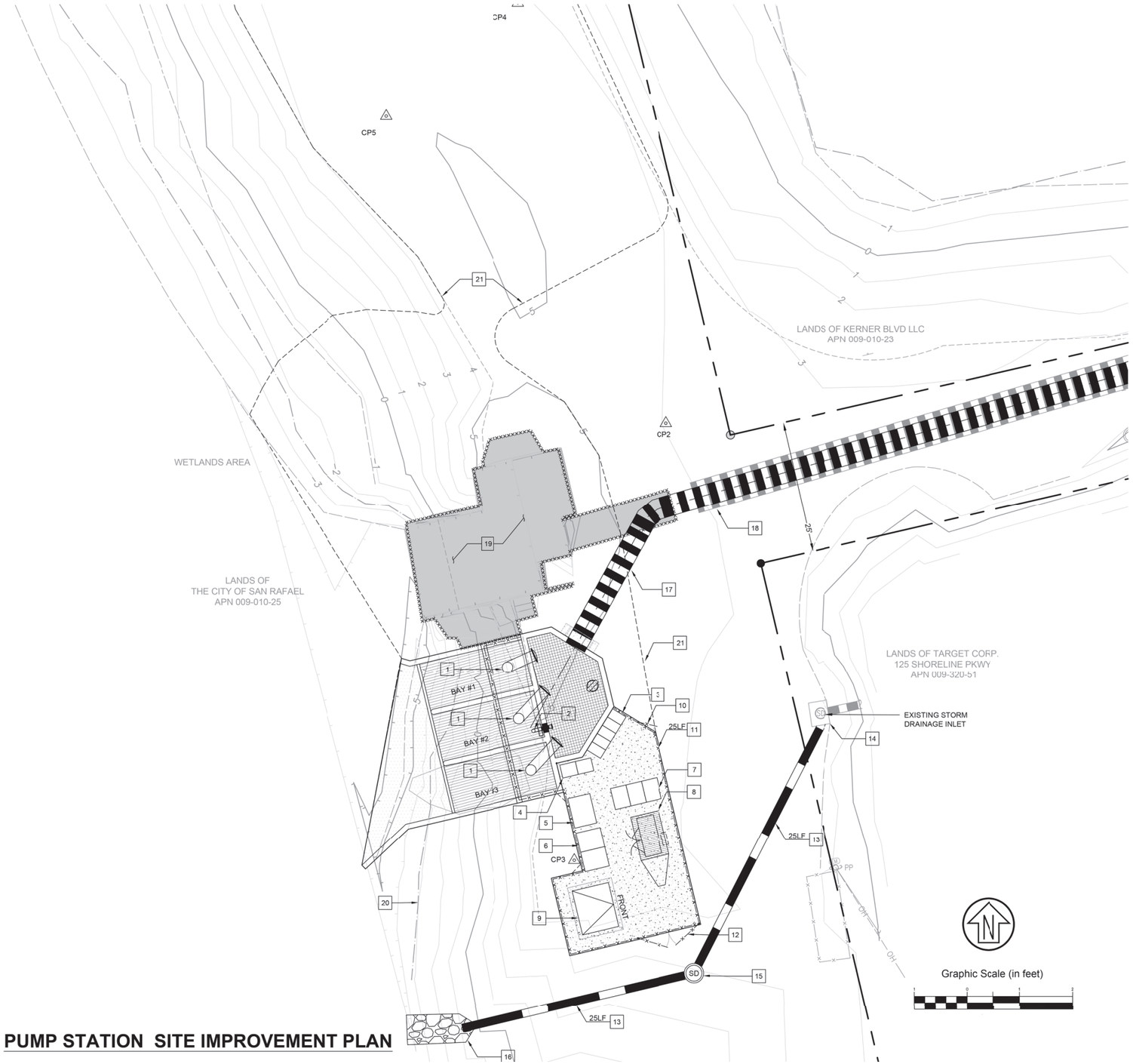

KEYNOTES

1	NEW VERTICAL PUMPING UNIT
2	NEW SUBMERSIBLE PUMPING UNIT
3	NEW MOTOR CONTROL CENTER
4	NEW PLC CONTROL
5	NEW AUTOMATIC TRANSFER SWITCH
6	NEW MAIN SWITCHBOARD
7	NEW SWITCHBOARD MS-1
8	PORTABLE GENERATOR (NIC)
9	NEW TRANSFORMER
10	NEW 6' HIGH PEDESTRIAN GATE
11	NEW 6' HIGH CHAIN LINK FENCE
12	NEW 6' HIGH VEHICULAR GATE
13	NEW 18" CMP (LENGTH PER PLAN)
14	NEW STORM DRAINAGE DROP INLET - UCS #260
15	STORM DRAIN MANHOLE - UCS #205 TYPE "A"
16	12" NOMINAL DIAMETER RIPRAP ROCK
17	48" STORM DRAIN - OPEN TRENCH CONSTRUCTION
18	48" STORM DRAIN - SLIP LINE INTO EX STORM DRAIN
19	REMOVE & DISPOSE EXISTING PUMP STATION & APPURTENANCES
20	LIMITS OF WETLANDS
21	GRADING LIMITS

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PUMP STATION SITE IMPROVEMENT PLAN

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San Quentin Pump Station Replacement Project

City of San Rafael, California

Figure 8. Site Plan (3 of 3)

Date: November 2018
Source: CSW | ST2

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Discharge piping and miscellaneous equipment housed in the pump station would be necessary for normal operations. The existing pump station utilizes a pressure vault, which connects to a 60-inch diameter outfall pipe. A pressure vault minimizes pressure loss, construction costs, and future maintenance; therefore, a pressure vault would be used in the final design of the new pump station as well.

Outfall Pipe Replacement

As indicated in the Site Plans (Figures 6-8), the pressure vault would connect to a pressurized outfall pipe. Based on the environmental sensitivity of the area and limited work area (25 feet wide), it was decided that slip lining (option 1 discussed previously) would be used to improve the discharge outfall pipe. This would involve 35 feet of 48-inch storm drain to be installed via open trench construction in order to connect the new pump station to the existing outfall pipe, where slip lining would begin. Approximately 25 feet of 60-inch storm drain would be removed to disconnect the existing station from the existing outfall pipe as well.

The benefits of the slip lining option include a smoother lining and less headloss, as well as avoidance of extensive open trenching and the resulting ground disturbance and air and water quality impacts. Slip line rehabilitation technology has been historically successful and works well with long straight pipe segments (Appendix A, CSW San Quentin Pump Station Basis of Design Report).

Staging and Access

The City of San Rafael construction contract specifications would contractually require the construction Contractor to locate the construction staging area on-site. The specifications for this staging area would include, at minimum, the following requirements:

- The staging area will be included in the Contractor's Stormwater Pollution Prevention Plan (SWPPP).
- The staging area will not be located in an environmentally or culturally sensitive area and/or impact water resources (rivers, streams, bays, inlet, lakes, drainage sloughs).
- The staging area will not be located in a regulatory floodway or within the base floodplain (100-year).
- The staging area will not affect access to properties or roadways.

The staging area for the proposed project would be located adjacent and to the south of the existing pump station, along with a turn-around point for construction vehicles via the gravel road in front of the existing station. The site would be reached via the existing access road that connects the pump station to Francisco Boulevard East (Figure 2).

Construction

Construction of the proposed project would last for approximately 33 weeks. All improvements would be made within the existing City right-of-way. Construction would require a pick-up truck, excavator, dump truck, dozer or grader, backhoe, and a crane with a hydraulic hammer. Sheet piles would be driven around the area designated for new pump station installation to dewater the

site and prevent water from entering the new wet well during construction. Additionally the new pump station would be built on a concrete slab that "floats" on the bay mud. The intent of this design is to minimize the differential settlement between the pump station and the outfall pipe. The total footprint of all permanent and temporary impacts from the pump station and outfall pipe replacement, as well as construction access and staging, is approximately 6,960 square feet.

At least one week prior to the commencement of work, the Contractor would provide project information signs to notify drivers of the upcoming project and potential traffic delays. Additionally, the City or its contractor would notify and coordinate with law enforcement and emergency service providers prior to the start of construction to ensure minimal disruption to service during construction.

The Bay Area Air Quality Management District (BAAQMD) recommends basic construction measures to ensure minimal impacts on regional air quality. The contractor would be responsible for implementing the following basic measures during construction:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas) will be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site will be covered.
- All visible mud or dirt track-out onto adjacent public roads will be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- Idling times will be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations).
- Clear signage will be provided for construction workers at all access points.
- All construction equipment will be maintained and properly tuned in accordance with manufacturer's specifications, and all equipment will be checked by a certified visible emissions evaluator.
- A publicly visible sign with the telephone number and person to contact at the lead agency regarding any dust complaints will be posted in or near the project site. The contact person will respond to complaints and take corrective action within 48 hours. The Air District's phone number will also be visible to ensure compliance with applicable regulations.

Grading

The project proposes to excavate 617 cubic yards (CY) of soil and to fill 305 CY, creating a net cut of 312 CY, which would be placed on-site at the graveled spit peninsula directly adjacent and northeast of the existing pump station.

Parking

Construction of the proposed project would not require the use of any on-street parking, as there is none within the project site. The proposed project does not add any new parking on-site. Construction vehicles would park in the staging area.

Traffic

Traffic interference is in no way expected due to the location of the project off of main streets, but any traffic control would conform to the California Manual on Uniform Traffic Control Devices (CAMUTCD), as well as City standard specifications. There is a possibility that some pedestrians and bicyclists use the gravel levee road for recreational purposes. The Contractor would install advance warning signs to alert pedestrians and bicyclists of the work zone. Advance warning signs may be reflective signs, changeable message boards, cones, and/or barricades. The work would be limited to 7:00 A.M. to 5:00 P.M., Monday through Friday, unless otherwise approved in writing by the Director of Public Works.

Utilities

The project site includes a PG&E utility pole, used to power the existing pump station. This pole would remain unaltered for the newly built station adjacent to the existing station. This is one of the benefits of building the new pump station next to the existing station, rather than closer to the Bay.

Tree Loss

The project has been designed to avoid tree loss and tree trimming to the maximum degree possible. Standard avoidance and minimization measures would be implemented to ensure the project complies with all applicable City regulations regarding tree removal.

9. Other Public Agencies Whose Approval May Be Required:

The information contained in this Initial Study will be used by the City of San Rafael (the California Environmental Quality Act [CEQA] Lead Agency) as it considers whether or not to approve the proposed project. If the project is approved, the Initial Study, as well as the associated Mitigated Negative Declaration (MND) would be used by the City and responsible and trustee agencies in conjunction with various approvals and permits. These actions include, but may not be limited to, the following approvals by the agencies indicated:

City of San Rafael

- City Council Approval

Army Corps of Engineers (Corps)

- Clean Water Act, Section 404 Discharge into Waters of the U.S.

Regional Water Quality Control Board (RWQCB)

- Clean Water Act, Section 401 Water Quality Certification

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ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is potentially significant unless mitigation is incorporated, as indicated by the checklist on the following pages.

☐	Aesthetics	☐	Greenhouse Gas	☐	Public Services
☐	Agricultural Resources	☒	Hazards/Hazardous	☐	Recreation
☐	Air Quality	☐	Hydrology/Water	☐	Transportation
☒	Biological Resources	☐	Land Use/Planning	☒	Tribal Cultural Resources
☒	Cultural Resources	☐	Mineral Resources	☐	Utilities and Service Systems
☐	Energy	☒	Noise	☐	Wildfire
☐	Geology/Soils	☐	Population/Housing	☒	Mandatory Findings of Significance

Determination:

On the basis of this initial evaluation:

☐ I find that the project COULD NOT have a significant effect on the environment and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the project MAY have a "Potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature: Date:

Name/Title: Hunter Young, Senior Civil Engineer, City of San Rafael Department of Public Works

INITIAL STUDY CHECKLIST

This section describes the existing environmental conditions in and near the project area and evaluates environmental impacts associated with the proposed project. The environmental checklist, as recommended in the CEQA Guidelines (Appendix G), was used to identify environmental impacts that could occur if the proposed project is implemented. The right-hand column in the checklist lists the source(s) for the answer to each question. The cited sources are identified at the end of this section.

Each of the environmental categories was fully evaluated, and one of the following four determinations was made for each checklist question:

- **"No Impact"** means that no impacts to the resource would occur as a result of implementing the project.
- **"Less than Significant Impact"** means that implementation of the project would not result in a substantial and/or adverse change to the resource, and no mitigation measures are required.
- **"Less than Significant with Mitigation Incorporated"** means that the incorporation of one or more mitigation measures is necessary to reduce the impact from potentially significant to less than significant.
- **"Potentially Significant Impact"** means that there is either substantial evidence that a project-related effect may be significant, or, due to a lack of existing information, could have the potential to be significant.

I.	**AESTHETICS** — Except as provided in Public Resources Code Section 21099, would the project:	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*	*Source*
a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒	1,2
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒	1,2,3
c)	In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐	1
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒	1

Environmental Setting

There are no designated scenic highways in Marin County. Portions of Highway 101, State Route (SR) 1, and SR-37 are, however, eligible for listing. The project site is not located along any eligible portion of these highways, which are located more than 10 miles to the west (Highway 101) and more than nine miles north (Highway 101 and SR-37) of the project site (California Department of Transportation, 2012). The San Rafael General Plan Community Design Element, Policy CD-5 states, "Respect and enhance to the greatest extent possible, views of the Bay and its islands, Bay Wetlands, St. Raphael's church bell tower, Canalfront, marinas, Mt. Tamalpais, Marin Civic Center and hills and ridgelines from public streets, parks and publicly accessible pathways." The proposed pump station site does not consist of, nor would it block, one of these City-designated scenic views. Existing land uses adjacent to the project site consist of light industry, commercial, residential, and conservation, and the San Francisco Bay Trail runs along the San Rafael Bay approximately 0.18 miles to the east of the site. Views of the site from the residential neighborhood to the north and the Bay Trail to the east are mostly screened by vegetation, and the distance is too great for clear views of the low-lying pump station. Views from some angles within the private commercial parking lots to the south and southwest are possible but unlikely, as the pump station sits on the backside of the large commercial stores. Motorists would not be able to view the project site, as views from any major road are blocked by buildings.

Existing sources of nighttime light in the project area include vehicle headlights, commercial development lighting, parking lot lights and residential security lighting. Existing sources of glare are mainly limited to automobile windshields and reflective building materials associated with residential and commercial uses.

Discussion of Impacts

a, b) ***No Impact.*** No scenic vistas exist in or near the project site. Furthermore, there is no state or locally designated scenic highway, road or corridor within the vicinity of the project site. The project also would not result in impacts within a state scenic highway, such as the removal of trees, rock outcroppings, or historic buildings.

c) ***Less than Significant Impact.*** There is the potential for temporary impacts to the existing visual quality of the surrounding area during construction. The only potential public view of the project site comes from the San Francisco Bay Trail directly to the east. Recreationists using the Bay Trail may be able to view the project site from certain angles, though it is mainly screened by vegetation. Temporary visual impacts could therefore result from the presence of construction vehicles or ground disturbance during project construction activities. However, construction activities would be temporary. The permanent development of the site would be consistent with the existing conditions of the site, as the new pump station would replace the current, dilapidated station. The new station would be slightly larger, but this size difference would not be noticeable nearly 0.20 miles away from the Bay Trail. The proposed pump station site does not consist of, nor would it block, any of the City-designated scenic views as described in the San Rafael General Plan. Impacts would be less than significant.

d) ***No Impact.*** Construction of the proposed project would not create a significant source of light or glare during daytime. The long-term operation of the project would not result in the addition of new sources of light and glare. Upon completion of construction the light and glare conditions at the project site would be nearly identical to existing conditions. The proposed project would not create a new source of substantial light or glare which adversely affect day or nighttime views in the area.

II.	**AGRICULTURAL AND FORESTRY RESOURCES** — (Farmland Mapping and Monitoring Program Website) In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:	***Potentially Significant Impact***	***Less than Significant with Mitigation Incorporated***	***Less than Significant***	***No Impact***	***Source***
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?	☐	☐	☐	☒	4
b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒	2
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))?	☐	☐	☐	☒	2

II.	**AGRICULTURAL AND FORESTRY RESOURCES** — (Farmland Mapping and Monitoring Program Website) In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:	***Potentially Significant Impact***	***Less than Significant with Mitigation Incorporated***	***Less than Significant***	***No Impact***	***Source***
d)	Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒	1
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??	☐	☐	☐	☒	1,4

Environmental Setting

The project site does not contain any farmland or forestry land and is not designated for agricultural or forestry uses or Prime, Statewide, or Locally Important Farmland (California Department of Conservation, 2010). The proposed project is located in residential and commercial areas and follows existing roads. Surrounding land is developed with residential, commercial, light industrial, and conservation uses.

Discussion of Impacts

a-e) ***No Impact.*** There are no agricultural or forestry resources within the project site. There are no Prime, Unique, Statewide or Locally Important farmlands in the area. The project

site is not under a Williamson Act Contract, nor is the project zoned as forest land or timber production. The project would be confined nearly entirely to the gravel road and turnaround point for the existing station, and all work and staging would take place on City of San Rafael land. No impacts to agricultural or forestry resources would occur.

III.	**AIR QUALITY** — Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*	*Source*
a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐	1,11
b)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐	1,11
c)	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐	1,11
d)	Result in other emissions (such as those leading to odors) affecting a substantial number of people?	☐	☐	☒	☐	1,11

Environmental Setting

The project site is in the San Francisco Bay Area air basin, where air quality is monitored and regulated by the Bay Area Air Quality Management District (BAAQMD). Ambient concentrations of key air pollutants have decreased considerably over the course of the last several decades. Air pollution is generated by anything that burns fuel (including but not limited to cars and trucks, construction equipment, backup generators, boilers and hot water heaters, barbeques and broilers, gas-fired cooking ranges and ovens, fireplaces, and wood-burning stoves), almost any evaporative emissions (including the evaporation of gasoline from service stations and vehicles, emissions from food as it is cooked, emissions from paints, cleaning solvents, and adhesives, etc.), and other processes (fugitive dust generated from roadways and construction activities, etc.).

A sensitive receptor is generally defined as a location where human populations, especially children, seniors, and sick persons, are located where there is a reasonable expectation of continuous human exposure to air pollutants. These typically include residences, hospitals, and schools. The site is surrounded by residential, commercial, and light industrial land uses.

The Bay Area is currently classified as “attainment” or “unclassifiable” with respect to every National Ambient Air Quality Standard (NAAQS) except ozone and fine particulate matter $PM_{2.5}$, for which it is still classified as “nonattainment.” Ozone concentrations in the Bay Area have also decreased considerably over the last several decades, but NAAQS are required to be set to be protective of public health “allowing an adequate margin of safety” and have also become more

stringent. Prior to 2008, attaining the ozone NAAQS required that the "design value"--i.e., the peak 8-hour average concentration on the 4th-worst day of the year (averaged over three consecutive years)--be below 0.08 parts per million (ppm); the Bay Area was classified as "marginal" nonattainment with respect to that standard.[1] In 2008, the ozone NAAQS was revised to 0.075 ppm. Therefore, while EPA has not yet finalized its attainment designations for the 2008 ozone standard, it is proposing to designate the Bay Area as "marginal nonattainment" (0.076 - 0.086 ppm) with respect to that standard.[2]

The State of California also has its own ambient air quality standards (CAAQS) which are equivalent to or more stringent than the NAAQS; the Bay Area is currently classified as nonattainment with respect to the CAAQS for ozone, particulate matter smaller than 10 microns (PM_{10}), and "fine" particulate matter smaller than 2.5 microns ($PM_{2.5}$).

Discussion of Impacts

a) ***Less Than Significant Impact.*** Construction activities would result in short-term increases in emissions from the use of heavy equipment that generates dust, exhaust, and tire-wear emissions; soil disturbance; materials used in construction; and construction traffic. Project construction would produce fugitive dust (PM_{10} and $PM_{2.5}$) during ground disturbance and would generate carbon monoxide, ozone precursors, and other emissions from vehicle and equipment operation. BAAQMD released a Clean Air Plan for the Bay Area in 2010, which would be the applicable air quality plan for the proposed project. Best management practices (BMPs) recommended by BAAQMD and identified above in the project description would be implemented during construction to minimize fugitive dust. Pump station development activities would mainly take place within an existing developed footprint. Construction emissions would be temporary, lasting approximately 33 weeks, and would not have long-term effects on air quality in the Bay Area. Because of the small area of disturbance, temporary nature of the emissions, and implementation of construction measures, impacts on air quality would be less than significant and would comply with the Bay Area 2010 Clean Air Plan.

b) ***Less Than Significant Impact.*** As discussed under item a), the project would result in minor construction-related emissions. It would not result in a cumulatively considerable net increase of any criteria pollutant. The project would cause short-term air quality impacts as a result of construction activities; however, it would not result in long-term or cumulatively considerable increases in air quality pollutant emissions for which the Bay Area is currently in non-attainment (ozone and particulate matter). Implementation of BAAQMD BMPs would ensure that the temporary increase in air pollutant emissions

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[1] The Bay Area Air Quality Management reported that the maximum 8-hour ozone concentration only exceeded the standard once in 2005 and once in 2007, but exceeded the standard on 12 days in 2006.

[2] EPA's proposed criterion for the "marginal" classification was proposed in the Federal Register on February 14, 2012.

associated with construction activities would result in less than significant contributions to cumulative pollutant levels in the region.

c) ***Less Than Significant Impact.*** The primary sensitive receptors in the vicinity are residents and shoppers, which may include children, elderly people, or people with respiratory illnesses. Sensitive receptors located in close proximity to several locations adjacent to the construction area could be exposed to temporary air pollutants from construction activities, such as fugitive dust, ozone precursors, and carbon monoxide. The duration of construction activities would be limited. Basic construction measures recommended by BAAQMD would be implemented during construction to minimize air pollutants. New construction equipment has been subject to increasingly stringent emissions requirements at the Federal level (e.g., 40 CFR 89 and 1039), designated "Tier 1", "Tier 2", "Tier 3", etc.; older construction equipment is subject to potential retrofit requirements required by the State of California (13 CCR 2449, 13 CCR 2450-2466, and 17 CCR 93116). As a result, sensitive receptors in the vicinity of the project would not be exposed to substantial pollutant concentrations, and impacts would be less than significant.

d) ***Less Than Significant Impact.*** Construction activities would involve the use of gasoline or diesel-powered equipment that emits exhaust fumes. These activities would take place intermittently throughout the workday, and the associated odors are expected to dissipate within the immediate vicinity of the work area. Persons near the construction work area may find these odors objectionable. However, the proposed project would not include uses that have been identified by BAAQMD as potential sources of objectionable odors, such as restaurants, manufacturing plants, landfills, and agricultural and industrial operations. The infrequency of the emissions, rapid dissipation of the exhaust and other odors into the air, and short-term nature of the construction activities would result in less-than-significant odor impacts.

IV. **BIOLOGICAL RESOURCES** — Would the project:		*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*	*Source*
a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐	1,5,13
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐	1,5,13
c)	Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐	1, 13
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐	1, 13
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐	1,2, 13
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒	1,13

The following discussion related to biological resources is based on a Biological Resources Memorandum prepared by WRA, Inc. in May, 2019 that is provided in Appendix B.

Regulatory Setting

Sensitive Biological Communities

Sensitive biological communities include habitats that fulfill special functions or have special values, such as wetlands, streams, or riparian habitat. These habitats are protected under federal regulations such as the Clean Water Act; state regulations such as the Porter-Cologne Act, the CDFW Streambed Alteration Program, and CEQA; or local ordinances or policies such as city or county tree ordinances, Special Habitat Management Areas, and General Plan Elements.

Waters of the United States

The U.S. Army Corps of Engineers (Corps) regulates "Waters of the United States" under Section 404 of the Clean Water Act. Waters of the U.S. are defined in the Code of Federal Regulations (CFR) as waters susceptible to use in commerce, including interstate waters and wetlands, all other waters (intrastate waterbodies, including wetlands), and their tributaries (33 CFR 328.3). Potential wetland areas, according to the three criteria used to delineate wetlands as defined in the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987), are identified by the presence of (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. Areas that are inundated at a sufficient depth and for a sufficient duration to exclude growth of hydrophytic vegetation are subject to Section 404 jurisdiction as "other waters" and are often characterized by an ordinary high water mark (OHWM). Other waters, for example, generally include lakes, rivers, and streams. The placement of fill material into Waters of the U.S generally requires an individual or nationwide permit from the Corps under Section 404 of the Clean Water Act.

Waters of the State

The term "Waters of the State" is defined by the Porter-Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." The Regional Water Quality Control Board (RWQCB) protects all waters in its regulatory scope and has special responsibility for wetlands, riparian areas, and headwaters. These waterbodies have high resource value, are vulnerable to filling, and are not systematically protected by other programs. RWQCB jurisdiction includes "isolated" wetlands and waters that may not be regulated by the Corps under Section 404. Waters of the State are regulated by the RWQCB under the State Water Quality Certification Program which regulates discharges of fill and dredged material under Section 401 of the Clean Water Act and the Porter-Cologne Water Quality Control Act. Projects that require a Corps permit, or fall under other federal jurisdiction, and have the potential to impact Waters of the State, are required to comply with the terms of the Water Quality Certification determination. If a proposed project does not require a federal permit, but does involve dredge or fill activities that may result in a discharge to Waters of the State, the RWQCB has the option to regulate the dredge and fill activities under its state authority in the form of Waste Discharge Requirements.

Other Sensitive Biological Communities

Other sensitive biological communities not discussed above include habitats that fulfill special functions or have special values. Natural communities considered sensitive are those identified in local or regional plans, policies, regulations, or by the CDFW; formerly the California Department of Fish and Game [CDFG]). The CDFW ranks sensitive communities as "threatened" or "very threatened" and keeps records of their occurrences in its California Natural Diversity Database (CNDDB) (CDFW 2013). Sensitive plant communities are also identified by CDFW (CDFG 2003, 2007, 2009). CNDDB vegetation alliances are ranked 1 through 5 based on NatureServe's (2010) methodology, with those alliances ranked globally (G) or statewide (S) as 1 through 3 considered sensitive. Impacts to sensitive natural communities identified in local or regional plans, policies, or regulations or those identified by the CDFW or U.S. Fish and Wildlife Service (USFWS) must be considered and evaluated under CEQA (CCR Title 14, Div. 6, Chap. 3, Appendix G). Specific habitats may also be identified as sensitive in city or county general plans or ordinances.

Environmental Setting

The proposed project footprint, as described in the Project Description, encompasses the area where planned activities would occur, including the existing pump station and associated underground pipe that runs to the east under the gravel walkway, as well as the footprint of a new pump station and associated underground culverts. The Biological Study Area (Figure 9) is a 3.8-acre area situated at the base of a slope created from infill that was placed between 1968 and 1987 (Historical Aerials 2018[3]). The entire area was diked in the mid 1950's.

The project footprint is located between the ruderal vegetation on the infill soil and the naturally occurring muted salt marsh vegetation within the diked baylands. The majority of the Biological Study Area is composed of biological communities typically located on degraded or impacted natural areas, a result of past and present disturbance including maintenance of utility easements (mowing and other vegetation disturbance), infill, and the effects of urbanization. The northern and western outer edges of the Biological Study Area are dominated by less impacted salt marsh biological community types.

Table 1 summarizes the area of each biological community type observed in the Biological Study Area and in the project footprint. Non-sensitive biological communities are the ruderal/non-native and developed areas. Sensitive biological communities include salt marsh, seasonal wetland, vegetation and Waters of the U.S./State consisting of a drainage channel (Figure 10). Descriptions for each biological community are provided below.

[3] *Historical Aerials. 2018. Available at: https://www.historicaerials.com/*

Table 1. Biological Communities within the Biological Study Area and Project Area

Biological Community	Acreage within Bio. Study Area	Acreage within Project Footprint
Non-Sensitive		
Developed	0.65	0.20
Ruderal/Non-native	2.51	0.08
Sensitive		
Salt Marsh	0.44	0.01 (363 sq. ft.)
Seasonal Wetland	0.01	0.00
Waters of the U.S./State	0.17	<0.01 (228 sq. ft.)

Biological Study Area (3.79 ac.)
Project Footprint

0 50 100 Feet

N

Path: L:\Acad 2000 Files\27000\27342\GIS\ArcMap\BiologicalStudyAreaAroundProjectFootprint.mxd

Sources: 2016 NAIPl, WRA | Prepared By: njander, 5/22/2019

Figure 9. Biological Study Area around Project Footprint

San Quentin Pump Station Replacement Project
City of San Rafael, California

wra
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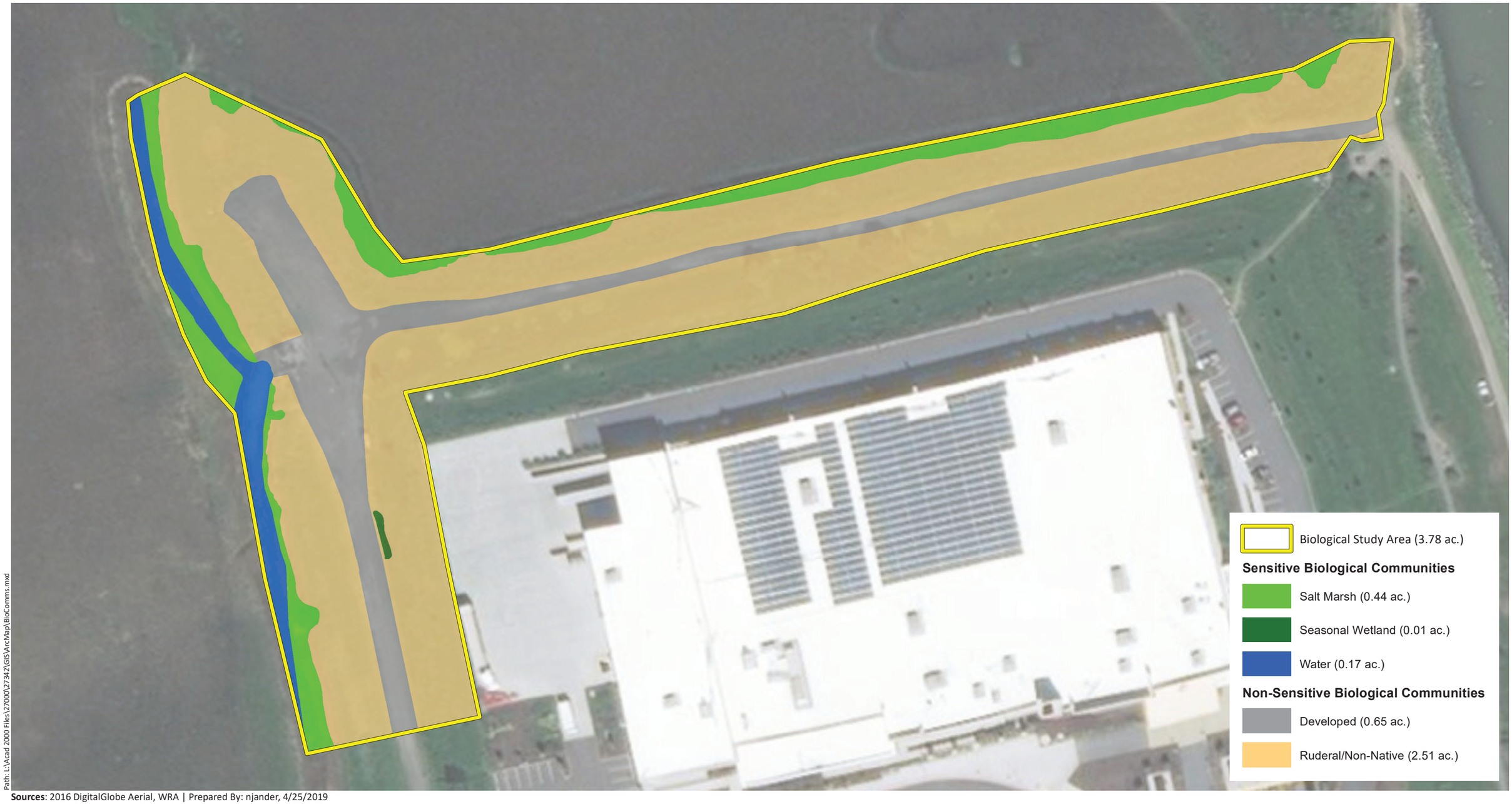

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Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: njander, 4/25/2019

Figure 10. Biological Communities in the Study Area

San Quentin Pump Station Reconstruction
Project, San Rafael, California

0 50 100 Feet N

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Non-Sensitive Biological Communities

Developed

Approximately 0.65 acres of developed area is located within the Biological Study Area, which includes the existing pump station, the gravel pathway and gravel landing to the north of the existing pump station.

Ruderal/Non-native

Approximately 2.51 acres of ruderal/non-native vegetation is located in the Biological Study Area on uplands along the gravel pathway and gravel landing. The ruderal/non-native vegetation community is composed of areas that are characterized as fennel (*Foeniculum vulgare*) patches and iceplant (*Carpobrotus* spp.) mats. This vegetation type typically occur in ruderal locations which have been partially developed or been used in the past for agriculture. Fennel is dominant or co-dominant in the herbaceous canopy layer with more than 50 percent relative cover. In areas of ice plant, a nearly monotypic mat with emergent non-native grasses and pickleweed (*Salicornia pacifica*) is present.

Additional species within this community includes wild oats (*Avena* sp.), wild radish (*Raphanus sativus*), ripgut brome (*Bromus diandrus*), Bermuda buttercup (*Oxalis pes-caprae*), stinkwort (*Dittrichia graveolens*), crane's bill geranium (*Geranium molle*), Italian thistle (*Carduus pycnocephalus*), bristly ox-tongue (*Helminthotheca echioides*), and perennial pepperweed (*Lepidium latifolium*).

Sensitive Biological Communities

Salt Marsh

The areas of salt marsh habitat best fits Alkali Heath Marsh *(Frankenia salina* Herbaceous Alliance, Pickleweed Mat (*Salicornia pacifica* Herbaceous Alliance), and Salt Grass Flats (*Distichlis spicata* Herbaceous Alliance) CDFW vegetation alliances (CNPS 2018b). A combined 0.44 acre of salt marsh is located within the Biological Study Area (Figure 10). Alkali heath marsh is located along the edge of the drainage channel north of the existing pump station. The areas of alkali heath marsh are dominated by alkali heath with associated species of curly leaf dock (*Rumex crispus*), Harding grass (*Phalaris aquatica*) and annual grasses. The small area of pickleweed mat which occurs along the northern boundary of the Biological Study Area is the southern edge of a larger expanse of an isolated patch of pickleweed mat; areas of pickleweed mat are nearly 100 percent relative cover of pickleweed. Within the Biological Study Area, salt grass flat is located along the drainage channel south of the existing pump station and on the opposite side of the channel, across from the existing pump station. Areas of salt grass flats are nearly 100 percent relative cover of salt grass with ripgut brome, perennial pepperweed occurring at low cover.

Both alkali heath marsh and pickleweed mat are considered sensitive by CDFW as indicated by an S3 rank; additionally, these communities are wetlands and within jurisdiction of the U.S. Army Corps of Engineers (Corps) and RWQCB under Section 404/401 of the CWA. Salt grass flats are

not considered sensitive by CDFW, it is a wetland and within the jurisdiction of the Corps and RWQCB under Section 404/401 of the CWA.

Seasonal Wetland

A 0.01 acre seasonal wetland, dominated by non-native grasses and forbs is located along the eastern edge of the access road near the proposed pump station site. Vegetation is dominated by seaside barley (*Hordeum marinum*) and Italian ryegrass (*Festuca perennis*), both of which are facultative wetland species. Redoximorphic features (soil color patterns indicating oxidation of iron and manganese compounds resulting from water saturation) were observed in the soil, below the rocky road base. Soils were saturated to the surface at the time of the site visit. This community is considered sensitive as it is a potential seasonal wetland which are within the jurisdiction of the Corps and RWQCB under Section 404/401 of the CWA.

Waters of the U.S./State

Approximately 0.17 acre of a drainage channel is located along the western portion of the Biological Study Area. Stormwater runoff enters this channel at Highway 580. Water is present throughout the year within this feature; however, there is a fluctuation of depth and width throughout the year, with lower depth and smaller width occurring in the summer and fall months (Google Earth 1987-2018). The ordinary high water mark (OHWM) and top-of-bank (TOB) of this feature are similar and were determined based on shift of vegetation, change in topography, and wrack line. Vegetation along the edges of the channel within the Biological Study Area include alkali heath marsh and salt grass flats as described above. Some patches of pickleweed and alkali bulrush were observed within the OHWM of the feature. This channel extends westward to Highway 580 and receives freshwater from stormwater runoff from adjacent developed areas. This channel is considered sensitive because it is within jurisdiction of the Corps and RWQCB under Section 404/401 of the CWA.

Special-Status Species

Plants

Based upon a review of the resources and databases listed above, it was determined that 106 special-status plant species have been documented in the vicinity of the Biological Study Area. The majority of the Biological Study Area (3.2 acres) is dominated by ruderal/non-native vegetation and developed areas. These communities are unlikely to support special-status plant species due to presence of aggressive non-native annual and perennial plant species which likely preclude special-status plants. The remaining salt marsh vegetation types comprise 0.44 acre of the 3.78-acre Biological Study Area, and are therefore limited in extent within the Biological Study Area.

Based on assessment of biological communities present within the Biological Study Area, no special status plants are determined to have potential to occur within it. The Biological Study Area is located within an area that was diked off from the bay within the mid 1950's (Historical Aerials 2018), and has received no direct tidal influence since that time. Known occurrences of nearby special-status plants that are known to occur in the biological communities present within

the Biological Study Area typically require direct tidal influence, which is not present at the project site. Therefore, while the biological communities within the Biological Study Area are potentially suitable for these salt marsh species to occur, the isolation of the Biological Study Area from direct tidal influence makes their occurrence unlikely.

Wildlife

Eighteen special-status species of wildlife have been recorded in the vicinity of the Biological Study Area in the California Natural Diversity Database.[4] Two of the species are considered extirpated from the region, and 15 species have little to no potential to occur within the Biological Study Area due to lack of suitable habitat (see Appendix B). The remaining species, the salt marsh harvest mouse (*Reithrodontomys raviventris*), has a moderate potential to occur within the Biological Study Area. Nesting birds and roosting bats also have the potential to occur within the Biological Study Area.

Salt marsh harvest mouse; Federal Endangered Species, State Endangered, CDFW Fully Protected Species. The salt-marsh harvest mouse (SMHM) is a relatively small rodent found only in suitable salt and brackish marsh habitat in the greater San Francisco Bay, San Pablo Bay, and Suisun Bay areas. This species has been divided into two subspecies: the northern SMHM (*Reithrodontomys raviventris halicoetes*) which lives in the brackish marshes of the San Pablo and Suisun bays, and the southern SMHM (*R. r. raviventris*) which is found in the marshes of San Francisco Bay. The Biological Study Area occurs near the presumed boundary between the northern and subspecies, likely within the range of the southern subspecies, though the exact location of the boundary and whether the two subspecies hybridize are both unknown.[5] The southern subspecies generally persists in smaller and more isolated populations relative to the northern subspecies, as most of the marshes of the South San Francisco Bay are narrow, strip-like marshes and thus support fewer SMHM compared to marshes in the northern portions of the species' range.[6] Northern marshes also tend to be more brackish, and have a more diverse assemblage of vegetation, thus the northern subspecies is more likely to occur in habitats that are not dominated by pickleweed, which dominates habitat in the southern range.[7]

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[4] California Department of Fish and Wildlife. 2018. California Natural Diversity Data Base (CNDDB). RareFind 5. Natural Heritage Division, California Department of Fish and Game. Sacramento, California. Accessed: November 2018.

[5] Smith, Katherine R, Melissa K Riley, Laureen Barthman–Thompson, Mark J Statham, Sarah Estrella, and Douglas Kelt. 2018. Towards Salt Marsh Harvest Mouse Recovery: Research Priorities. San Francisco Estuary and Watershed Science 16, no. 2.

[6] U.S. Fish and Wildlife Service. 2010. Five Year Review for the Salt Marsh Harvest Mouse (Reithrodontomys raviventris). U.S. Fish and Wildlife Service. Sacramento, CA.

[7] Smith, Katherine R, Melissa K Riley, Laureen Barthman–Thompson, Isa Woo, Mark J Statham, Sarah Estrella, and Douglas A Kelt. 2018. Towards Salt Marsh Harvest Mouse Recovery: A Review. San Francisco Estuary and Watershed Science 16, no. 2

The SMHM was last recorded in the Biological Study Area in 1987. The lack of more recent records is not unusual, especially for a privately owned property where state and Federal resource managers may have difficulty obtaining access, and may not accurately reflect an absence of the species on the Biological Study Area. Pickleweed, alkali heath, and saltgrass-dominated marsh occurs within the Biological Study Area, and these habitat patches are directly connected to over a quarter square kilometer of adjacent, high-quality, pickleweed marsh. However, the wetland complex is completely isolated from any other marshes that could support SMHM, and has a long history of disturbance. If any population-level extinction events occurred in the Biological Study Area and surrounding marsh, there would be virtually no chance of recolonization. However, the marsh is large with abundant upland refuge, so it is possible that a SMHM population has persisted here since the late 1980's. The species is presumed present within the pickleweed and salt grass marsh within the Biological Study Area, and within suitable habitat in the surrounding marsh.

Nesting Birds. Within the Biological Study Area, native birds may nest on the ground, in shrubbery, and on infrastructure. Most native birds have baseline protections under the federal Migratory Bird Treaty Act of 1918 (MBTA) as well as the California Fish and Game Code (CFGC). Under these laws/codes, the intentional killing, collecting or trapping of covered species, including their active nests (those with eggs or young), is prohibited.[8] Work in the Biological Study Area could lead to damage or mortality to nests, or disturbance of adults leading to abandonment of nests.

Roosting Bats. The pump station that is to be demolished in the Biological Study Area may support roosting bats. Bats could potentially use the structure for hibernation, or for maternity roosting. Hibernation roosting usually occurs between the fall and early spring in California. Disturbing bats during hibernation has high metabolic costs to the animals and can lead to reduced survival. Maternity colonies are composed of adult females and young, and disturbance of these can lead to abandonment of the colony, and/or mortality of young. The pump station contains abundant crevices that could accommodate roosting bats, and while the structure is small and subject to regular disturbance the potential for bat roosting cannot be ruled out.

Methods

Prior to the site visit, background literature was reviewed to determine the potential presence of sensitive vegetation types, aquatic communities, and special-status plant and wildlife species. Resources reviewed for sensitive vegetation communities and aquatic features include aerial photography, mapped soil types, the California Native Plant Society (CNPS) Online Database

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[8] The U.S. Department of the Interior recently issued guidance clarifying that the MBTA only applies to intentional/deliberate killing, harm or collection of covered species (including active nests) (USDOI 2017). According to the guidance, unintentional impacts to birds/nests that occur within the context of otherwise lawful activities are not MBTA violations. However, ambiguity remains regarding application of the CFGC, as well as the extent to which minimization and avoidance measures are still required under the MBTA. Additionally, challenges to the Opinion are anticipated.

(2018a[9]), the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB, CDFW 2018[10]), and the US Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPac) database (USFWS 2018[11]). For database queries, the San Rafael and eight surrounding U.S. Geological Survey (USGS) 7.5-minute quadrangles were included as the focal search area (USGS 1980[12]).

On January 8, 2018, WRA biologists conducted a field assessment of the Biological Study Area to evaluate the potential presence of sensitive vegetation communities and aquatic features and evaluate on-site habitats to determine the potential for occurrence of special-status plant and wildlife species. Observed plant communities, aquatic features, and plant and wildlife species were noted. Site conditions were noted as they relate to habitat requirements of special-status plant and wildlife species known to occur in the vicinity as determined by the background literature research.

The Biological Study Area was assessed in terms of potential biological resources impacts on the redevelopment project. This analysis was performed to a level of detail necessary to understand what types of major biological impacts are likely to be associated with the proposed project activities, with a focus on the project footprint within the Biological Study Area.

The conclusions of this analysis are based on conditions observed at the time of the field assessments and regulatory policies and practices in place at the time the Biological Resources Memorandum (Appendix B) was prepared; changes that may occur in the future with regard to conditions, policies, or practices could affect the conclusions presented in this assessment.

Discussion of Impacts

a) ***Less than Significant with Mitigation Incorporated***. Noise, ground disturbance, and other construction activities could cause a temporary disturbance to salt-marsh harvest mouse (SMHM), a federal and state-protected endangered species, within and adjacent to the Biological Study Area. Activities could lead to injury or mortality to SMHM within the Biological Study Area. Implementation of the avoidance and minimization measures listed in Mitigation Measure BIO-1 would reduce construction phase impacts to less than significant. The operational phase of the project, which would require very little disturbance except for the occasional maintenance activity, would leave the area very similar to its current baseline condition and would therefore have less than significant impacts to state or federal special status species.

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[9] California Native Plant Society. 2018a. Online Rare Plant Inventory. Available at: http://rareplants.cnps.org/

[10] California Dept. of Fish and Wildlife California Natural Diversity Database. CDFW 2018. Available at: https://www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data

[11] US. Fish and Wildlife Service. 2018. Information for Planning and Consultation. Available at: https://ecos.fws.gov/ipac/

[12] U.S. Geologic Society.1980. San Rafael 7.5-Minute Topographic Quadrangle.

Mitigation Measure BIO-1: Mitigation measures for avoidance and minimization of effects to SMHM shall be incorporated into the permits or required authorizations and specifications, which the project proponent shall follow. The following avoidance and minimization measures are required:

1. A qualified biological monitor (i.e., biologist whose credentials for SMHM monitoring have been previously approved by the USFWS) shall be present on-site during all construction work taking place adjacent to emergent marsh, including all vegetation removal and initial ground-disturbing work in these areas. The biological monitor shall document compliance with the Action permit conditions and all take avoidance and minimization measures. The monitor(s) shall have the authority to halt construction, if necessary, if there is the potential for a listed species to be harmed or when non-compliance events occur. The biological monitor(s) shall be the contact person for any employee or contractor who might inadvertently kill or injure a listed species, or anyone who finds a dead, injured, or entrapped listed species.

2. If any mouse is observed at any time during construction, work shall not be initiated or shall be stopped immediately by the biological monitor until the mouse leaves the vicinity of the work area of its own accord. The biological monitor or any other persons at the site shall not pursue, capture, or handle any mouse observed.

3. Night work is not anticipated and shall be avoided to the fullest extent feasible. If night work is necessary, all lighting shall be directed away from marsh and wetland areas to avoid impacting the natural behavior of SMHM.

4. All vehicles and heavy equipment stored outside of exclusion fencing and in the vicinity of suitable SMHM habitat shall be checked for mice before work commences each morning.

5. When construction activities are to take place in potential SMHM habitat (emergent marsh and upland areas within 50 feet of emergent marsh), vegetation removal in work areas shall be performed to remove cover and render these areas unattractive to SMHM.

   a. Only non-motorized equipment or hand-held motorized equipment (i.e., string trimmers) shall be used to remove the vegetation.

   b. Vegetation shall be cut in at least two passes: with the first pass cutting vegetation at approximately half of its height above the ground (mid-canopy) and the next pass, or subsequent passes, cutting vegetation to ground-level or no higher than 1 inch.

   c. The biological monitor shall inspect areas of vegetation removal immediately prior to the initiation of removal to search for SMHM and “flush” small mammals out of the area and toward adjacent marsh areas that will not be subject to removal. If any mouse is observed, work shall be stopped immediately by the biological monitor until the mouse leaves the vicinity of the vegetation removal of its own accord.

d. Vegetation removal shall start in the position furthest from the highest quality and most accessible SMHM habitat outside of the work area, and progress toward that habitat, such that SMHM are protected to the greatest degree possible as they move out of the focal area.

e. Cut vegetation shall be removed from the exclusion area (work area) so that no cut vegetation remains there once the exclusionary fence is installed, to discourage SMHM from being attracted to the area.

f. All non-native, invasive vegetation removed shall be discarded at a location outside of any marsh areas to prevent reseeding.

6. Following completion of vegetation removal, temporary exclusionary fencing shall be installed to isolate work areas and prevent SMHM from entering work areas during construction.

a. The fencing shall be installed between suitable habitat areas (e.g., salt marsh) and the defined work area (or areas) adjacent to suitable habitat immediately following vegetation removal and prior to the start of construction/excavation activities. Areas to be fenced should include the vicinity of the old and new pump structures and the area to be graded to the north of the pumps. As there is no suitable habitat for SMHM adjacent to the linear work area where the underground pipe is to be replaced, fencing would have limited value there.

b. The fence shall consist of a non-textured, slick material that does not allow SMHM to pass through or climb, or silt fence with slick tape (or an effectively similar material) a minimum of 6 inches wide fixed to the fence to render it non-climbable. The bottom should be buried to a depth of at least 4 inches so that animals cannot crawl under the fence. Fence height should be at least 12 inches higher than the highest adjacent vegetation with a maximum height of 4 feet.

c. Fence posts should be placed facing the work area side (i.e., vegetation-cleared side) and not the side of the fencing facing intact habitat areas. The fencing shall be installed under the supervision of a biological monitor.

d. The biological monitor shall routinely inspect exclusionary fencing to ensure that it remains intact and effective. Fencing deficiencies noted shall be immediately reported to the contractor and repaired promptly.

b) ***Less than Significant with Mitigation Incorporated.*** Approximately 247 square feet of salt marsh habitat (salt grass mats), a sensitive riparian biological community per CDFW as indicated by an S3 rank, would be permanently impacted through the development of the new pump station, and an additional 116 square feet would be temporarily impacted through the removal of the existing station (Figure 11). Project activities would require permits from pertinent regulatory agencies, such as the Corps and the Regional Water Board, which would require mitigation for the small footprint of the project's wetland impacts. Furthermore, the proposed project, via the re-contouring of the pond slope after

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	Impact Type			
	Permanent		Temporary	
Biological Communities	**Acres**	**Sq. Ft.**	**Acres**	**Sq. Ft.**
Salt Marsh	0.01	246.67	0.00	116.24
Water	0.00	76.56	0.00	151.25
Seasonal Wetland	0.00	0.00	0.00	0.00

Path: L:\Acad 2000 Files\27000\27342\GIS\ArcMap\Impacts\nTheBiologicalStudyArea.mxd

Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: njander, 6/3/2019

Figure 11. Impacts in the Biological Study Area

San Quentin Pump Station Reconstruction
Project, San Rafael, California

0 50 100 Feet

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pump station replacement, would create approximately 736 square feet of area that would be naturally reclaimed by water and salt marsh habitat. These calculated areas can be seen in detail on Figure 11. With this and implementation of Mitigation Measures BIO-2 and BIO-3 below, calling for the applicant to be bound to specific mitigation as written into the appropriate regulatory permits, the project's substantial adverse effects on sensitive biological communities would be less than significant.

Mitigation Measure BIO-2: The applicant shall obtain a Section 404 permit from the Corps, and a Section 401 Certification from the Regional Water Quality Control Board (RWQCB). Mitigation measures shall be incorporated into the permits, which the project proponent shall follow. The following avoidance and minimization measures are proposed as a part of the permit applications:

1. Best management practices shall be employed to reduce impacts to vegetation and to limit erosion. Vegetation removal shall be minimized to the greatest extent feasible. Areas in which vegetation is removed should be replanted or seeded with native plants appropriate for the site. Erosion control measures, such as the use of silt fencing or straw wattles, should be implemented in areas of ground disturbance or vegetation removal.

2. All impacts to the drainage channel from deconstruction would be temporary as vegetation is expected to recolonize the excavated areas. To reduce potential temporary impacts to waters in the Project Area, best management practices shall be employed to reduce impacts associated with excavation and grading including erosion and sedimentation. Best management practices recommended by the Marin Countywide Water Pollution Prevention Program shall be implemented to minimize pollutants carried from the Project Area in runoff. The project shall comply with terms of the San Francisco Bay Region Municipal Regional Stormwater National Pollutant Discharge Elimination System Permit.

3. All staging, maintenance, and storage of construction equipment shall be performed in a manner to preclude any direct or indirect discharge of fuel, oil, or other petroleum products into the drainage channel or salt marsh vegetation. No other debris, rubbish, creosote-treated wood, soil, silt, sand, cement, concrete or washings thereof, or other construction related materials or wastes shall be allowed to enter into or be placed where they may be washed by rainfall or runoff into the drainage channel or salt marsh vegetation. All such debris and waste shall be picked up daily and properly disposed of at an appropriate site.

4. No equipment shall be operated in areas of flowing or standing water. No fueling, cleaning, or maintenance of vehicles or equipment shall take place within any areas where an accidental discharge to the drainage channel or salt marsh vegetation may occur.

5. Disturbance or removal of vegetation shall not exceed the minimum necessary to complete construction.

6. Where areas of bare soil other than in the excavated drainage channel are

exposed during the rainy season, sediment and erosion control measures shall be used to prevent sediment from entering waters in the drainage channel or salt marsh vegetation. Sediment and erosion control structures shall be monitored and repaired or replaced as needed. Build-up of soil behind silt fences shall be removed promptly and any breaches or undermined areas repaired promptly. Revegetation of disturbed surfaces other than the excavated drainage channel shall occur prior to the start of the first rainy season after construction.

7. The work area shall be delineated where necessary with orange construction fencing in order to minimize impacts to habitat beyond the work limit.

Mitigation Measure BIO-3: Prior to filling of jurisdictional waters, or construction activities within Corps or RWQCB jurisdiction, necessary regulatory permits shall be obtained from the appropriate agencies. Regulatory permits to be obtained include a Corps Permit, Regional Water Quality Control Board Section 401 Water Quality Certification and/or Waste Discharge Requirement. Prior to proposed filling of jurisdictional waters, compliance with all regulatory agency permit conditions shall be demonstrated. Permanent impacts to jurisdictional wetlands or waters shall be mitigated at a minimum 1:1 ratio on a functions and values basis by: (1) replacing permanent impacted features through bank re-contouring at the old pump station location to create new area of waters and wetlands in the Biological Study Area; (2) purchasing an appropriate amount of mitigation credits by an approved mitigation bank, or (3) another type of mitigation as approved by the Corps and/or RWQCB through the permitting process.

c) ***Less than Significant with Mitigation Incorporated.*** The proposed project would temporarily impact 151 square feet of Waters of the U.S./State and 116 square feet of salt marsh habitat as discussed above, which is considered wetland within jurisdiction of the U.S. Army Corps of Engineers (Corps) and RWQCB under Section 404/401 of the CWA, through the removal of the existing pump station. If not adequately controlled, soil and material from the existing structure may enter the Waters during deconstruction of the existing pump station. Additionally, removal of material would cause turbidity within the Waters. Once the existing pump station is removed, installation of the new pump station would permanently impact approximately 77 square feet of Waters and 247 square feet of salt marsh, a total of 324 square feet of permanent impact. The proposed project includes placing fill within the Waters to stabilize and support the concrete slab upon which the new pump station would be placed.

However, upon completion of pump station replacement, the bank would be regraded and new Waters would be gained; the bank adjacent to the newly gained Waters would have the potential to support salt marsh habitat. Approximately 736 square feet of wetlands and Waters of the U.S. would be gained, which is 547 square feet more Waters and wetland area than is being permanently impacted.

Given a net increase in wetlands and Waters, and with implementation of Mitigation Measures BIO-2 and BIO-3 above, the project's impacts to wetlands and Waters of the U.S. and State would be less than significant.

d) ***Less than Significant with Mitigation Incorporated.*** The project would not impede the movement of a native resident or migratory fish or wildlife species, as drainage patterns and topographic features would not be changed. However, the project has the potential to temporarily impede the use of native wildlife nursery sites during the construction phase by damaging bird nests and causing injury or mortality to eggs or chicks, or disturbance of nesting adults resulting in reduced clutch survival or nest abandonment, and/or by causing disturbance to roosting bats or injury or mortality of bat pups (young). Implementation of Mitigation Measures BIO-4 and BIO-5 would ensure that impacts to native wildlife nursery sites are less than significant during the construction phase. The operation phase would have a less than significant impact on this topic, as it would leave the site in nearly the exact condition it is currently.

Mitigation Measure BIO-4: Mitigation measures for avoidance and minimization of effects to nesting birds shall be incorporated into the permits or required authorizations and specifications, which the project proponent shall follow. For the avoidance of impacts to native nesting birds protected by the MBTA and CFGC, the following avoidance and minimization measures are proposed as a part of the permit applications:

1. Project activities shall be initiated to the extent feasible, outside of the nesting season. The nesting season is defined here as being from February 1 to August 31 and therefore work shall commence between September 1 and January 31.

2. If this is not possible, and project activities are initiated during the nesting season, then a nesting bird survey shall be conducted by a qualified wildlife biologist no more than 14 days prior to the start of project activities.

3. If nests are identified, a no-disturbance buffer shall be implemented to avoid impacts to nesting birds and should remain in place until all young are fledged or the nest otherwise becomes inactive. Buffers typically range from 25 feet to 500 feet depending on the species.

Mitigation Measure BIO-5: Mitigation measures for avoidance and minimization of effects to roosting bats shall be incorporated into the permits or required authorizations and specifications, which the project proponent shall follow. The following avoidance and minimization measures are required:

1. Preconstruction surveys for bats shall be conducted by a qualified biologist no less than 14 days prior to removal of the pump house if the work should begin during the maternity roosting season (April 1 through August 31) or during the hibernation season (November 1 through February 28).

2. If special-status bat species are detected during surveys, appropriate, species and roost specific mitigation measures shall be developed. Such measures may include postponing demolition of the pump house until the end of the maternity roosting season.

3. Demolition of the pump house can be conducted outside of the maternity roosting and hibernation seasons (during the months of September, October and March) without performing preconstruction bat surveys.

e) ***Less than Significant.*** The City of San Rafael provides for the protection of street trees along any public street, sidewalk or walkway in the city (Ord. 972 § 2, 1970; Ord. 865 § 2, 1966: Ord. 609). The project site is not along any public street, sidewalk or walkway, and is not expected to impact or require the removal of any protected trees. If a protected tree must be removed or impacted, it would be replaced in accordance with the municipal code. Tree removal as a result of project implementation would not conflict with any local provisions for tree protection, and no significant impacts are anticipated.

f) ***No Impact.*** No state, regional, or federal habitat conservation plans or Natural Community Conservation Plans have been adopted for the project site.

V. **CULTURAL RESOURCES** — Would the project:		*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*	*Source*
a)	Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	☒	☐	☐	1,2,14
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☒	☐	☐	1,2,14
c)	Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐	1,2,14

The following analysis of cultural resource impacts is based on a report compiled by Alta Archaeological Consulting in May, 2019, which is included as Appendix C. Sources consulted for the report included a records search with the Northwest Information Center (NWIC), review of historic registers and maps, literature review, and a field survey.

Environmental Setting

The project area is situated within the Coast Range geologic province (Jenkins 1969). The northern Coast Ranges are a geologic province comprised of numerous rugged north-south trending ridges and valleys that run parallel to a series of faults and folds. Formation of these ranges is generally attributed to events associated with subduction of the Pacific Plate beneath the western border of North America. The bedrock that underlies the region is a complex assemblage of highly deformed, fractured, and weathered sedimentary, igneous, and metamorphic rocks. The bedrock geology of the project area consists of Jurassic-Cretaceous age Franciscan Formation rock (Schoenherr 1995:7). Rocks of this formation, the oldest in the area, are often weakly metamorphosed, and consist of greywacke shale interspersed with discontinuous bodies of ultramafic rock such as greenstone, schist, and serpentine. The repeated folding and faulting is reflected in the complex structure of Franciscan rocks and area topography (Schoenherr 1995:265).

The project area is situated on a wetland flat bordering the San Rafael Bay on the north side of the San Quentin Peninsula. The vegetation community surrounding the project area consists mainly of high grasses with sparse deciduous forest. Common hardwood trees in the region include California bay laurel (*Umbellularia californica*), Valley oak (*Quercus lobata*), Interior live oak (*Quercus wislizeni*), and Coast live oak (*Quercus agrifolia*). Softwoods include Coast redwood (*Sequoia sempervirens*) and Monterey pine (*Pinus radiata*). Throughout the North Coast Ranges, many trees imported into the region have thrived, particularly blue-gum eucalyptus *(Eucalyptus globulus*) (Little 1980). The project area is situated in the southern portion of highly-developed

San Rafael. The parcel is surrounded on three sides by industrial parks and housing developments.

Regulatory Setting

Federal and state criteria have been established for the determination of historical resource significance as defined in National Register (NR) criteria contained in National Register Bulletin 16 (U.S. Department of the Interior 1986:1) and for the purposes of CEQA under Section 5024.1(g) of the Public Resource Code and Section 15064.5 of the State CEQA Guidelines.

The NHPA applies to certain projects undertaken requiring approval by federal agencies. Property owners, planners, developers, as well as State and local agencies are responsible for complying with NHPA's requirements regarding the identification and treatment of historic and prehistoric cultural resources. Under NHPA, cultural resources must be evaluated to determine their eligibility for listing in the NR. If an archaeological resource is determined ineligible for listing on the NR, then the resource is released from management responsibilities and a project can proceed without further cultural resource considerations. Similarly, the CEQA applies to certain projects undertaken requiring approval by State and/or local agencies. Under CEQA, cultural resources must be evaluated to determine their eligibility for listing in the California Register of Historic Resources (CRHR). If a cultural resource is determined ineligible for listing on the CRHR the resource is released from management responsibilities and a project can proceed without further cultural resource considerations.

The San Quentin Pump Station was evaluated for eligibility for listing on the NRHP per the four criteria established in 36 CFR 60.4: Criteria for evaluation and for listing on the CRHR per Sections 15064.5 (b), 21083.2, and 21084.1 of the Public Resource Code (PRC) and the CEQA Guidelines (California Code of Regulations Title 14, Section 15064.5).

As set forth in Title 36, Part 63 of the Code of Federal Regulations, for a cultural resource to be deemed significant under the NHPA and thus eligible for listing on the NR, it must meet at least one of the following criteria:

(A) associated with events that have made a significant contribution to the broad patterns of our history; or
(B) associated with the lives of persons significant in our past; or
(C) embodies distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
(D) yielded, or may be likely to yield, information important in prehistory or history.

Furthermore, in order to be considered eligible for listing on the NR, a property must retain aspects of integrity, or its ability to convey its historical significance. These aspects are as follows: Location, Design, Setting, Materials, Workmanship, Feeling, and Association.

As set forth in Section 5024.1(c) of the Public Resources Code for a cultural resource to be deemed "important" under CEQA and thus eligible for listing on the California Register of Historic Resources (CRHR), it must meet at least one of the following criteria:

(1) is associated with events that have made a significant contribution to the broad patterns of California History and cultural heritage; or
(2) is associated with the lives of persons important to our past; or
(3) embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possess high artistic value; or
(4) has yielded or is likely to yield, information important to prehistory or history.

Archaeological resources are commonly evaluated with regard to Criteria D/4 (research potential).

Historic-era structures older than 50 years are most commonly evaluated in reference to Criteria 1/A (important events), Criteria B/2 (important persons) or Criteria C/3 (architectural value). To be considered eligible under these criteria the property must retain sufficient integrity to convey its important qualities. Integrity is judged in relation to seven aspects including: location, design, setting, materials, workmanship, feeling, and association.

Discussion of Impacts

a) ***Less than Significant with Mitigation Incorporated.*** Pursuant to State CEQA guideline 15064.5, the City's General Plan (Culture and Arts Element) was consulted to identify any National, State, or Local historical landmarks with the project site. The project site does not contain any resource listed as one of the 21 historic landmarks in the City's General Plan. Review of historic registers and inventories indicate that no listed historical resources are present in the project area or located within the 0.5-mile visual area of the Area of Potential Effect (APE).

A records search identified four cultural resources are present within the one-half mile records search radius. There are three prehistoric and one historic-era resources located between a quarter and half a mile to the north and southwest of the project site; however, no cultural resources are documented within the project area limits.

ALTA staff archaeologists conducted a field survey of the project on January 17, 2019. Project design drawing, project maps and aerial imagery were used to correctly identify the project area. Ground surface visibility was moderate (25-30%) due to dense seasonal grasses and imported gravel road fill. The entire APE and the access road was surveyed using intensive survey coverage with transects no greater than 10 meter intervals. A total of about 5.2 acres of land was surveyed. Survey efforts included an evaluation of the current historic-era pump station to determine historical and/or architectural significance.

The San Quentin Pump Station does not fulfill Criterion A/1 of the National Register Criteria for Evaluation or the California Register of Historical Resources Criteria for Designation. The pump station is associated with the reclamation of San Francisco Bay marshes and wetlands. This location is one of many wetlands reclaimed for urban

development in the 20th century. However, these events are not significant enough to national, state, or regional history to associate the pump station with a pattern of history significant to the cultural heritage of the United States or California. No documentation indicates the association of the pump station with significant local, state, or national persons. No architect or builder is known at present. Therefore, the pump station fails to fulfill Criterion B/2. The pump station does not demonstrate aesthetic qualities that speak to an investment of artistic consideration in its design. Rather, the design qualities and construction qualities indicate a primary emphasis on functionality. The pump station does not represent a type, period, region, or method of construction. With these considerations, the pump station fails to fulfill Criterion C/3.

Considering its relatively recent construction and its location on relatively recently reclaimed land, the pump station and its vicinity are unlikely to yield any information important to the history of the region or the nation.

In sum, the San Quentin Pump Station does not fulfill Criterion A/1 through D/4 of the National Register Criteria for Evaluation or the California Register of Historical Resources Criteria for Designation, nor does it retain enough integrity to convey its significance. The ALTA survey deems the pump station ineligible for inclusion on the National Register of Historic Places or the California Register of Historical Resources.

Given the above-described studies to identify potential cultural resources and the lack of any such resources being identified, it is unlikely the proposed project would have a significant impact on cultural resources. In the event that cultural resources are uncovered in the course of construction, however, the following mitigation measure would ensure that impacts remained less than significant.

Mitigation Measure CULT-1: If previously unidentified cultural resources are encountered during project implementation, avoid altering the materials and their stratigraphic context. A qualified professional archaeologist shall be contacted to evaluate the situation. The Federated Indians of the Graton Rancheria shall be contacted to solicit their input with regard to proposed treatment and disposition of materials. Project personnel should not collect cultural resources. Prehistoric resources include, but are not limited to, chert or obsidian flakes, projectile points, mortars, pestles, and dark friable soil containing shell and bone dietary debris, heat-affected rock, or human burials. Historic resources include stone or abode foundations or walls; structures and remains with square nails; and refuse deposits or bottle dumps, often located in old wells or privies.

b) ***Less than Significant with Mitigation Incorporated.*** The project area has a low sensitivity for archaeological resources. Historically, the project area was part of the waters of San Rafael bay. The area was diked and reclaimed during the mid-20th century as part of reclamation efforts (USGS 1956, 1960). As such, there is a low sensitivity for encountering either prehistoric or historic-era archaeological resources. Additionally, all proposed project improvements would occur within existing rights-of-way and no improvements would require additional large-scale excavation. Furthermore, the areas

for which project work is proposed have already been disturbed as a result of the original construction of the existing pump station and storm drainage pipe. The previous construction activity would likely have reduced or eliminated the significance of archaeological resources if they were encountered.

However, the City of San Rafael implements specific adopted archeological resource measures in the event resources are encountered during grading. Impacts would be less than significant with implementation of the following mitigation measure:

Mitigation Measure CULT-2: The City or its contractor shall comply with California Health and Safety Code Section 7050.5 and California Public Resources Code Sections 5097.5, 5097.9 et seq., regarding the discovery and disturbance of cultural materials, should any be discovered during project construction.

In keeping with the CEQA guidelines, if archaeological remains are uncovered, work at the place of discovery shall be halted immediately until a qualified archaeologist can evaluate the finds (§15064.5 [f]). Prehistoric archaeological site indicators include: obsidian and chert flakes and chipped stone tools; grinding and mashing implements (e.g., slabs and handstones, and mortars and pestles); bedrock outcrops and boulders with mortar cups; and locally darkened midden soils. Midden soils may contain a combination of any of the previously listed items with the possible addition of bone and shell remains, and fire affected stones. Historic period site indicators generally include: fragments of glass, ceramic, and metal objects; milled and split lumber; and structure and feature remains such as building foundations and discrete trash deposits (e.g., wells, privy pits, dumps).

c) ***Less than Significant Impact.*** There are no formal cemeteries on the site, nor are human remains likely to exist on the site. However, the possibility remains that a resource of cultural significance may be encountered. Per Public Resources Code 5097.98 and Health and Human Safety Code 7050.5, if human remains are encountered, excavation or disturbance of the location shall be halted in the vicinity of the find, and the County Coroner contacted. If the Coroner determines the remains are Native American, the Coroner shall contact the Native American Heritage Commission. The Native American Heritage Commission shall identify the person or persons believed to be most likely descended from the deceased Native American. The most likely descendent makes recommendations regarding the treatment of the remains with appropriate dignity. With the compliance of State law, a less-than-significant impact would result.

VI.	**ENERGY** — Would the project:	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*	*Source*
a)	Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐	1, 2
b)	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐	1, 2

Environmental Setting

California

Energy usage is typically quantified using the British thermal unit ("BTU"). As a point of reference, the approximate amount of energy contained in common energy sources are as follows: gasoline, 115,000 BTUs per gallon; diesel, 138,500 BTUs per gallon; natural gas, 21,000 BTUs per pound ("lb"); electricity, 3,414 BTUs per kilowatt-hour ("kWh").[13]

Total energy usage in California was 7,640.8 trillion BTUs in 2012, which equates to an average of 201 million BTUs per capita. Of California's total energy usage, the breakdown by sector is 39 percent transportation, 23 percent industrial, 19 percent residential, and 19 percent commercial. Petroleum satisfies 55 percent of California's energy demand, natural gas 32 percent, and electricity 12 percent. Coal fuel accounts for less than one percent of California's total energy demand.[14] Electric power and natural gas in California are generally consumed by stationary users, whereas petroleum consumption is generally accounted for by transportation-related energy use.[15] The other sources are made up of renewable energy sources, which includes wind and solar power, among other uses.

Given the nature of the proposed project, the main uses of energy would occur via construction vehicle fuel and electricity during operation. These two sources of energy are discussed in further detail below.

City of San Rafael

The City of San Rafael receives its electricity from Pacific Gas & Electric Company (PG&E), a

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[13] U.S. Department of Energy, 2014. Alternative Fuels Data Center – Fuel Properties Comparison. http://www.afdc.energy.gov/fuels/fuel_comparison_chart.pdf

[14] U.S. Department of Energy, Energy Information Administration, 2014. "Official Energy Statistics from the U. S. Government," http://tonto.eia.doe.gov/state/state_energy_profiles.cfm?sid=CA.

[15] Ibid.

natural gas and electric utility, as well as Marin Clean Energy (MCE), which supplies customers with 50 to 100% renewable energy as an alternative to PG&E. MCE's 100% renewable electricity program is called Deep Green, and it supplies non-polluting wind and solar power for public buildings, streetlights, and other civic accounts in Marin County. San Rafael chose to join the Deep Green program in 2018.

Regulatory Setting

Federal and state agencies regulate energy use and consumption through various means and programs. At the federal level, the United States Department of Transportation, the United States Department of Energy, and the United States Environmental Protection Agency (EPA) are three federal agencies with substantial influence over energy policies and programs. Generally, federal agencies influence and regulate transportation energy consumption through establishment and enforcement of fuel economy standards for automobiles and light trucks, through funding of energy related research and development projects, and through funding for transportation infrastructure improvements.

At the state level, the California Public Utilities Commission (CPUC) and the California Energy Commission (CEC) are two agencies with authority over different aspects of energy. The CPUC regulates privately owned utilities in the energy, rail, telecommunications, and water fields. The CEC collects and analyzes energy-related data, prepares statewide energy policy recommendations and plans, promotes, and funds energy efficiency programs, and adopts and enforces appliance and building energy efficiency standards. California is exempt under federal law from rules that otherwise would preempt setting state fuel economy standards for new on-road motor vehicles. Some of the more relevant federal and state energy-related laws and plans are discussed below.

Federal Regulations

Energy Policy Act of 2005

Passed by Congress in July 2005, the Energy Policy Act includes a comprehensive set of provisions to address energy issues. The act includes tax incentives for the following: energy conservation improvements in commercial and residential buildings; fossil fuel production and clean coal facilities; and construction and operation of nuclear power plants, among other things. Subsidies are also included for geothermal, wind energy, and other alternative energy producers. It directs the USDOE to study and report on alternative energy sources such as wave and tidal power, and includes funding for hydrogen research. The Act also increases the amount of ethanol required to be blended with gasoline, and extends daylight saving time (to begin earlier in spring and end later in fall) to reduce lighting requirements. It also requires the federal vehicle fleet to maximize use of alternative fuels. The Act further includes provisions for expediting construction

of major energy transmission corridors, such as high-voltage power lines, and fossil fuel transmission pipelines. These are just a few examples of the provisions contained in the Act.[16]

Energy Independence and Security Act of 2007

Signed into law in December 2007, this broad energy bill included an increase in auto mileage standards, and also addressed biofuels, conservation measures, and building efficiency. The U.S. EPA administers the Corporate Average Fuel Economy (CAFE) program, which determines vehicle manufacturers' compliance with existing fuel economy standards. The bill amended the CAFE standards to mandate significant improvements in fuel efficiency (i.e., average fleet wide fuel economy of 35 miles per gallon (mpg) by 2020, versus the previous standard of 27.5 mpg for passenger cars and 22.2 mpg for light trucks).[17]

Another provision includes a mandate to increase use of ethanol and other renewable fuels by 36 billion gallons by 2022, of which 21 million gallons is to include advanced biofuels, largely cellulosic ethanol, that have 50 to 60 percent lower GHG emissions. The bill also includes establishment of a new energy block grant program for use by local governments in implementing energy-efficiency initiatives, as well as a variety of green building incentives and programs, among other things.[18]

State Regulations

Energy Action Plan

In 2003, the three key energy agencies in California— the CEC, the California Power Authority (CPA), and the CPUC— jointly adopted an Energy Action Plan (EAP) that listed goals for California's energy future and set forth a commitment to achieve these goals through specific actions. In 2005, the CPUC and the CEC jointly prepared the EAP II to identify the further actions necessary to meet California's future energy needs. The EAP II describes the priority sequence for actions to address increasing energy needs, also known as "loading order." The loading order identifies energy efficiency and demand response as the state's preferred means of meeting growing energy needs. After cost-effective efficiency and demand response, the state is to rely on renewable sources of power and distributed generation, such as combined heat and power applications. To the extent that efficiency, demand response, renewable resources, and distributed generation are unable to satisfy increasing energy and capacity needs, the EAP II supports the use of clean and efficient fossil fuel-fired generation.

In 2008, the CPUC and CEC released an Energy Action Plan Update using information and analysis prepared for the Energy Commission's *2007 Integrated Energy Policy Report (IEPR)*.

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[16] United States Congress, Energy Policy Act of 2005 (Public Law 109-58), passed July 29, 2005. https://www.congress.gov/bill/109th-congress/house-bill/6

[17] EPA. 2007. Summary of the Energy Independence and Security Act. Available online at: https://www.epa.gov/laws-regulations/summary-energy-independence-and-security-act

[18] Ibid 33

The Update was partially written in response to the California Global Warming Solutions Act of 2006 (discussed below), intended to keep the EAP I and EAP II process alive while capturing changes in the policy landscape and describing intended activities to accomplish those policies. The focus areas included: energy efficiency, demand response, renewable energy, electricity reliability and infrastructure, electricity market structure, natural gas supply and infrastructure, research and development, and climate change.[19]

The EAP identifies key actions to be taken in all of these areas in order to meet the state's growing energy requirements. The plan recommendations are implemented by the governor through executive orders, by the legislature through new statutes, and by the responsible state agencies through regulations and programs.

Title 24 (California Energy Code)

The California Energy Code (Title 24, Part 6, of the California Code of Regulations, California's Energy Efficiency Standards for Residential and Nonresidential Buildings), provides energy conservation standards for all new and renovated commercial and residential buildings constructed in California. The provisions of the California Energy Code apply to the building envelope, space-conditioning systems, and water-heating and lighting systems of buildings and appliances; they also give guidance on construction techniques to maximize energy conservation. Minimum efficiency standards are given for a variety of building elements, including appliances; water and space heating and cooling equipment; and insulation for doors, pipes, walls, and ceilings. The CEC adopted the 2005 changes to the Building Efficiency Standards, which emphasized saving energy at peak periods and seasons, and improving the quality of installation of energy-efficiency measures. It is estimated that implementation of the 2005 Title 24 standards have resulted in an increased energy savings of 8.5 percent relative to the previous Title 24 standards. Compliance with Title 24 standards is verified and enforced through the local building permit process.[20] The 2008 Title 24 Standards, which had an effective date beginning August 1, 2009, include added provisions that require, for example, "cool roofs" on commercial buildings; increased efficiency in heating, ventilating, and air conditioning systems; and increased use of skylights and more efficient lighting systems.[21] Title 24 Standards were further updated with the 2013 Building Energy Efficiency Standards, which are estimated to lead to 25 percent less energy consumption for residential buildings and 30 percent savings for nonresidential buildings over 2008 Energy Standards. 2013 standards, which updated codes for lighting, space heating and cooling, ventilation, and water heating, took effect on July 1st 2014.

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[19] State of California, Energy Commission and Public Utilities Commission, "Energy Action Plan 2008 Update," February 2008. http://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/Utilities_and_Industries/Energy_-_Electricity_and_Natural_Gas/2008%20Energy%20Action%20Plan%20Update.pdf

[20] California Energy Commission (2016) Web site (Building Efficiency Standards), http://www.energy.ca.gov/title24

[21] Ibid.

California Green Building Standards Code

All new construction must adhere to the California Green Building Standards Code (CCR, Title 24, Part 11) in place at the time of construction. As an example, the 2013 Title 24 California Green Building Standards, referred to as CALGreen:

- Sets a threshold of a 20 percent reduction in indoor water use and includes voluntary goals for reductions of 30 percent, 35 percent, and 40 percent.
- Requires separate meters for indoor and outdoor water use at nonresidential buildings; and at those sites, irrigation systems for larger landscaped areas must be moisture-sensing.
- Calls for 50 percent of construction waste to be diverted from the landfills and lists higher, voluntary diversion amounts of 65 percent to 75 percent for new homes, and 80 percent for commercial construction.
- Mandates inspections of energy systems -- such as the heat furnace, air conditioning, and mechanical equipment -- for nonresidential buildings that are larger than 10,000 square feet to "ensure that all are working at their maximum capacity according to design efficiencies."
- Requires that paint, carpet, vinyl flooring, particle board, and other interior finish materials be low-emitting in terms of pollutants.

California Global Warming Solutions Act of 2006

In September 2006, the governor signed AB 32, the Global Warming Solutions Act of 2006, which mandates that California's GHG emissions be reduced to 1990 levels by 2020. The act directs the California EPA to work with state agencies to implement a cap on GHG emissions (primarily carbon dioxide) from stationary sources of such as electric power generation facilities, and industrial, commercial, and waste-disposal sectors. Since carbon dioxide emissions are directly proportional to fossil fuel consumption, the cap on emissions is expected to have the incidental effect of forcing a reduction in fossil fuel consumption from these stationary sources. Specifically, AB 32 directs the California EPA to work with other state agencies to accomplish the following: 1) promulgate and implement GHG emissions cap for the electric power, industrial, and commercial sectors through regulations in an economically efficient manner; 2) institute a schedule of greenhouse gas reductions; 3) develop an enforcement mechanism for reducing GHG; 4) establish a program to track and report GHG emissions.[22]

Senate Bill 32

Enacted in 2016, Senate Bill (SB) 32 (Pavley, 2016) codifies the 2030 GHG emissions reduction goal of Executive Order B-30-15 by requiring CARB to ensure that statewide GHG emissions are reduced to 40 percent below 1990 levels by 2030. Similar to AB 32, a reduction in GHG emissions typically corresponds with a reduction in energy usage as the bulk of GHGs result from the

[22] *Assembly Bill 32, Passed August 31, 2006, http://www.arb.ca.gov/cc/docs/ab32text.pdf.*

combustion of fossil fuel.

SB 32 was coupled with a companion bill: AB 197 (Garcia, 2016). Designed to improve the transparency of CARB's regulatory and policy-oriented processes, AB 197 created the Joint Legislative Committee on Climate Change Policies, a committee with the responsibility to ascertain facts and make recommendations to the Legislature concerning statewide programs, policies and investments related to climate change. AB 197 also requires CARB to make certain GHG emissions inventory data publicly available on its web site; consider the social costs of GHG emissions when adopting rules and regulations designed to achieve GHG emission reductions; and, include specified information in all Scoping Plan updates for the emission reduction measures contained therein.

Local Regulations

In addition to federal and state regulations and guidelines, the following is a synopsis of local City of San Rafael regulations and goals relative to reducing or avoiding significant impacts on energy use.

City of San Rafael General Plan 2020

Policy SU-6 Resource Efficiency in Site Development. Encourage site planning and development practices that reduce energy demand, support transportation alternatives and incorporate resource and energy-efficient infrastructure.

Policy SU-6a. Site Design. Evaluate as part of development review, proposed site design for energy-efficiency, such as shading of parking lots and summertime shading of south-facing windows.

Policy SU-14d. City Electricity. Participate in the Marin Energy Authority by switching all City accounts over to the Light Green option in 2010 and the Deep Green option (100% renewable power) by 2020. Consider the use of renewable energy technology such as solar, cogeneration and fuel cells in the construction or retrofitting of City facilities.

Policy SU-14l. Backup Energy Provision. Evaluate backup energy provisions for critical city facilities and upgrade as needed. Encourage the use of alternatives, such as fuel cell and solar generator backups, to the sustained use of gasoline-powered generators.

City of San Rafael Climate Change Action Plan 2011

LF11: Adopt a Zero Waste Goal and adopt a Zero Waste Strategic Plan for San Rafael.

LF15: Adopt a construction debris recycling and reuse ordinance.

EN7: Develop a program of levee analysis, including inventorying heights, testing and maintaining public and private levees.

Discussion of Impacts

a) ***Less than Significant Impact.*** The proposed project would require the use of diesel and other fuels for trucks and equipment during construction, but these activities would be

short-term and completed as efficiently as possible for practical and financial reasons, among other considerations. The only ongoing energy consumption in the operational phase of the project would be from a City-supplied portable generator, very similar to, or the same as, the one used by the existing pump station. Given the important flood control functions of the pump station, the relatively minor amount of energy used to power the vertical pumps is not wasteful, inefficient, or unnecessary. Furthermore, any energy usage increase from the baseline condition would be very minor, if anything. Impacts in this regard would therefore be less than significant.

b) ***Less than Significant Impact.*** The proposed project would replace an existing pump station with a similarly sized station. The degree of energy consumption due to the new station would therefore not be changed from current baseline conditions. While the proposed pump station may not necessarily advance state and local renewable energy plans, it certainly would not hinder or obstruct such plans either. Furthermore, given San Rafael's enrollment in the Deep Green 100% renewable program, electricity from the generator could be from renewable sources. Impacts would be less than significant.

VI. **GEOLOGY AND SOILS** — Would the project:	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*	*Source*
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?	☐	☐	☐	☒	1,10
ii) Strong seismic ground shaking?	☐	☐	☒	☐	1,10
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐	1,6,10
iv) Landslides?	☐	☐	☒	☐	1,6,10
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐	1,6,15
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?	☐	☐	☒	☐	1,6,15
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐	1,6
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒	1,15

VI. GEOLOGY AND SOILS — Would the project:	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*	*Source*
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐	1

Environmental Setting

Regional Geologic Setting

The project site lies within the Coast Ranges geomorphic province of California. Regional topography within the Coast Ranges province is characterized by northwest-southeast trending mountain ridges and intervening valleys that parallel the major geologic structures, including the San Andreas Fault System. The province is also generally characterized by abundant landsliding and erosion, owing in part to its typically high levels of precipitation and seismic activity.

Earthquakes are the product of the build-up and sudden release of strain along a “fault” or zone of weakness in the earth's crust. Stored energy may be released as soon as it is generated or it may be accumulated and stored for long periods of time. Faults are seldom single cracks in the earth's crust but are typically comprised of localized shear zones which link together to form larger fault zones. Within the Bay Area, faults are concentrated along the San Andreas fault system, which extends nearly 700 miles along a northwest trend from Mexico to offshore northern California. The movement between rock formations along either side of a fault may be horizontal, vertical, or a combination and is radiated outward in the form of energy waves. The amplitude and frequency of earthquake ground motions partially depends on the material through which it is moving. The earthquake force is transmitted through hard rock in short, rapid vibrations, while this energy becomes a long, high-amplitude motion when moving through soft ground materials, such as Bay Mud.

An “active” fault is one that shows displacement within the last 11,000 years (i.e. Holocene) and has a reported average slip rate greater than 0.1 mm per year. The California Division of Mines and Geology (1998) has mapped various active and inactive faults in the region. The nearest known active faults to the site are the San Andreas and Hayward Faults.

Local Geologic Setting

The project site is located immediately west of San Pablo Bay. Regional geologic mapping (California Division of Mines and Geology, 1976) indicates that the site is underlain by artificial fill over Bay Mud with marsh deposits mapped directly to the north. A Regional Geologic Map and descriptions of the mapped geologic units are shown on Figure 3 of Appendix A, Sub-Appendix A (Draft Geotechnical Investigation Report).

The project site, like all properties in the San Francisco Bay area, is situated in a seismically active area. In the San Francisco Bay Area, the San Andreas fault system includes the San Andreas,

Hayward, Calaveras, and other related faults in the San Francisco Bay area. According to the U.S. Geological Survey (Working Group on California Earthquake Probabilities 2003), there is a 62% chance of at least a magnitude 6.7 (or greater) earthquake in the San Francisco Bay region between 2003 and 2032.

The Biological Study Area is not located within a State of California Earthquake Fault Zone for active faulting and no active faults are mapped on the property. The San Andreas Fault is located approximately 16.2 kilometers (10 miles) southwest of the site whereas the Hayward Fault is located approximately 11.4 kilometers (7 miles) to the northeast.

Discussion of Impacts

a-i,) ***No Impact.*** The project site is not located within a State of California designated Alquist-Priolo Earthquake Fault Zone (California Department of Conservation, 1974). Earthquake fault zones are regulatory zones that encompass surface traces of active faults that have a potential for future surface fault rupture. The closet active faults to the site are the San Andreas Fault, located approximately 10 miles to the west-southwest of the project site at its closest point, and the Hayward Fault, approximately 7 miles northeast at its closest point. No faults cross through the project site, and surface rupture associated with a fault is not anticipated in the City. No impacts would occur.

a-ii) ***Less than Significant Impact***. The potential for seismic ground-shaking at the project site is “very strong” according to the Association of Bay Area Government’s (ABAG) Resilience Program hazards map, but seismic-related ground failure is not anticipated. The project site’s proximity to two active bay area faults (San Andreas and Hayward) leaves it vulnerable to some degree of ground shaking, which is common in the Bay Area. The proposed project would not create a need or opportunity for people to reside on-site and thus be exposed to such ground shaking long-term. If an earthquake were to occur during the construction phase, it could create a risk for workers on-site, but under the obligation of the Occupational Safety and Health Act (OSHA), construction workers would be trained to take the necessary precautions to maintain worker safety in the event of an earthquake. Structures associated with the proposed work would be designed to conform to the most recent edition of the California Building Code (2016) with flexible connections and CBC design features as discussed in the geotechnical report compiled for the project (Appendix A, Sub-Appendix A). Given these legal obligations, the impacts related to this topic would be less than significant.

a-iii) ***Less than Significant Impact.*** Liquefaction occurs when a saturated or partially saturated soil substantially loses strength and stiffness in response to an applied stress, such as seismic shaking, which causes a solid to behave like a liquid. Soils susceptible to liquefaction are saturated, loose, granular deposits. Liquefaction can result in flow failure, lateral spreading, ground movement, settlement, and other related effects. Buried pipelines embedded within liquefied soils may also experience uplift due to buoyancy.

According to ABAG's Resilience Program hazards map, the project site has a moderate susceptibility to liquefaction; however, according to the geologic mapping and the results of subsurface exploration completed for the proposed work, the project site is underlain by relatively thick deposits of bay mud which are not susceptible to liquefaction. The fill material is mostly comprised of clayey soils that are not susceptible to liquefaction either. Therefore, the likelihood of damage to the new pump station and outfall pipe due to liquefaction is low. In addition, the project would be subject to all Federal, State, and local regulations for seismic conditions, including the CBC. Impacts would be less than significant.

a-iv) ***Less than Significant Impact.*** Landslides are frequently triggered by strong ground motions. They are an important secondary earthquake hazard. The term landslide includes a wide range of ground movement, such as rock falls, deep failure of slopes, and shallow debris flows. Landslides from seismic activity are a very low risk at the project site given its flat topography and general lack of slopes, cliffs, or flowing water.

The project is subject to all Federal, State, and local regulations and standards for seismic conditions, including the CBC, and would be designed to conform to all building requirements. Given the low risk of landslides at the project site and the legal obligations associated with seismic building design, impacts associated with seismic landslides would be less than significant.

b) ***Less than Significant Impact.*** Construction would involve limited soil disturbance, which could temporarily expose soils to wind and water erosion. However, the project would not cause a substantial change to erosion and accretion patterns of the area long-term because the pump station improvements would not alter the existing drainage pattern of the area. Temporary construction impacts related to run-off from the cut soil stored on-site could occur, but standard measures from the Marin Countywide Water Pollution Prevention Program and from the State Water Board's General Permit would be implemented to ensure impacts from runoff would remain less than significant. Additionally, there would be almost no disturbance of native topsoil, as construction activities would take place mainly within existing paved roads and the soil in the area is non-native fill material. The fill material cut for the new pump station and stockpiled on-site would be wet and therefore unsusceptible to soil erosion, and would then be naturally vegetated over time, further reducing erosion risk. BAAQMD construction measures would be implemented to minimize the potential for erosion and indirect effects associated with soil erosion (i.e., water quality impacts, fugitive dust). Impacts on soil would therefore be less than significant.

c, d) ***Less than Significant Impact.*** The potential for geologic and soil hazards from unstable or expansive soils in the project site is considered low based on the geologic units, soil types, and flat topography discussed previously. The ground disturbance associated with the proposed project would cause soil disturbance but these actions would not result in substantial changes in topography, ground surface relief features, or geologic

substructures, and would therefore not change the stability of the soil conditions. The pump station itself would be designed to "float" on a concrete slab on top of the soil to avoid settlement over time, and the outfall pipe would mainly be sliplined into existing infrastructure. Furthermore, the project is subject to all Federal, State, and local regulations and standards for seismic conditions including the California Building Code (CBC) and would be designed to conform to all building requirements. Therefore, the proposed project's impacts would not destabilize the soil or expose human life or structures to increased risk of on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse. Impacts in these areas would be less than significant.

e) ***No Impact.*** The project does not involve construction of septic tanks or alternative wastewater disposal systems.

f) ***Less than Significant Impact.*** The project site follows mainly existing rights-of-way on graveled and previously disturbed land. Excavation of soil would be required, but the soil would be non-native fill and is unlikely to contain any paleontological resources. The ground disturbance associated with the project would not change the topography or geologic substructures of the vicinity, and would therefore not change any unique geologic features. The project area was historically part of the waters of the San Rafael Bay and was diked and reclaimed in the mid-20th century, covered in fill material. Unique paleontological or geologic features would therefore only exist in the deeper layers of soil and would remain undisturbed. Impacts would be less than significant.

VII. GREENHOUSE GAS EMISSIONS — Would the project:		*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*	*Source*
a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐	1
b)	Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐	1,11

Environmental Setting

Assembly Bill 32, adopted in 2006, established the Global Warming Solutions Act of 2006 which requires the State to reduce greenhouse gas (GHG) emissions to 1990 levels by 2020. Senate Bill 97, adopted in 2007, required the Governor's Office of Planning and Research to develop CEQA guidelines "for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions," and the Resources Agency certified and adopted the amendments to the guidelines on December 30, 2009.

GHGs are recognized by wide consensus among the scientific community to contribute to global warming/climate change and associated environmental impacts. The major GHGs released from human activity are carbon dioxide, methane, and nitrous oxide (Governor's Office of Planning and Research, 2008). The primary sources of GHGs are vehicles (including planes and trains), energy plants, and industrial and agricultural activities (such as dairies and hog farms).

Discussion of Impacts

a) ***Less Than Significant Impact.*** GHG emissions from the project would be produced from construction-related equipment emissions. Based on the nature of the project and short duration of construction, GHG emissions resulting from construction activities would be both minor and temporary. While the project would have an incremental contribution to GHG emissions within the City and region, the individual impact is less than significant. During the operational phase, the pump station would utilize a City-supplied portable generator, which would emit small amounts of greenhouse gases from diesel fuel usage. However, the current station already uses a portable generator and there would be no change in greenhouse gas emissions over current baseline conditions. Less than significant impacts would occur.

b) ***Less Than Significant Impact.*** The proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. GHG emissions from off-road equipment and utility electrical usage are identified and planned for in the BAAQMD's 2010 Clean Air Plan as well as the BAAQMD's Source

Inventory of Bay Area Greenhouse Gas Emissions (BAAQMD 2010a and 2010b). A primary objective of the 2010 Clean Air Plan is to reduce greenhouse gas emissions to 1990 levels by 2020 and 40% below 1990 levels by 2035. The project would generate emissions similar to existing conditions and, therefore, a less-than-significant impact would occur.

VIII. **HAZARDS AND HAZARDOUS MATERIALS** — Would the project:		*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*	*Source*
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐	1
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?	☐	☒	☐	☐	1
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒	1
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?	☐	☐	☐	☒	1
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒	1
f)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐	1
g)	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐	1

The following Hazards and Hazardous Materials Appendix G thresholds analysis was prepared by hazardous materials specialists at Baseline Environmental Consulting.

Environmental Setting

The site is located on relatively flat land adjacent to the San Rafael Bay. Regional geologic mapping indicates that the site is underlain by artificial fill over Bay Mud with marsh deposits mapped directly to the north.[23]

The proposed pump station site and outfall pipe alignment are located immediately north of a former landfill (referred to as the San Quentin Landfill). The San Quentin Landfill is a closed, unlined Class III landfill that operated from 1968 to 1987. The site was used for the disposal of non-hazardous solid wastes such as construction debris. No waste has been disposed of at the landfill since 1987.[24] In 1987 the landfill began final closure. Final cover of the landfill consisted of approximately 1 foot of foundation soil, a minimum of at least 1 foot of low hydraulic conductivity layer, and approximately 3 feet of topsoil.

Several separate monitoring programs are being implemented for the site including groundwater monitoring, leachate monitoring, and surface water monitoring and are being performed under the Regional Water Quality Control Board (Water Board) Order No. R2-2012-0064.

Groundwater conditions at the landfill are monitored by eight monitoring wells (generally located around the perimeter of the landfill). The monitoring program requires the dischargers to monitor groundwater levels quarterly and groundwater chemistry semi-annually in the eight monitoring wells. Constituents of Concern (COCs, considered potential contaminants given the nature of the waste and are monitored once every five years) include volatile organic compounds (VOCs), semi-volatile organic compound (SVOCs), organochlorine pesticides and poly-chlorinated biphenyls (PCBs). According to Order R2-2012-0064, the groundwater quality in the monitoring wells has consistently shown no significant impacts from the landfill.[25]

The landfill contains six leachate monitoring wells. Monitoring parameters include field parameters (pH, EC, groundwater elevation) and inorganics (TDS, ammonia, nitrate). COCs include VOCs, SVOCs, organochlorine pesticides, and PCBs. Anthropogenic compounds have been detected in leachate at the landfill, but the frequency of their detection is low. According to Order R2-2012-0064, the concentrations of the compounds do not exceed the Water Board's Environmental Screening Levels and do not pose significant risk to either human health or the environment.

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[23] California Division of Mines and Geology, "Geology for Planning in Central and Southeastern

Marin County, California, OFR 76-2 S.F. Plate 1D, South Central Marin Geology", 1976.

[24] CSS Environmental Services, 2019. First Semi-Annual 2019 Groundwater Monitoring Report, Former San Quentin Landfill 1615 East Francisco Boulevard San Rafael, California, March 5.

[25] San Francisco Bay Regional Water Quality Control Board, 2012. Updated Waste Discharge Requirements and Rescission of Order No. 01-022 for: San Quentin Solid Waste Disposal Landfill, Order No. R2-2012-0064.

Landfills are known to generate methane gas as the waste in the landfill breaks down. The Water Board order R2-2012-0064 specifies that "methane and other landfill gases shall be adequately vented, removed from the landfill, or otherwise controlled to minimize the danger of explosion, adverse health effects, nuisance conditions and the impairment of beneficial uses of water due to gas migration."[26] However, no monitoring data or information on the methane venting systems is included in the order.

Discussion of Impacts

a) ***Less than Significant Impact.*** Project construction activities are expected to involve the routine transport, use, and disposal of hazardous materials (e.g., motor fuels, paints, oils, and grease) that could pose a significant threat to human health or the environment if not properly managed. Although small amounts of these materials would be transported, used, and disposed of during project construction, these materials are typically used in construction projects and are not considered acutely hazardous. Workers who handle hazardous materials are required to adhere to health and safety requirements enforced by the federal Occupational Health and Safety Administration (OSHA) and California Division of Occupational Safety and Health (Cal/OSHA). Hazardous materials must be transported to and from the project site in accordance with Resource Conservation and Recovery Act (RCRA) and U.S. Department of Transportation regulations. Hazardous materials must also be disposed of in accordance with RCRA regulations at a facility that is permitted to accept the waste. Because compliance with existing regulations is mandatory, project construction is not expected to create a significant hazard to public health or the environment through the routine transport, use, or disposal of hazardous materials.

During project operation, it is anticipated that the project would involve the use of hazardous materials that are typical of stormwater pumping facilities (e.g., oil and grease, hydraulic fluid). These materials would be used in small and localized amounts. As described above, the routine transport, use, and disposal of hazardous materials are subject to federal and State regulations. On the local level, the County of Marin, Waste Management Division is the Certified Unified Program Agency (CUPA) that implements regulatory programs for sites that routinely use relatively large quantities of hazardous materials to ensure the safe storage, management, and disposal of such materials in accordance with the Unified Program. While the project is not expected to handle large quantities of hazardous materials, compliance with existing laws, regulations, and CUPA programs, as applicable, would be mandatory; therefore, project operations are not expected to create a significant hazard to public health or the environment through the routine transport, use, or disposal of hazardous materials.

[26] *Ibid, page 12.*

As a result, impacts related to the routine transport, use, or disposal of hazardous materials during project construction and operation would be less than significant.

b) ***Less than Significant with Mitigation Incorporated.*** Potential accident and upset conditions resulting in the release of hazardous materials used or encountered during general project construction and operation activities are discussed below.

Accidental Hazardous Materials Release Related to Undocumented Fill and the Closed Landfill during Project Construction and Operation

Surface soils at the project site are comprised of undocumented fill. The quality of this fill is unknown and may contain elevated levels of contaminants, including metals, petroleum hydrocarbons, and PCBs. In addition, the precise limits of the former landfill in relation to the project alignment are not known. It is possible that contaminants associated with the landfill have affected the project site (both the new pump station site and the outfall pipeline alignment). Contaminants from the landfill may have affected the project site in the following ways:

- Solids (including contaminated soils) may have been spread onto the site during landfill operation and/or closure, or migrated onto the site as a result of erosion;
- Affected groundwater, potentially containing VOCs, SVOCs, pesticides, and PCBs may have migrated off the landfill site to the surrounding area. VOCs, SVOCs, pesticides, and PCBs have been identified in landfill leachate wells.[27]
- Soil and landfill gas (including methane and VOCs) could migrate through the soil column and affect off-site areas.

Excavation of material from the project site during grading activities could potentially expose workers and the surrounding public to hazardous materials in dust or vapors that could be released if the excavated fill material is contaminated. Re-use of the fill material as engineered fill could potentially expose future maintenance workers to hazardous materials if contaminated material is re-used on-site. Dewatering during construction could generate contaminated effluent that could potentially expose workers to hazardous materials if not characterized, handled, and disposed of correctly. Elevated concentrations of methane in soil gas can potentially pose explosion hazards, as vapor intrusion from the subsurface could cause methane to accumulate in potentially explosive concentrations in the proposed pump station, subsurface utility conduits, vaults, or other poorly ventilated/confined spaces that may be subject to vapor intrusion. The potential for accidental hazardous materials release is a potentially significant impact. Implementation of Mitigation Measure HAZ-1 would ensure that potential hazardous materials in the landfill and groundwater effluent are properly identified through sampling and removed and/or addressed in accordance with applicable regulations during construction and operation.

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[27] *CSS Environmental Services, 2016. First Semi-Annual 2016 and 5-Year Groundwater Monitoring Report, Former San Quentin Landfill 1615 East Francisco Boulevard San Rafael, California., March 4.*

With implementation of Mitigation Measure HAZ-1, the project would create a less-than-significant impact related to accidental releases of hazardous materials during construction and operation.

Mitigation Measure HAZ-1: Phase II environmental site assessment (ESA) sampling of soil, groundwater, and soil gas shall be performed at the project site by a qualified environmental professional to evaluate potential impacts from hazardous materials in soil, groundwater, and soil gas, and potential elevated methane levels in soil gas. This information shall also be used to characterize and properly manage any dewatering effluent that would be generated during project construction.

A work plan for the proposed sampling activities shall be prepared by the qualified environmental professional and submitted to the City for review and approval. The work plan shall outline the proposed sampling locations and the proposed sample collection procedures and laboratory analytical methods. At a minimum, laboratory analysis of soil and groundwater samples shall include Title 22 metals, petroleum hydrocarbons (gasoline, diesel, and motor oil), VOCs, SVOCs, and PCBs. Soil gas samples shall be analyzed for VOCs and methane. Soil and groundwater sampling and analysis shall be performed in accordance with the U. S. Environmental Protection Agency's SW-846 guidelines. Sampling of soil gas shall be performed in accordance with State Department of Toxic Substances Control's (DTSC) Active Soil Gas Investigations Advisory and analysis of methane in soil gas shall be performed in accordance with DTSC's Guidance for Evaluation of Biogenic Methane.

A Phase II ESA report documenting the results of the sampling and analysis activities shall be prepared by the qualified environmental professional and submitted to the City for review and approval. The report shall document the sampling activities performed and subsurface characteristics observed, and shall evaluate sample results based on applicable regulatory agency screening levels and guidance documents (e.g., the San Francisco Bay Regional Water Quality Control Board's Environmental Screening Levels for soil, groundwater, and soil gas, and the DTSC's methane guidance). The report shall include recommendations for the following: further investigation if warranted; soil handling, disposal, and potential re-use options; and groundwater handling and discharge/disposal options.

If soil, groundwater, or soil gas sample analytical results exceed ESLs for unrestricted land use and naturally-occurring background concentrations for metals in soil, and/or if elevated methane is detected in soil gas, the applicant shall prepare and implement health and safety procedures and worker training requirements; a soil management plan; and/or methane management measures (e.g., installation of vapor barriers and/or other soil gas mitigation systems for the proposed new pump house and any other utility vaults where vapors could collect).

Accidental Hazardous Materials Release during Building Demolition

The existing San Quentin Pump Station was constructed in 1972 and may contain asbestos-containing materials (ACM), lead-based-paint (LBP), and/or PCBs. Asbestos is a known human carcinogen that was commonly used in building materials until the early 1980s. Lead is a suspected human carcinogen, a known teratogen, and a reproductive toxin, and was widely used as an additive in paints prior to 1978. PCBs are known to cause cancer as well as other adverse health effects, and were used as additives to building materials (e.g. caulking, light ballasts, electrical equipment) prior to 1979.

The removal of hazardous building materials prior to demolition is governed by federal and State laws and regulations. Workers who conduct hazardous materials abatement and demolition activities must be trained in accordance with OSHA and Cal/OSHA requirements. Hazardous building materials removed during construction must be transported in accordance with U.S. Department of Transportation regulations and disposed of in accordance with RCRA, the California Code of Regulations, and/or the California Universal Waste Rule at a facility permitted to accept the wastes. The Bay Area Air Quality Management District (BAAQMD) requires notification from contractors and/or building owners 10 working days prior to renovation of buildings that contain asbestos. Implementation of Mitigation Measure HAZ-2 would ensure that potential hazardous building materials are properly identified and removed in accordance with applicable regulations prior to renovation. With implementation of Mitigation Measure HAZ-2, the project would create a less-than-significant impact related to accidental releases of hazardous materials during building demolition.

Mitigation Measure HAZ-2: Prior to demolition of the existing pump station, the project contractor shall submit a comprehensive assessment report to the City, signed by a qualified environmental professional, documenting the presence or lack thereof of ACMs, LBP, PCBs, and any other hazardous building materials. If hazardous building materials are present, the contractor shall submit specifications prepared and signed by a qualified environmental professional, for the stabilization and/or removal and disposal of the identified hazardous materials in accordance with all applicable laws and regulations. The contractor shall implement the approved recommendations and submit to the City evidence of any proposed remedial actions.

c) ***No Impact.*** There are no schools within one-quarter mile of the project site. Therefore, there would be no impacts on schools.

d) ***No Impact.*** The provisions of Government Code Section 65962.5 require the State Water Resources Control Board, Department of Toxic Substances Control, California Department of Health Services, and California Department of Resources Recycling and Recovery to submit information to the California Environmental Protection Agency pertaining to sites that were associated with solid waste disposal, hazardous waste disposal, and/or hazardous materials releases. The compilation of hazardous materials release sites that meet criteria specified in Section 65962.5 of the California Government

Code is known as the Cortese List. The State Water Board's Geotracker website lists the off-site San Quentin Landfill site, which is adjacent to the project site, as a "Land Disposal Site."

There are currently no hazardous materials release sites on the project site that meet the criteria for inclusion on the Cortese List. Therefore, the project would have no impacts related to development on a hazardous materials release site included on the Cortese List.

e) ***No Impact.*** The project site is located more than four miles south of the nearest airport, the San Rafael Airport (a private use airport). Gnoss Field is the nearest public use airport, located over 12 miles to the north of the project site.

The project site is not located within an airport influence area; therefore, project structures would not be considered a potential obstruction to aircraft. Furthermore, the project would not result in a substantial increase in bird populations, solar glare, misleading lighting, or other visual impairments in proximity to the airport's approach and departure zones. Therefore, the project would have no impacts on the navigable airspace of public use airports and would not result in a safety hazard for people residing or working in the project area.

f) ***Less than Significant Impact.*** The proposed project is located at the end of a private dirt road and is not near or within any designated emergency access routes. Therefore, construction of the proposed project would not temporarily block or impair any existing emergency evacuation routes. Based on the project design, the project would have a less-than-significant impact on the implementation of any emergency response and evacuation plans.

g) ***Less than Significant Impact.*** The project site is surrounded by paved urbanized uses, marshland, and an open body of water (the San Rafael Bay) and is not located in an area mapped as Very High Fire Hazard Severity Zone by California Department of Forestry and Fire Protection.[28] Therefore, the project would have a less-than-significant impact related to wildland fire hazards.

[28] *CAL FIRE, 2007. Fire Hazard Severity Zones in SRA, Adopted by Cal FIRE on November 7, 2007.*

IX.	**HYDROLOGY AND WATER QUALITY** — Would the project:	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*	*Source*
a)	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐	1
b)	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐	1
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	☐	☐	☒	☐	1,15
	(i) result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐	1,15
	(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐	1,15
	(iii) create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐	1,15
	(iv) impede or redirect flood flows?	☐	☐	☒	☐	1,7,15
d)	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐	1,11
e)	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐	1

Environmental Setting

According to the RWQCB's Water Quality Control Plan for the San Francisco Basin, the project site is located in the Marin Coastal Basin and discharges to the San Rafael Bay. The San Rafael Creek watershed is 403 acres, consisting of urban/commercial development, hillside woods, and wetlands. The wetlands act as a storage basin for the pump station. The watershed is bisected by Interstate 580, which includes large roadside ditches for drainage that are inundated during rain events. Anecdotal evidence indicates that the parcels on the west side of Interstate 580 flood as a result of the existing pump flow rates. This evidence indicates that the existing pump system is insufficient. The at-risk properties are located at an elevation of four feet. See Appendix A, Sub-Appendix C for the full Drainage Study.

The project site is covered with pervious surfaces in the form of gravel/dirt roadways and marshland, with drainage flowing into the existing detention basins adjacent to the current pump station. According to the Federal Emergency Management Agency (FEMA) Federal Insurance Rate Maps (FIRM), the project site is in flood zone AE, which is defined as an area within the 100-year flood zone where a base flood elevation has been determined (FEMA, 2019).

Regulatory Setting

The City of San Rafael is part of the Marin Countywide Stormwater Pollution Prevention Program (MCSTOPPP) whose goals are to: prevent stormwater pollution, protect and enhance water quality in creeks and wetlands, preserve beneficial uses of local waterways, and comply with State and Federal regulations. MCSTOPPP staff implement permit compliance and track stormwater regulations on behalf of the member agencies.

The federal Clean Water Act (CWA) Section 402, promulgated by rules developed by the US EPA in 1990, establishes the National Pollutant Discharge Elimination System (NPDES) stormwater program. The program requires that urban stormwater runoff pollution of the nation's water be regulated for Municipal Separate Storm Sewer Systems (MS4s). The San Francisco Bay Regional Water Board issued one Municipal Regional Stormwater NPDES Permit (MRP) in 2015 covering MS4s that serve populations of 100,000 or greater. For smaller MS4s, such as the City of San Rafael, discharges are currently regulated under a General Permit renewal issued by the State Water Resources Control Board in 2013 for Storm Water Discharges from Small MS4s (Water Quality Order No. 2013-0001-DWQ, NPDES General Permit No. CAS000004).

Discussion of Impacts

a) ***Less than Significant Impact.*** Construction activities would require ground disturbance for excavation, demolition, grinding and paving, and retaining for pump station installation. The net cut of these activities is expected to be 312 cubic yards. Soil removed would be stockpiled at the project site and, if not properly controlled, soil particles and other materials could be carried in stormwater runoff to drainage facilities, which could degrade water quality in the San Rafael Bay. Standard construction measures recommended by the Marin Countywide Water Pollution Prevention Program would be implemented to minimize pollutants carried from the project site in runoff. The project would comply with

terms of the State Water Board's Storm Water Discharges from Small MS4s General Permit. Water quality impacts during construction would therefore be less than significant, and operational water quality impacts would not change from current baseline conditions.

b) ***Less than Significant Impact.*** The project would not require use of groundwater supplies or affect groundwater recharge in the area. The project would install a new pump station, creating impervious surface, but it would demolish and remove the existing station. Any impacts to wetland land cover would be mitigated pursuant to the measures listed in Section IV (Biological Resources). The pump station pumps surface water, as opposed to groundwater, that collects in the adjacent detention ponds and discharges it to the San Rafael Bay. This function is unchanged from the current condition and would not impede or interfere with groundwater recharge or groundwater management.

c-i-iv) ***Less than Significant Impact***. The proposed project would not alter the course of a stream or river, nor would it add substantial impervious surface. The project would install a new pump station, creating impervious surface, but it would demolish and remove the existing station and any impacts to wetland land cover would be mitigated pursuant to the measures listed in Section IV (Biological Resources). Therefore the project would not result in an increase in impermeable surfaces or an increase in runoff compared to existing conditions. The project would not cause a substantial change to the erosion and accretion patterns long-term because the pump station improvements would not alter the existing drainage pattern of the area. Temporary construction impacts related to run-off from the cut soil stored on-site could occur, but standard measures from the Marin Countywide Water Pollution Prevention Program and from the State Water Board's General Permit would be implemented to ensure impacts from runoff would remain less than significant. The proposed project is located with the 100-year flood zone, however it would not impede flood flow; as the pump station's purpose is to reduce stormwater and increase flood conveyance in the surrounding areas, flood flows would be benefited. Impacts would be less than significant.

d, e) ***Less than Significant Impact.*** The project would not have other water quality or groundwater sustainability impacts beyond those discussed under items a) and b) above. Due to its proximity to the San Rafael Bay, the proposed project site is located in a tsunami inundation area; however, the operational project would leave the area very similar to its current condition with no additional risk of pollutants being released due to inundation. The project would comply with the Marin Countywide Water Pollution Prevention Program and the State Water Board's General Permit. Impacts would be less than significant.

XI.	**LAND USE AND PLANNING** – Would the project:	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*	*Source*
a)	Physically divide an established community?	☐	☐	☐	☒	1
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?	☐	☐	☒	☐	2

Environmental Setting

The project site is in a commercial portion of the City of San Rafael. Existing land uses adjacent to the project site consist of open space, single and multi-family residences, recreational uses, and commercial retail uses. The project site is within existing roads and access routes and their associated rights-of-way. The City of San Rafael General Plan, adopted in 2004 with various subsequent chapter amendments, provides policies and implementation strategies for management of the resources and land uses in the City, and the City Codes provide restrictions and requirements to protect resources and comply with local, state, and federal laws. Applicable General Plan policies are listed below. No habitat conservation plans have been adopted for the area.

Regulatory Setting

San Rafael General Plan

Land Use Element

LU-1. Planning Area and Growth to 2020. Plan the circulation system and infrastructure to provide capacity for the total development expected by 2020.

Safety Element

S-2. Location of Public Improvements. Avoid locating public improvements and utilities in areas with identified flood, geologic and/or soil hazards to avoid any extraordinary maintenance and operating expenses. When the location of public improvements and utilities in such areas cannot be avoided, effective mitigation measures will be implemented.

S-10. Location of Public Improvements. To minimize threat to human health or any extraordinary construction and monitoring expenses, avoid locating improvements and utilities in areas with dangerous levels of identified hazardous materials. When the location of public improvements and utilities in such areas cannot feasibly be avoided, effective mitigation measures will be implemented.

S-17a. Title 18 Flood Protection Standards. Evaluate and revise the City's Title 18 flood protection standards for new development based on Federal and regional criteria.

S-18 Storm Drainage Improvements. Require new development to improve local storm drainage facilities to accommodate site runoff anticipated from a "100-year" storm.

S-19a. Incremental Flood Control Improvements. Where needed and possible, new development/redevelopment projects shall include measures to improve area flood protection. Such measures would be identified and required through the development review process.

S-22a. Erosion Control Programs. Review and approve erosion control programs for projects involving grading one acre or more or 5,000 square feet of built surface as required by Standard Urban Stormwater Management Plans. Evaluate smaller projects on a case-by-case basis.

2-22b. Grading During the Wet Season Discourage grading during the wet season and require that development projects implement adequate erosion and/or sediment control and runoff discharge measures.

S-25. Regional Water Quality Control Board (RWQCB) Requirements. Continue to work through the Marin County Stormwater Pollution Prevention Program to implement appropriate Watershed Management plans as dictated in the RWQCB general National Pollutant Discharge Elimination System permit for Marin County and the local stormwater plan.

Discussion of Impacts

a) ***No Impact.*** The project involves replacement of a pump station within an adjacent footprint to that of the existing station. The project location is mainly in a previously developed, gravel access road surrounded by open marsh land. The project would not physically divide an established community. No impacts would occur.

b) ***Less than Significant Impact.*** A proposed project would have a significant impact if it were to conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. The proposed project is subject to several local policies, plans, and regulations, as described above. The primary objective of the proposed project is to replace the dilapidated existing pump station to improve storm water conveyance and reduce flooding in the surrounding areas. The project therefore meets General Plan policies related to safety via storm drainage improvements and flood control. The proposed project would be subject to a Stormwater Pollution Prevention Plan (SWPPP) approved by the RWQCB, which would outline all appropriate erosion control best practices. The proposed project would not conflict with the City of San Rafael General Plan or other applicable land use plans or policies. Impacts would be less than significant.

XII. **MINERAL RESOURCES** — Would the project:		*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*	*Source*
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?	☐	☐	☐	☒	2,12
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?	☐	☐	☐	☒	2,12

Discussion of Impacts

a, b) ***No Impact.*** The project site is not in or adjacent to any important mineral resource areas. Furthermore, the development of the proposed project would not preclude future excavation of oil or minerals should such extraction become viable. As such, there would be no loss of availability of known mineral resources and no impacts to mineral resources.

XIII. **NOISE** — Would the project result in:	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*	*Source*
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐	1,2, 9
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐	1
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?	☐	☐	☐	☒	1

Environmental Setting

The City of San Rafael Noise Ordinance limits construction hours to 7:00 A.M. to 5:00 P.M. Monday through Friday. The Director of Public Works/City Engineer may grant exemptions. Noise in the project site and vicinity is primarily from commercial development, residences, and vehicular traffic along roads. There are no schools or nursing homes adjacent to the project site. The nearest sensitive noise receptors are residences in the community 0.31 miles north of the proposed project site and students attending Bahia Vista Elementary school, located approximately 0.75 miles north-northwest of the site. However, shoppers at the commercial retail centers along Shoreline Parkway could also be potentially impacted by project-induced noise.

Discussion of Impacts

a) ***Less than Significant Impact with Mitigation Incorporated.*** Sound is technically described in terms of amplitude (loudness) and frequency (pitch). The standard unit of sound amplitude measurement is the decibel (dB). The decibel scale is a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound. The pitch of the sound is related to the frequency of the pressure vibration. Since the human ear is not equally sensitive to a given sound level at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) provides this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Noise, on the other hand, is typically defined as unwanted sound. A typical noise environment consists of a base of steady "background" noise that is the sum of many distant and indistinguishable noise sources. Superimposed on this background noise is the sound from individual local sources. These can vary from an occasional aircraft or train passing by to virtually continuous noise from, for example, traffic on a major highway.

Several rating scales have been developed to analyze the adverse effect of community noise on people. Since environmental noise fluctuates over time, these scales consider that the effect of noise upon people is largely dependent upon the total acoustical energy content of the noise, as well as the time of day when the noise occurs. Those that are applicable to this analysis are as follows:

- L_{eq} – A L_{eq}, or equivalent energy noise level, is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
- L_{max} – The maximum instantaneous noise level experienced during a given period of time.
- L_{min} – The minimum instantaneous noise level experienced during a given period of time.
- CNEL – The Community Noise Equivalent Level is a 24-hour average Leq with a 5 dBA "weighting" during the hours of 7:00 P.M. to 10:00 P.M. and a 10 dBA "weighting" added to noise during the hours of 10:00 P.M. to 7:00 A.M. to account for noise sensitivity in the evening and nighttime, respectively. The logarithmic effect of these additions is that a 60 dBA 24 hour L_{eq} would result in a measurement of 66.7 dBA CNEL.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day, night, or over a 24-hour period. For residential uses, environmental noise levels are generally considered low when the CNEL is below 60 dBA, moderate in the 60–70 dBA range, and high above 70 dBA.[29] Noise levels greater than 85 dBA can cause temporary or permanent hearing loss. Examples of low daytime levels are isolated, natural settings with noise levels as low as 20 dBA and quiet suburban residential streets with noise levels around 40 dBA. Noise levels above 45 dBA at night can disrupt sleep. Examples of moderate level noise environments are urban residential or semi-commercial areas (typically 55–60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher

[29] *Office of Planning and Research, State of California General Plan Guidelines, October 2003 (in coordination with the California Department of Health Services).*

levels associated with more noisy urban residential or residential-commercial areas (60–75 dBA) or dense urban or industrial areas (65–80 dBA).

It is widely accepted that in the community noise environment the average healthy ear can barely perceive CNEL noise level changes of 3 dBA. CNEL changes from 3 to 5 dBA may be noticed by some individuals who are extremely sensitive to changes in noise. A 5 dBA CNEL increase is readily noticeable, while the human ear perceives a 10 dBA CNEL increase as a doubling of sound.

Noise levels from a particular source generally decline as distance to the receptor increases. Other factors, such as the weather and reflecting or barriers, also help intensify or reduce the noise level at any given location. A commonly used rule of thumb for roadway noise is that for every doubling of distance from the source, the noise level is reduced by about 3 dBA at acoustically "hard" locations (i.e., the area between the noise source and the receptor is nearly complete asphalt, concrete, hard-packed soil, or other solid materials) and 4.5 dBA at acoustically "soft" locations (i.e., the area between the source and receptor is normal earth or has vegetation, including grass). Noise from stationary or point sources is reduced by about 6 to 7.5 dBA for every doubling of distance at acoustically hard and soft locations, respectively. Noise levels are also generally reduced by 1 dBA for each 1,000 feet of distance due to air absorption. Noise levels may also be reduced by intervening structures – generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm reduces noise levels by 5 to 10 dBA. The normal noise attenuation within residential structures with open windows is about 17 dBA, while the noise attenuation with closed windows is about 25 dBA.[30]

Table 2 lists the Federal Transit Administrations typical construction equipment noise levels at 50 feet.

Table 2. Construction Equipment Noise Generation

Equipment	Typical Noise Level (dBA) 50 ft from Source	Equipment	Typical Noise Level (dBA) 50 ft from Source
Air Compressor	81	Jack Hammer	88
Backhoe	80	Loader	85
Ballast Equalizer	82	Paver	89
Ballast Tamper	83	Pile-driver (Impact)	101
Compactor	82	Pile-driver (Sonic)	96

[30] *National Cooperative Highway Research Program Report 117, Highway Noise: A Design Guide for Highway Engineers, 1971.*

Equipment	Typical Noise Level (dBA) 50 ft from Source	Equipment	Typical Noise Level (dBA) 50 ft from Source
Concrete Mixer	85	Pneumatic Tool	85
Concrete Pump	82	Pump	76
Concrete Vibrator	76	Roller	74
Crane, Derrick	88	Saw	76
Crane, Mobile	83	Scarifier	83
Dozer	85	Scraper	89
Generator	81	Shovel	82
Grader	85	Spike Driver	77
Impact Wrench	85	Truck	88
Source: Federal Transit Administration. *Transit Noise and Vibration Impact Assessment*, 2006			

Construction activities would generate temporary noise from equipment use; the most common noise generated would be from mobile diesel equipment such as excavators, dozers, trucks, front end loaders and compactors. Activities would be restricted to the hours of 7:00 A.M. to 5:00 P.M. Monday through Friday, unless otherwise approved in writing by the Director of Public Works.

Table 2 illustrates typical noise levels from construction equipment at a reference distance of 50 feet. Noise levels from construction equipment attenuate at a rate of six dBA per doubling of distance. Therefore, the noise levels at a distance of 100 feet would be 6 dBA less than those shown in Table 2. Construction equipment would generate maximum noise levels of approximately 101 decibels (dB) at 50 feet.

Construction noise levels may periodically exceed noise standards in the existing Noise Ordinance, but the temporary noise from construction would not cause a substantial increase in ambient noise or expose sensitive receptors to unacceptable noise levels for long periods of time. Impacts associated with construction noise would cause a potentially significant, temporary increase in noise levels, but incorporation of Mitigation Measure NOISE-1 would reduce noise impacts to a less-than-significant level.

Long-term operational noise impacts would be less than significant because the conditions would be similar to existing noise levels.

Mitigation Measure NOISE–1: The City shall incorporate the following practices into the construction documents to be implemented by the project contractor:

- Construction hours shall be limited to 7:00 A.M. to 5:00 P.M. Monday through Friday, unless otherwise approved in writing by the Director of Public Works.
- Notify businesses, residences, and noise-sensitive land uses adjacent to construction sites of the construction schedule in writing. Designate the City's construction manager as responsible for responding to any local complaints about construction noise. The construction manager shall determine the cause of the noise complaints (for example starting too early, or a bad muffler) and institute reasonable measures to correct the problem. Conspicuously post a telephone number for the construction manager at the construction site.
- Maximize the physical separation between noise generators and noise receptors. Such separation includes, but is not limited to, the following measures:
  - Use heavy-duty mufflers for stationary equipment and barriers around particularly noisy areas of the site or around the entire site;
  - Where feasible, use shields, impervious fences, or other physical sound barriers to inhibit transmission of noise to sensitive receptors;
  - Locate stationary equipment to minimize noise impacts on the community; and
  - Minimize backing movements of equipment.
- Use quiet construction equipment whenever possible.
- Impact equipment (e.g., jack hammers and pavement breakers) shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically-powered tools. Compressed air exhaust silencers shall be used on other equipment. Other quieter procedures, such as drilling rather than using impact equipment, shall be used whenever feasible.
- Prohibit unnecessary idling of internal combustion engines.

b) ***Less than Significant Impact.*** Ground-borne vibration and noise is typically associated with blasting operations, the use of pile drivers, and large-scale demolition activities. The proposed project would require driving sheet piles around the new pump station location to exclude water from entering the wet well during construction. This work would be very short-term, most likely being completed in two work days. The short-term use of pile drivers in soft ground would not generate noise that would be considered excessive, especially given the project location in open space, over 0.3 miles (1,600 feet) south of the closest residence and 0.75 miles southeast of the nearest school. As such, no excessive ground-borne vibrations would be generated by the proposed project and these impacts would be less than significant.

c) ***No Impact.*** The nearest public airport to the project site is the Marin County Airport (Gnoss Field), located approximately 13 miles to the north-northwest. The project site is also located approximately 4.5 miles southeast of the private San Rafael airport. This distance precludes the possibility that the project would expose people residing or working in the project area to excessive noise in combination with aviation noise. No impacts in this regard would occur.

XIV. POPULATION AND HOUSING — Would the project:		*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*	*Source*
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)?	☐	☐	☐	☒	1
b)	Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒	1

Environmental Setting

The project site is in an open marshland area of the City of San Rafael, zoned for conservation, and surrounded by commercial, light industry, and residential land uses. There are no homes located within the project site.

Discussion of Impacts

a, b) ***No Impact.*** The project would replace an existing pump station with a new pump station directly adjacent to the current location. The pump station would improve stormwater conveyance and flood control in the surrounding commercial areas and on Highway 580 as it leads to the Richmond Bridge. The project would be constructed mainly within a previously developed gravel road and turnaround area and would not displace people or housing. As the project does not include new housing, it would not result in a substantial increase in population or housing units in the City. No impacts would occur.

XV. **PUBLIC SERVICES** — Would the project:	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*	*Source*
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 public services:					
Fire protection?	☐	☐	☒	☐	1
Police protection?	☐	☐	☒	☐	1
Schools?	☐	☐	☐	☒	1
Parks?	☐	☐	☐	☒	1
Other public facilities?	☐	☐	☐	☒	1

Environmental Setting

San Rafael Fire Department

The San Rafael Fire Department provides life safety emergency and non-emergency services in the areas of fire protection, technical rescue, emergency medical services, and disaster response. The Department operates 7 Fire Stations with 90 personnel 24/7 that provide these services within the City limits and other areas as defined through contracts and mutual aid agreements with bordering areas.

San Rafael Police Department

The San Rafael Police Department has been in existence since 1855. In its current configuration, the Chief of Police directs a staff of 65 sworn and 24 non-sworn employees. Patrol is the largest division led by a Captain and includes the Traffic Unit, SWAT team, and Foot-beat. The Support Services Captain oversees Investigations, which is comprised of one lieutenant, one sergeant and four detectives, one School Resource Officer, a one sergeant-two officer Directed Patrol Unit, Youth Services Counseling, Records, Property Evidence, Dispatch, Permits and Personnel and Training.

San Rafael City Schools

The San Rafael City Schools (SRCS) includes the San Rafael Elementary School District and the San Rafael High School District, with a total student population of nearly 7,000. The two districts are governed by one school board and one district office administration. The Elementary District is composed of nine schools. The High School District provides secondary education to students residing in two elementary districts: Dixie School District and San Rafael Elementary District. The High School District has two comprehensive 9-12 high schools (San Rafael High and Terra Linda High) and a continuation high school (Madrone High).

Parks and Recreational Facilities

The City of San Rafael has 25 City-owned parks totaling 140 acres, eight county parks totaling 532 acres, one State park with 1,640 acres and three community centers. There are 3,285 acres of open space within the city limits of San Rafael, or approximately 25 percent of the City's land area, which is owned or in part by the City of San Rafael. There is almost 7,300 acres of combined City and County open space within San Rafael's Sphere of Influence.

Discussion of Impacts

a) ***Less than Significant Impact.*** Given the proposed project would not permanently increase the existing residential or employment population in the City, the project would not result in a long-term increase in the demand for public services or require construction of new governmental facilities. The purpose of the project is to improve stormwater conveyance and flood control in the surrounding commercial and residential areas. Therefore, no impacts related to schools, parks or other public facilities would occur. There is some potential for construction activities to slow emergency response times in a temporary and minor way; however this is very unlikely given the project's location in an open area away from major roads or emergency routes. Impacts to public services would therefore be less than significant.

XVI. **RECREATION** — Would the project:	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*	*Source*
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒	1
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒	1

Environmental Setting

No parks or recreational facilities are located in the project site. The San Francisco Bay Trial is located approximately 920 feet east of the current pump station and runs over the outfall pipe as it connects to the bay.

Discussion of Impacts

a, b) ***No Impact.*** Given the proposed project would not permanently increase the existing residential or employment population in the City, the project would not increase the use of nearby recreational facilities. The purpose of the project is to improve stormwater conveyance and flood control in the surrounding commercial and residential areas and it does not include recreational facilities or require the construction or expansion of recreational facilities. Construction activities along the outfall pipe (excavating a pit to install a pressure vault at the end of the new pipe) could potentially occur within 70 feet of the San Francisco Bay Trail, but these activities would be temporary and would not disrupt or preclude recreational activities on the trail or cause frequent recreators to seek other recreational outlets. No impacts would occur.

XVII. TRANSPORTATION — Would the project:		*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*	*Source*
a)	Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐	1,2
b)	Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐	1,2
c)	Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒	1,2
d)	Result in inadequate emergency access?	☐	☐	☒	☐	1,2

Environmental Setting

The project site is located in uninhabited open space north of the Target store on Shoreline Parkway in the City of San Rafael. The current pump station is located on an unnamed, graveled turnaround area off of a levee road that connects to Francisco Boulevard East, along which an associated stormwater discharge pipe runs toward the San Rafael Bay. The area does not contain other structures or attractions that create utilization of the gravel levee road. However, the intersection of the levee road with Francisco Boulevard East is often highly trafficked, especially due to its proximity to Shoreline Boulevard and the commercial shopping centers that run along it, including Home Depot and Target, and its connection to the Richmond-San Rafael Bridge. The only pedestrian or bicyclist facility in the vicinity of the project area is the San Francisco Bay Trail, which runs along the east side of the project site adjacent to San Rafael Bay; however, the proposed work would be contained to an area outside of the 100-foot shoreline band, and would therefore stop short of the bay trail.

The San Rafael General Plan 2020 Circulation Element calls out San Rafael's circulation needs in the following categories: roadway improvements, school transportation, transit users, transit services, paratransit services, bicycle and pedestrian facilities, parking facilities, airport facilities, and funding needs. It also identifies the City's main highways and arterials. Highway 580, 0.32 miles southwest of the project site, is the closest highway. Francisco Boulevard East (0.3 miles southwest) and Bellam Boulevard (0.5 miles northwest) are the closest major arterial roads to the project site. Bellam Boulevard is the main route allowing vehicles access to the residential neighborhood to the north of the open marsh area in which the project site is located, and Francisco Boulevard is the only road to which the levee road used for accessing the project site

actually connects. Lastly, Kerner Boulevard, which creates access to the commercial and light industrial areas to the northwest and southeast of the project vicinity, is a minor arterial road.

Discussion of Impacts

a) ***Less than Significant Impact.*** A significant impact may occur if the adopted California Department of Transportation (Caltrans) and Marin County Congestion Management Agency (CMA) thresholds for a significant project impact would be exceeded. To address the increasing public concern that traffic congestion is impacting the quality of life and economic vitality of the State of California, the Congestion Management Program (CMP) was enacted by Proposition 111. The CMP designated a transportation network including all State highways and some arterials within the County to be monitored by local jurisdictions. If the LOS standard deteriorates on the CMP network, then local jurisdictions must prepare a deficiency plan to be in conformance with the CMP program.

As discussed above, the proposed project would not permanently increase traffic on local roads or highways. The project would maintain all lanes of traffic on all main roads at all times during construction. The proposed project would not result in long-term traffic increases. Impacts would be less than significant.

b) ***Less than Significant Impact.*** A significant impact may occur if the proposed project were to be inconsistent with provisions outlined in CEQA Guidelines section 15064.3, subdivision (b), which sets forth criteria for analyzing transportation impacts. Under the CEQA Guidelines, a lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including a qualitative analysis.

The proposed project would have no impacts whatsoever on vehicle miles traveled in and around the project site on an operational level. The pump station would require very little maintenance once it is operational, and that which it would require would be consistent with current baseline conditions.

Construction traffic (equipment and materials transport and daily worker traffic) would slightly increase traffic on local roads during the temporary construction phase of the proposed project. Temporary construction traffic would be limited to equipment delivery and material transport, and a few employee vehicles on a daily basis, which would be parked on-site at the gravel turnaround and out of the way of main streets. The temporary construction-related traffic would not result in a noticeable increase in traffic on local roads. Vehicles transporting equipment and materials to the project site could cause slight delays for travelers as the construction vehicles slow to turn onto the levee access road from Francisco Boulevard East, but no temporary lane closures or detours would be required. Control measures to warn pedestrians and bicyclists that use the gravel levee road for recreational purposes, as described in the project description, would be in place during the construction phase to alert motorists to potential delays. These measures would include advance warnings signs such as reflective signs, changeable message boards,

cones, and/or barricades. With these measures and the temporary nature of construction-related traffic, impacts on traffic would be less than significant.

c) ***No Impact.*** A significant impact may occur if a project were to include a new roadway design, introduce a new land use or permanent project features into an area with specific transportation requirements and characteristics that have not been previously experienced in that area, or if project access or other features were designed in such a way as to create hazardous conditions. The proposed project does not require features or structures that are not already characteristic of the baseline condition. The project site already contains a pump station, and the new pump station would be placed immediately adjacent in the same uninhabited, open space, gravel area off of main roads. The outfall pipe would be sliplined into the existing pipe, such that no changes to the character of the area would be created. The proposed work would not bring new traffic or travel to the area or introduce design features that are not already present, and the proposed uses are the same as those that area already in place and are therefore compatible. No impacts would occur in this area.

d) ***Less than Significant Impact.*** The proposed project is located at the end of a private dirt road and is not near or within any designated emergency access routes. During the temporary construction period, minor delays due to slower moving construction vehicle traffic may be experienced for emergency access to the residences to the north of the open marshland in which project work would occur. All lanes would remain open on all roads and no detours would be required, as all work is contained in the isolated gravel turnaround of the current pump station. As stated in the standard construction BMPs outlined in the Project Description, the City or its contractor would notify and coordinate with law enforcement and emergency service providers prior to the start of construction to ensure minimal disruption to service during construction. Due to this and the short-term nature of the construction, impacts would be less than significant.

XVIII. TRIBAL CULTURAL RESOURCES — Would the project?		*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*	*Source*
a)	Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of 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 Public Resources Code section 5020.1(k)?	☐	☒	☐	☐	1
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 Public Resources Code section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐	1

Environmental Setting

The Native American Heritage Commission (NAHC) was contacted via email to request a review of the Sacred Lands file and to request a list of Native American contacts in this area. The response letter dated March 4, 2019 by Steven Quinn (NAHC Staff Services Analyst) indicated that the search of the Sacred Lands File had a positive result. The NAHC response letter identified two Native American individuals (Gene Buvelot and Greg Sarris) associated with the Federated Indians of the Graton Rancheria (FIGR) that may have knowledge of cultural resources within the project area.

Federated Indians of the Graton Rancheria
6400 Redwood Drive, Suite 300
Rohnert Park, CA 94928

On January 31, 2019 consultation letters were sent to both Native American individuals listed by the NAHC; as the City has worked with FIGR on other projects, they had contact information to send letters before hearing back from the NAHC. In a letter dated February 28, 2019, Buffy McQuillen, Tribal Historic Preservation Officer with the Federated Indians of the Graton Rancheria, responded to state that the Tribe requests formal consultation for the project.

On April 23, 2019, Theo Sanchez, City of San Rafael, provided the draft Archaeological Survey Report to Buffy McQuillen for review and comment. Later that day, Buffy McQuillen replied by email to provide comments on the draft report.

On May 7, 2019, Alex DeGeorgey spoke with Buffy McQuillen over the phone to discuss her comments on the draft report. Buffy stated that the positive results from the Sacred Lands File are the prehistoric shell mound sites that are documented in the vicinity of the project area. No Sacred Sites are present within the project area proper. Ms. McQuillen requested that the tribe be contacted if previously unidentified cultural resources are discovered during project implementation.

To date, no additional communications have been completed. Attachment B (Native American Consultation) of Appendix C (Archaeological Survey Report and Historic Resource Evaluation Report) provides documentation of Native American correspondences.

Regulatory Setting

Assembly Bill 52

In September 2014, the California Legislature passed Assembly Bill ("AB") 52, which added provisions to the Public Resources Code ("PRC") concerning the evaluation of impacts on tribal cultural resources under CEQA, and consultation requirements with California Native American tribes. In particular, AB 52 now requires lead agencies to analyze a project's impacts on "tribal cultural resources," separately from archaeological resources (PRC Section 21074; 21083.09). Under AB 52, "tribal cultural resources" include "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" that are either (1) listed, or determined to be eligible for listing, on the state or local register of historic resources; or (2) a resource that the lead agency chooses, in its discretion, to treat as a tribal cultural resource (PRC Section 21074).

AB 52 also requires lead agencies to engage in additional consultation procedures with respect to California Native American tribes (PRC Sections 21080.3.1, 21080.3.2, 21082.3). If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document must discuss (1) whether the proposed project has a significant impact on an identified tribal cultural resource and (2) whether feasible alternatives or mitigation measures avoid or substantially less the impact on the identified tribal cultural resource (PRC Section 21082.3(b)). Finally, AB 52 required the Office of Planning and Research to update Appendix G of the CEQA Guidelines by July 1, 2016 to provide sample questions regarding impacts to tribal cultural resources (PRC Section 21083.09). AB 52's provisions apply to projects that have a notice of preparation filed on or after July 1, 2015.

California Register of Historical Resources

Criteria for important historical resources on the California Register or historic properties on the National Register are as follows:

1 Is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California.
2 Is associated with the lives of persons important to local, California history.
3 Embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of a master or possess high artistic values.
4 Has yielded, or may be likely to yield, information important to the pre-history or history of the local area or California.

Discussion of Impacts

a-i, ii) ***Less than Significant with Mitigation Incorporated***. Review of historic registers and inventories indicate that no historical resources are present in the project area. No state, local, or National Register-listed or eligible properties are located with the 0.5-mile visual area of the APE. Review of the Sacred Land file by the NAHC identified the presence of a cultural resource within the project vicinity and recommended consultation with FIGR for more information. This consultation was completed via phone calls, emails, and cultural report reviews with FIGR Tribal Historic Preservation Officer, Buffy McQuillen. Consultation revealed that no Sacred Sites are present within the project area proper; however, as there is always some potential to uncover previously buried cultural resources, the tribe requested to be contacted if previously unidentified cultural resources are discovered during proposed project activities.

Furthermore, per Public Resources Code 5097.98 and Health and Human Safety Code 7050.5, if human remains are encountered, excavation or disturbance of the location shall be halted in the vicinity of the find, and the County Coroner contacted. If the Coroner determines the remains are Native American, the Coroner shall contact the Native American Heritage Commission, who shall identify the person or persons believed to be most likely descended from the deceased Native American in order to provide guidance on handling the remains.

Implementation of Mitigation Measure CULT-1 in Section V, along with compliance with State law, would ensure that impacts to tribal cultural resources remain less than significant.

XIX. UTILITIES AND SERVICE SYSTEMS — Would the project:		*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*	*Source*
a)	Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐	1
b)	Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐	1
c)	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐	1
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?	☐	☐	☒	☐	1
e)	Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐	1

Discussion of Impacts

a) ***Less than Significant Impact.*** The proposed project calls for replacement of the deteriorated storm drainage pipe that discharges water pumped from the current pump station into the San Rafael Bay. The outfall pipe has leaks and breaks in two separate locations where trenches would need to be cut to repair the existing pipe. However, the rest of the pipe would be replaced via sliplining a new 48-inch-diameter drainage pipe inside the existing 60-inch-diameter pipe. The project therefore does not require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage. The proposed project would not require much power, but an on-site

generator would provide any needed electricity. No other utilities or telecommunication facilities would be required or affected. Less that significant impacts would occur.

b, c) ***Less than Significant Impact.*** Neither construction nor operation of the project would generate wastewater or consume potable water. The project would repair or replace a pump station and storm drainage pipe. As the proposed project does not have an element that would increase the residential or employment population of the area and, in essence, replaces structures and function that are currently present and operational, there would be less than significant impacts related to water supply, wastewater treatment capacity, or infrastructure.

d, e) ***Less than Significant Impact.*** The project would generate soil spoils and solid waste from removal of pavement and concrete structures comprising the existing pump station to be demolished. The 312 cubic yards of net cut soil would be stored on-site and allowed to revegetate. Other solid waste would be properly disposed of or recycled in a nearby landfill or approved disposal facility with capacity to receive the waste. Any materials used during construction would be properly disposed of in accordance with federal, state, and local regulations. Impacts related to solid waste facilities, statutes, and regulations would be less than significant.

XX. **WILDFIRE** — If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:		*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*	*Source*
a)	Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐	1,2
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?	☐	☐	☒	☐	1,10
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?	☐	☐	☒	☐	1
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?	☐	☐	☒	☐	1,10

Environmental Setting

The project site is not with the Wildland Urban Interface and is therefore not designated as a Very High Severity Zone per the San Rafael Fire Department.[31] The proposed project site is within an open marshland area, with very little slope.

Discussion of Impacts

a-d) ***Less than Significant Impact.*** The proposed project would not impair an adopted emergency response plan or emergency evacuation plan due to its location in an open area, away from residences, business, and major roads. The project site is flat, outside the Wildland Urban Interface, and is not considered a High Severity Zone for wildfire. The project is replacing an existing structure, and therefore does not require installation of additional utility infrastructure over the current baseline condition. The proposed project would pose less than significant impacts related to exacerbating or exposing people to wildfire risk.

[31] https://www.cityofsanrafael.org/prepare-for-wildfire/. *Accessed 4/30/2019.*

XXI. MANDATORY FINDINGS OF SIGNIFICANCE	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*	*Source*
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐	1
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☒	☐	☐	1
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐	1

Discussion of Impacts

a) ***Less than Significant with Mitigation Incorporation.*** The incorporation of the mitigation measures included in Section IV (Biological Resources) would reduce potential impacts to a less-than-significant level. The project site does not contain any resource listed in, or determined to be eligible by, the State Historical Resource Commission and does not contain a resource included in a local register of historic resources or identified as significant in a historical resource survey. Additionally, the project site does not contain any object, building, structure, site, area, place, record, or manuscript that a lead agency determined to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California. However, cultural resources could potentially be uncovered during construction. Mitigation measures included in Section V (Cultural Resources) would reduce potential impacts to a less-than-significant level.

b) ***Less Than Significant with Mitigation Incorporation.*** Cumulatively considerable means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. The analysis within this Initial Study demonstrates that the project would not have any individually limited, but cumulatively considerable impacts. As presented in the analysis in Biological Resources, Cultural Resources, Hazards and Hazardous Materials, Noise, and Tribal Cultural Resources sections, any potentially significant impacts would be less than significant after mitigation. Due to the limited scope of direct physical impacts to the environment associated with construction, the project's impacts are project-specific in nature. Compliance with the conditions of approval issued for the proposed development would further assure that project-level impacts would not be cumulatively considerable. Consequently, the project along with other cumulative projects would create a less than significant cumulative impact with respect to all environmental issues.

c) ***Less Than Significant Impact.*** With implementation of the construction measures and BMPs discussed in the Project Description, the project would not result in substantial adverse effects to human beings, either directly or indirectly.

CHECKLIST INFORMATION SOURCES

1. Professional judgment and expertise of the environmental/technical specialists evaluating the project, based on a review of existing conditions and project details, including standard construction measures and technical reports
2. City of San Rafael General Plan, 2004
3. California Department of Transportation, 2012
4. California Department of Conservation, 2016
5. U.S. Fish and Wildlife Service, California Department of Fish and Game, and California Native Plant Society species lists
6. Natural Resources Conservation Service, 2017
7. Federal Emergency Management Agency, 2016
8. California Department of Conservation, 2015
9. City of San Rafael Noise Ordinance
10. ABAG Hazards Mapping, 2019
11. Bay Area Air Quality Management District, 2010
12. USGS Mineral Resources Data System, 2011
13. Biological Resources Memorandum, WRA 2019
14. Archaeological Survey Report and Historic Resource Evaluation Report, Alta 2019
15. San Quentin Pump Station Basis of Design Report and Appendices, CSW|Stuber-Stroeh, 2018

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