# ADMINISTRATIVE DRAFT
# INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

## CAMP ROBERTS HIGH WATER BRIDGE MAINTENANCE, ACCESS ROAD CONSTRUCTION, AND BENT FOUNDATION REPAIR PROJECT
## CAMP ROBERTS, CALIFORNIA

**Project No. 1802-1931**

**Prepared for:**

California Army National Guard
U.S. Highway 101
San Miguel, California 93451
Attn: Bill Kendall, Project Manager, J9
California Military Department Facilities and Engineering

**Prepared by:**

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**MARCH 2023**

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ENGINEERS, GEOLOGISTS & ENVIRONMENTAL SCIENTISTS

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## APPENDICES

## LIST OF ACRONYMS

| | |
|---|---|
| AB | Assembly Bill |
| Ac | acre |
| AR6 | Sixth Assessment Report |
| AQMP | Air Quality Management Plan |
| BA | Biological Assessment |
| bgs | Below ground surface |
| BMP | Best Management Practices |
| CAAQS | California Ambient Air Quality Standards |
| CAARNG | California Army National Guard |
| CalEEMod | California Emissions Estimator Model® |
| CAL FIRE | California Department of Forestry and Fire Protection |
| CARB | California Air Pollution Control Board |
| CCRWQCB | Central Coast Regional Water Quality Control Board |
| CDFW | California Department of Fish and Wildlife |
| CEQA | California Environmental Quality Act |
| CGOPR | California Governor's Office of Planning and Research |
| $CH_4$ | Methane |
| CHP | California Highway Patrol |
| CGS | California Geologic Survey |
| CNDDB | California Natural Diversity Database |
| CNEL | Community Noise Level Equivalent |
| CNPS | California Native Plant Society |
| CO | Carbon Monoxide |
| $CO_2$ | Carbon Dioxide |
| $CO_2e$ | $CO_2$ equivalents |
| County | Monterey County |
| dB | decibels |
| dBA | A-weighted Decibel |
| DPS | Distinct Population Segment |
| DTSC | Department of Toxic Substances Control |

| | |
|---|---|
| DWR | Department of Water Resources |
| EIR | Environmental Impact Report |
| EMFAC | Emission Factors |
| ESMC | Endangered Species Management Component |
| FEMA | Federal Emergency Management Agency |
| GAMA | Groundwater Ambient Monitoring and Assessment |
| GHG | Greenhouse Gas |
| GSA | Groundwater Sustainability Agencies |
| HWB | High Water Bridge |
| IPaC | Information Planning and Consultation |
| IPCC | Intergovernmental Panel on Climate Change |
| INRMP | Integrated Natural Resource Management Plan |
| IS | Initial Study |
| lb | pounds |
| Ldn | Day-Night Average Sound Level |
| Leq | Equivalent Sound Level |
| Lmax | Maximum Sound Level |
| MBARD | Monterey Bay Air Resources District |
| MCURA | Monterey County Water Resources Agency |
| mg/L | Milligrams per Liter |
| MM | Mitigation Measure |
| MND | Mitigated Negative Declaration |
| $MTCO_2e$ | Carbon Dioxide Equivalent GHG Emissions |
| N2O | Nitrous Oxide |
| NAAQS | National Ambient Air Quality Standards |
| NCCAB | North Central Coast Air Basin |
| NMFS | National Marine Fisheries Service |
| NO2 | Nitrogen Dioxide |
| NOx | Oxides of Nitrogen |
| NPDES | National Pollutant Discharge Elimination System |
| NRCS | Natural Ressources Conservation Service |

| | |
|---|---|
| NRHP | National Register of Historic Places |
| $O_3$ | Ozone |
| OPR | Office of Planning and Research |
| PFAS | Polyfluoroalkyl Substances |
| PG&E | Pacific Gas and Electric |
| PM2.5 | Particulate Matter with w Diameter of 2.5 Microns or Less |
| PM10 | Particulate Matter with a diameter of 10 Microns or Less |
| PMOA | Programmatic Memorandum of Agreement |
| ppm | Parts Per Million |
| PPV | Peak Particle Velocity |
| PWSP | Project Work and Safety Plan |
| ROG | Reactive Organic Gases |
| RV | Recreational Vehicle |
| RWQCB | Regional Water Quality Control Board |
| Qa | Holocene age alluvial clay and sand of valley areas |
| Qg | Holocene age alluvial gravel and stream channels |
| Qoa2 | Quaternary age alluvial terrace deposits |
| SB | Senate Bill |
| SCAQMD | South Coast Air Quality Management District |
| SCCC | South Central California Coast |
| SHPO | State Historic Preservation Officers |
| SO2 | Sulfur Dioxide |
| Sq.ft | Square Foot/Feet |
| SWPPP | Storm Water Pollution Prevention Plan |
| SWRCB | State Water Resources Control Board |
| SYBCI | Santa Ynez Band of Chumash Indians |
| TDS | Total Dissolved Solids |
| USACE | United States Army Corps of Engineers |
| USEPA | United States Environmental Protection Agency |
| USFWS | United States Fish and Wildlife Service |
| USGS | United States Geological Survey |
| VMT | Vehicle Miles Traveled |

## INITIAL STUDY SUMMARY

1. **Project Title:** Camp Roberts High Water Bridge Maintenance, Access Road Construction, and Bent Foundation Project
2. **Lead Agency Name and Address:** California Army National Guard
   U.S. Highway 101
   San Miguel, California 93451
3. **Contact Person and Phone Number:** Bill Kendall, Project Manager, J9
   California Military Department Facilities and Engineering
   (916) 854-1948
4. **Project Location:** Camp Roberts Military Training Site
   San Luis Obispo and Monterey Counties
   California
5. **Project Sponsor's Name and Address:** California Army National Guard
   U.S. Highway 101
   San Miguel, California 93451
6. **General Plan Designation(s):** PQP – Public Quasi-Public
7. **Zoning Designation(s):** PQP – Public Quasi-Public
8. **Description of Project:**

   Refer to Project Description below.

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

   The Project site is surrounded by the Camp Roberts military base and training areas.

10. **Other Public Agencies Whose Approval is Required:**

    Refer to Table 1-2 Project Approvals and Permits.

11. **Have California Native American tribes traditionally and culturally affiliated with the Project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?**

    Refer to Section 3.5 Cultural Resources and Section 3.18 Tribal Cultural Resources.

# 1.0 PROJECT DESCRIPTION

The California Army National Guard (CA ARNG) is proposing the Camp Roberts High Water Bridge Maintenance, Access Road Construction, and Bent Foundation Repair Project (Project), located within Camp Roberts Military Base in San Luis Obispo and Monterey Counties, California.

## 1.1 PROJECT LOCATION

The Project site is located along the Nacimiento River, within the north central section of Camp Roberts, approximately four miles southeast of the town of Bradley, Monterey County, California (Bradley NE 7.5-minute United States Geological Survey [USGS] quadrangle) (Figure 1-1). The Nacimiento River originates in the coastal mountains of San Luis Obispo County and flows northeast to the Salinas River in Monterey County, which ultimately leads to the Pacific Ocean. The Nacimiento River within Camp Roberts was altered by the installation of the Nacimiento Dam in 1957, approximately ten miles above the confluence with the Salinas River.

## 1.2 PROJECT SITE HISTORY

The High Water Bridge (HWB) is an important piece of infrastructure at Camp Roberts as it provides direct access between the various ranges on the west side of the Nacimiento River and the Main Garrison on the east side. Without the HWB, soldiers would have to detour approximately eight miles upstream to the Low Water Bridge to access the ranges from the Main Garrison, which decreases training time and increases fuel consumption. More importantly, the HWB is the most direct; therefore, fastest route to and from the ranges for emergency services. Without use of the HWB, the response time to reach a soldier injured at one of the ranges increases substantially.

The HWB is approximately 560 feet long and is built primarily from large, treated timbers. The wooden bridge deck is supported by wooden columns that rest on 36 concrete foundations or bents. The concrete foundations are supported by timber piles driven to an unknown depth into the riverbed. Under normal flow conditions, the Nacimiento River flow is typically limited to between five foundations near the center of the bridge but under flood conditions, flow can occur across the full width of the river channel. Bridge refurbishment in 2016 included installing a new deck and replacing damaged or decayed structural members. After the HWB was refurbished, but before the 2016-2017 wet season, tree limbs and other water-borne debris that had accumulated on the upstream side of the bridge piers was removed under an emergency permit issued by the United States Army Corps of Engineers (USACE) and the Central Coast Regional Water Quality Control Board (CCRWQCB). The accumulated debris appears to have impeded flow beneath the HWB, in particular forcing flow beneath and around the accumulated debris, resulting in increased turbulence and flow velocities. The resulting scour significantly undermined certain of the concrete foundations, or possibly exacerbated an existing condition that may have been unobserved or unknown.

Currently, the upstream ends of four of the 36 foundations in the waterway are undermined from about one-third to the entirety of their length. The depth of undermining at the upstream end has resulted in a three-to-five-foot gap between the underside of the foundation and the streambed (Figure 1-2). This condition greatly jeopardizes the structural integrity of the bridge

and must be remedied before the bridge suffers irreparable damage or the structure fragments into the riverbed.

## 1.3 PROJECT DESCRIPTION

The Project consists of several distinct components including access road construction (temporary and permanent), fire break establishment and annual vegetation maintenance, HWB bent foundation repairs and maintenance, and wetland mitigation (refer to Figure 1-3). The temporary access road would be constructed and used for equipment and vehicle access to the southwest bank area of the Nacimiento River during the Project and would be returned to natural conditions after completion of Project activities. The permanent access road would be constructed with an approximately six-inch layer of gravel and used for equipment and vehicle staging and access to the east bank of the Nacimiento River during the Project and would include a turn-around area. The permanent access road would remain in place to provide equipment and vehicle access for future firebreak vegetation removal and ongoing HWB maintenance activities. The permanent access road would result in loss of wetland habitat and therefore the creation of new wetland habitat has been included in the Project to offset wetland impacts.

Four distinct fire break areas would be established in the northwest, southwest, northwest, and southwest quadrants of the HWB to reduce the amount of vegetation fuels in the vicinity of the HWB. Initial fire break establishment would consist of vegetation clearing during the Project and would continue annually as needed.

Bent foundation repairs would coincide with construction of the temporary and permanent access roads and initial establishment of fire break areas. The purpose of the bent foundation repair is to maintain the HWB structural integrity. Currently, debris is lodged up against the HWB bent foundations, causing further erosion from under the bent footings. The HWB foundations are being undermined by the scour effect of turbulent waters being caused by debris buildup on the upstream side of the foundation bents. In some locations, there is a three-to-five-foot gap between the underside of the bridge foundations and the streambed. Removal of the debris and repair of the bent foundations would extend future use of the HWB for training activities and emergency response for Camp Roberts. HWB bent foundation repair activities would include Nacimiento River diversion, Project area dewatering, debris removal, concrete footing repair, and streambed material replacement and restoration. Once bridge bents are repaired, routine maintenance such as debris removal would occur, as needed. The following sections provide further details of the Project component activities.

### 1.3.1 Contractor Staging Areas

Contractor staging areas will be located just north and south of the HWB on the eastern side of the Nacimiento River and north of the HWB on the western side of the Nacimiento River (refer to Figure 1-4). Staging areas will be used for all aspects of Project construction.

### 1.3.2 Access Roads

#### 1.3.2.1 Temporary Access Road

A temporary dirt access road would be constructed to perform HWB bent foundation repairs on the western bank of the Nacimiento River. The temporary access road is expected to be approximately 20 feet in width and extend from Tower Road to the western bank of the

Nacimiento River (Figure 1-5). The temporary access road is anticipated to be constructed by clearing and grubbing any existing vegetation within the area. Minor earth movement may be required to remove small holes or mounds to provide a smooth earthen travel surface for construction equipment into the bent foundation repair work area.

Equipment used to construct the temporary access road may include a bush hog to remove vegetation and a backhoe loader to define a smooth travel surface. It is not expected that compaction of the access path would be required prior to use by construction activities, although compaction along the temporary access road would occur as construction equipment moves into and out of the Nacimiento River during HWB bent foundation repair activities. The temporary access road would be returned to pre-Project, natural conditions after completion of Project activities.

#### 1.3.2.2 Permanent Access Road

A permanent gravel access road would be constructed to provide access for HWB bent foundation repairs and to facilitate debris removal and other future maintenance activities for the bridge and adjacent embankments on the eastern bank of the Nacimiento River (refer to Figure 1-5). The access road would be 330 feet long and 15 feet wide with a maximum turn-around radius of 10,600 square feet, for a total area of 15,550 square feet. The access road would be maintained with gravel substrate and used for annual vegetation removal and bridge maintenance.

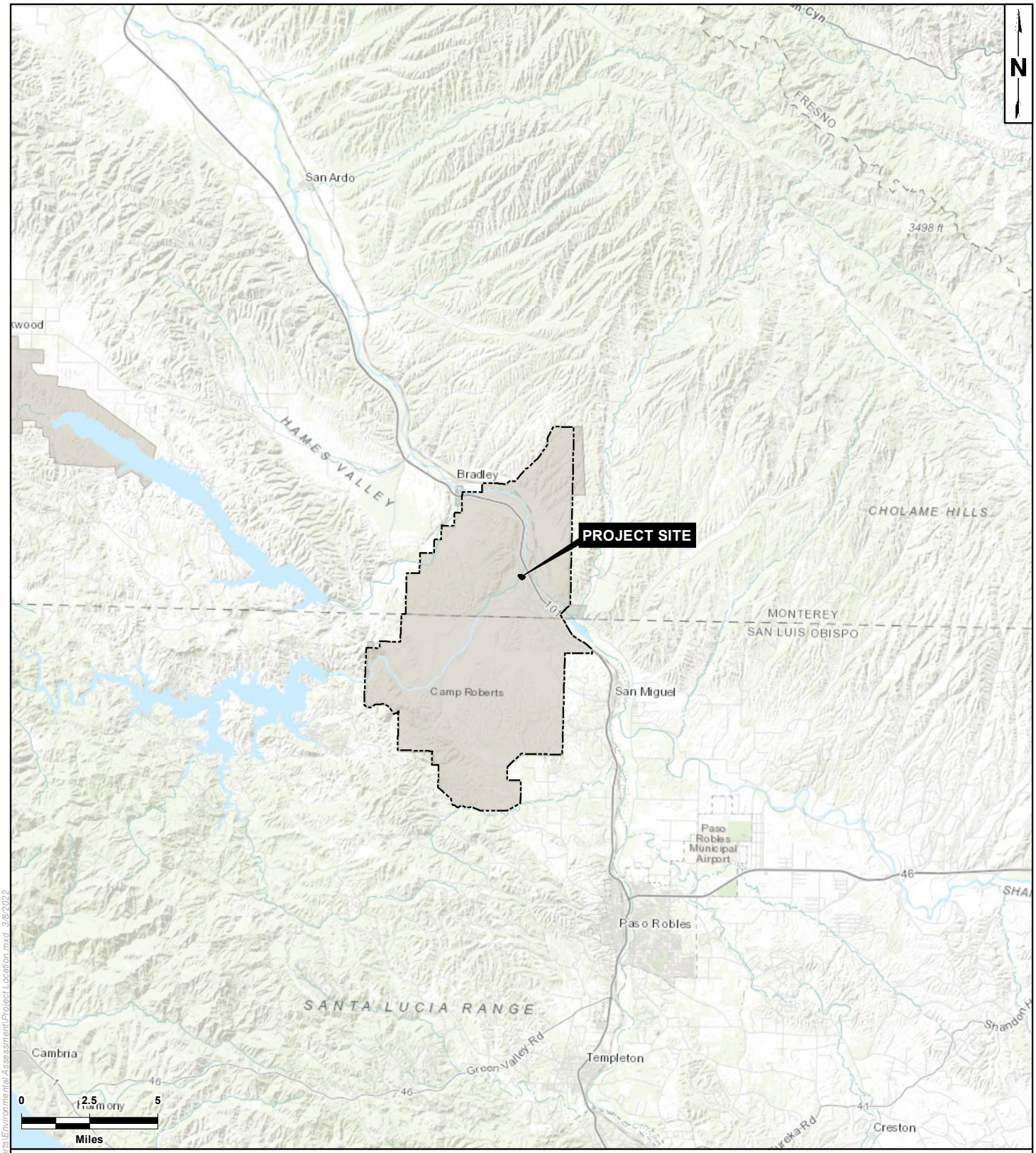
Construction of the access road would require 750 cubic yards of excavation to clear and grub the construction area of vegetation, debris, and rocks. A total of 850 cubic yards of fill material would be used to construct the access road, including 350 cubic yards of gravel base. The gravel base would consist of 6-inch thick 0.75-inch crushed rock with a minimum of 6-inch thick geocell. Construction of the access road would take approximately one month (20 days).

Equipment required to construct the access road would include, but not be limited to, a front-end loader to move soil, an excavator to pick up debris, a dump truck to haul off debris and import soil and gravel, compactor and/or roller, and use of a water truck for dust control.

Access road construction would impact riparian and upland vegetation communities as discussed in Section 3.4. The access road would impact a restoration area that was signed-off as complete by the CCRWQCB on February 18, 2022. The restoration project restored riparian and upland habitat that had been disturbed during previous bridge maintenance activities. The access road would help prevent unauthorized impacts during routine maintenance activities.

#### 1.3.2.3 Wetland Mitigation

The permanent gravel access road would impact riparian and wetland vegetation communities and therefore creation of riparian and wetland habitat has been included in the Project to offset impacts. The mitigation for the permanently impacted area will include removal of man-made barriers, concrete fill, and debris within and adjacent to the Project site, to lower the elevation and create additional aquatic habitat. This approach will result in approximately 1.24 acres of created aquatic habitat located within and adjacent to the Project disturbance footprint. This habitat conversion mitigation strategy is proposed to increase the aquatic resource area and function within the Project vicinity.




LEGEND:

Project Footprint  Camp Roberts Boundary

MAP EXTENT:


*Source: Esri Online Topo Basemap, Avocet*
*Coordinate System: NAD 1983 StatePlane California IV FIPS 0404 Feet*
*Notes: This map was created for informational and display purposes only.*

padre associates, inc.
ENGINEERS, GEOLOGISTS & ENVIRONMENTAL SCIENTISTS

PROJECT NAME:
CAMP ROBERTS HIGH WATER BRIDGE
MONTEREY COUNTY, CA

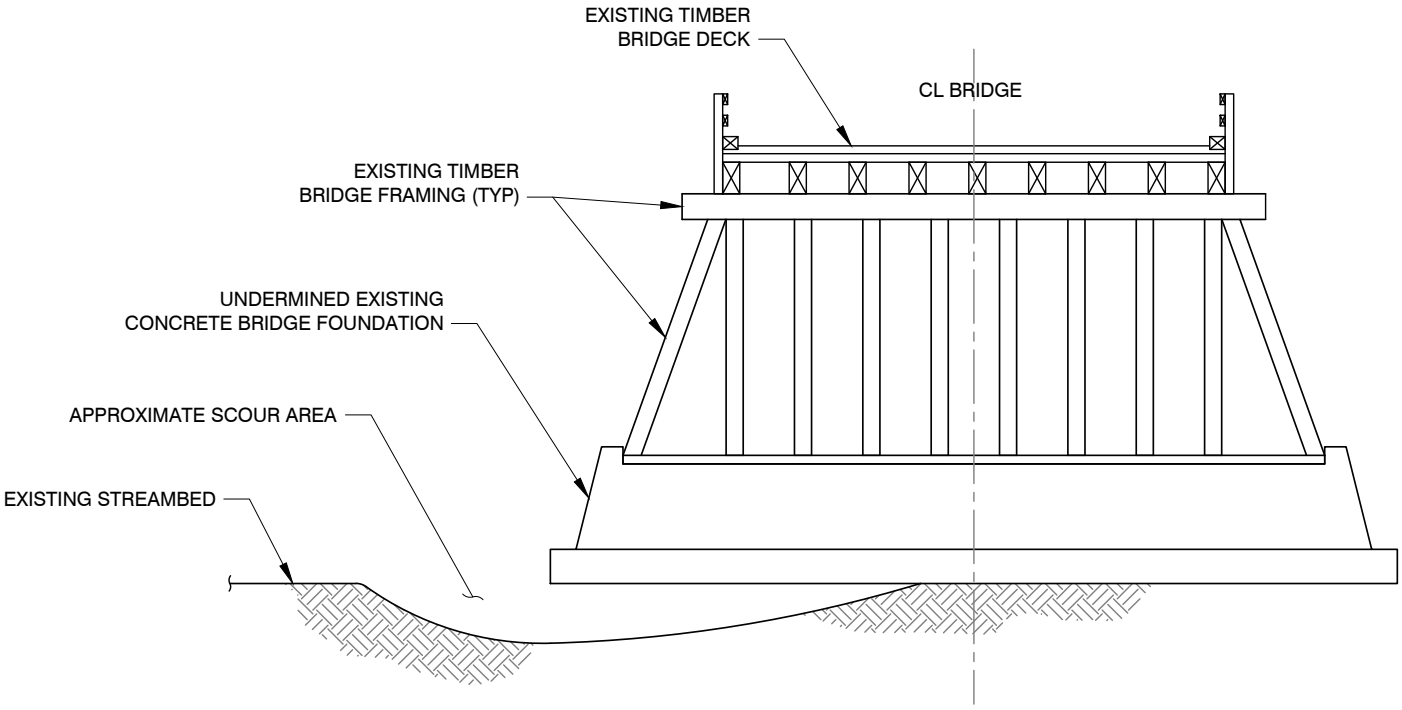
PROJECT NUMBER: 1802-1931

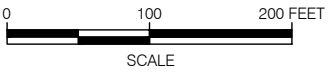
DATE: March 2022

# PROJECT LOCATION

FIGURE 1-1

Z:\GIS Projects\GIS Maps\Map Projects\Camp Roberts\Environmental Assessment\Project Location.mxd 3/8/2022




*Source: Avocet March 2022*
*Notes: This map was created for informational and display purposes only.*

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| PROJECT NAME: | | |
|---|---|---|
| CAMP ROBERTS HIGH WATER BRIDGE<br>MONTEREY COUNTY, CA | | |
| PROJECT NUMBER: | DATE: | |
| 1802-1931 | March 2022 | |

DEPICTION OF THE UNDERMINING UNDER THE HIGH WATER BRIDGE

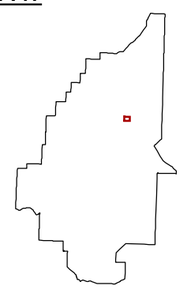
FIGURE
1-2

Z:\GIS Projects\GIS Maps\Map Project\Camp Roberts\Environmental Assessment\Depiction of the Undermining Under the HWB mxd 3/8/2022


LEGEND:

- Maintenance Access Road
- Temporary Construction Access Path
- Approximate Bridge Repair Area
- Fire Break
- Proposed Freshwater Emergent Wetland (0.22 ac)
- Proposed Freshwater Forested/Shrub (1.02ac)
- Project Boundary

MAP EXTENT:



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*Source: Esri Online Imagery Basemap, Avocet*
*Coordinate System: NAD 1983 StatePlane California IV FIPS 0404 Feet*
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PROJECT NAME:
CAMP ROBERTS HIGH WATER BRIDGE
MONTEREY COUNTY, CA

PROJECT NUMBER: 1802-1931

DATE: January 2023

# HIGH WATER BRIDGE PROJECT AREAS

FIGURE 1-3

Z:\GIS Projects\GIS Maps\Map Project\Camp Roberts\Environmental Assessment\High Water Bridge Proposed Action Areas.mxd 1/19/2023

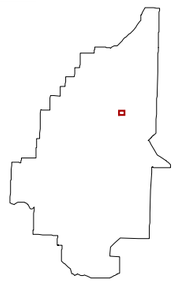

N

LEGEND:

Staging Area

Project Boundary

MAP EXTENT:



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PROJECT NAME:
CAMP ROBERTS HIGH WATER BRIDGE
MONTEREY COUNTY, CA

PROJECT NUMBER: 1802-1931

DATE: September 2022

# CONSTRUCTION STAGING AREAS

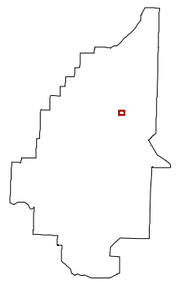
FIGURE 1-4

Z:\GIS Projects\GIS Maps\Map Project\Camp Roberts\Environmental Assessment\Construction Staging Areas.mxd 9/22/2022


LEGEND:

- Maintenance Access Road
- Temporary Construction Access Path
- Project Boundary

MAP EXTENT:



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PROJECT NAME:
CAMP ROBERTS HIGH WATER BRIDGE
MONTEREY COUNTY, CA

PROJECT NUMBER: 1802-1931

DATE: September 2022

# ACCESS ROADS

FIGURE 1-5

Z:\GIS Projects\GIS Maps\Map Project\Camp Roberts\Environmental Assessment\Access Roads.mxd 9/22/2022

### 1.3.3 Fire Break/Annual Vegetation Maintenance

Four fire breaks would be established adjacent to the HWB (refer to Figure 1-6). Initial establishment would include vegetation trimming and removal to a maximum of three feet in height. Vegetation maintenance would occur on an annual basis in September or later, outside of nesting bird season (February 1 through August 31). The dimensions of the four fire breaks include:

- Northwest bank – 125 feet by 25 feet (3,125 square feet [sq.ft.], 0.072 acres [ac])
- Southwest bank – 132 feet 7 inches by 25 feet (3,314.58 sq.ft., 0.076 ac)
- Northeast bank – 331 feet 6 inches by 25 feet (8,287.5 sq.ft., 0.190 ac)
- Southeast bank – 324 feet 6 inches by 25 feet (8,112.5 sq.ft., 0.186 ac)

Vegetation removal will be conducted in accordance with the Camp Roberts Integrated Natural Resources Management Plan. Vegetation within the fire break areas would be maintained by hand or through use of a tracked excavator with a brush hog attachment and low impact road tracks. The tracked excavator would drive into the fire break areas on both sides of the bridge and would grind-up/mulch the brush and trees in place down to a height of about four to six inches in order maintain the three-foot maximum height of vegetation. Areas of the fire breaks that are not accessible to the excavator will be maintained with hand tools such as weed whips, chainsaws, and loppers.

### 1.3.4 Bent Foundation Repair and Maintenance

The bent foundation repair would coincide with construction of the access road and fire break areas. Future maintenance activities would occur as needed.

#### 1.3.4.1 Nacimiento River Diversion and Project Area Dewatering Activities

**Nacimiento River Diversion.** Bent foundation repair would require a diversion to isolate the Nacimiento River from flowing or standing surface waters from the duration of in-channel construction work. The Project is anticipated to incorporate an open channel, partial width, configuration where water is constrained to a portion of the existing river channel width while the remainder of the channel is kept dry for construction work. In order to minimize disturbance, the proposed diversion method will be limited to cofferdams, sheet-pile system, or a combination thereof to isolate the construction work area from the river.

Construction within the Nacimiento River will be limited between June 15 and October 15, or as restricted by agency permit conditions. Water diversion structures will be installed immediately prior to the beginning of work within the riverbanks and will be removed upon completion of construction work. It is anticipated that Project construction will occur in two phases with the first phase focused on the eastern portion of the bridge foundations and the second phase focused on the western portion of the bridge foundations.

Prior to in-water construction activities, the water diversion comprised of cofferdams, sheet-pile system, or combination will be installed to fully enclose the construction area (Figure 1-7 and Figure 1-8). Plastic sheeting may be used to minimize water seepage into and out of the construction area and will be firmly anchored, using sandbags, to the riverbed. The upstream section of the cofferdam will be constructed first and continuing towards the downstream end and

will be installed to reduce sedimentation, siltation, or erosion upstream or downstream of the Project area. When possible, timing of the cofferdam installation will be coordinated with the release schedule of the Nacimiento Dam, which feeds a majority of the flow of the Nacimiento River at the Project site, so that installation will coincide with the low flow conditions.

**Project Area Dewatering.** Once water diversion structures are in place, the contractor will install any necessary bank energy dissipators to prevent erosion of the existing riverbanks. Dewatering pumps will then be used to dewater the enclosed construction area. Pump intakes will be fitted with fish screens to prevent accidental take of wildlife during dewatering operations. Appropriately sized pumps and piping will be used to remove any standing water left within the construction area after the diversion has been installed.

Erosion control will be installed at all dewatering discharge locations and will include filter fabric, riprap, or other standard energy dissipation best management practices (BMPs).

All water diversion cofferdams and dewatering pumps, piping, and tanks will remain in place and functional throughout the in-channel construction periods. When all work within the construction area is complete and no further access to the channel is required, the temporary water diversion and dewatering systems will be removed. This will occur prior to October 15 of each construction season. Prior to removal of cofferdams, all unnecessary equipment, material, and debris will be removed from the channel. Cofferdams will be removed using the least impactful equipment available to perform the task taking particular care to avoid introducing pollutants into the channel. The water diversion cofferdam will be removed starting with the downstream portion. The upstream portion of the cofferdam will be removed in such a way as to provide a gradual restoration of flow to the channel to avoid a surge of water that may cause erosion and scouring. The contractor will continually visually monitor water flow within the channel to ensure that no downstream scour or erosion takes place. Energy dissipation will be removed and discharge locations will be restored to their pre-construction condition.

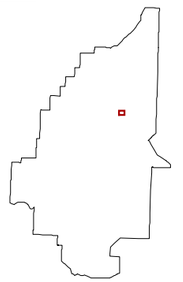
The contractor will utilize methods to dewater the work area in compliance with all water quality effluent limitations specified by the RWQCB and the National Pollutant Discharge Elimination System (NPDES) General Construction Permit.


LEGEND:

Fire Break

Project Boundary

MAP EXTENT:



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*Source: Esri Online Imagery Basemap, Avocet*
*Coordinate System: NAD 1983 StatePlane California IV FIPS 0404 Feet*
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PROJECT NAME:
CAMP ROBERTS HIGH WATER BRIDGE
MONTEREY COUNTY, CA

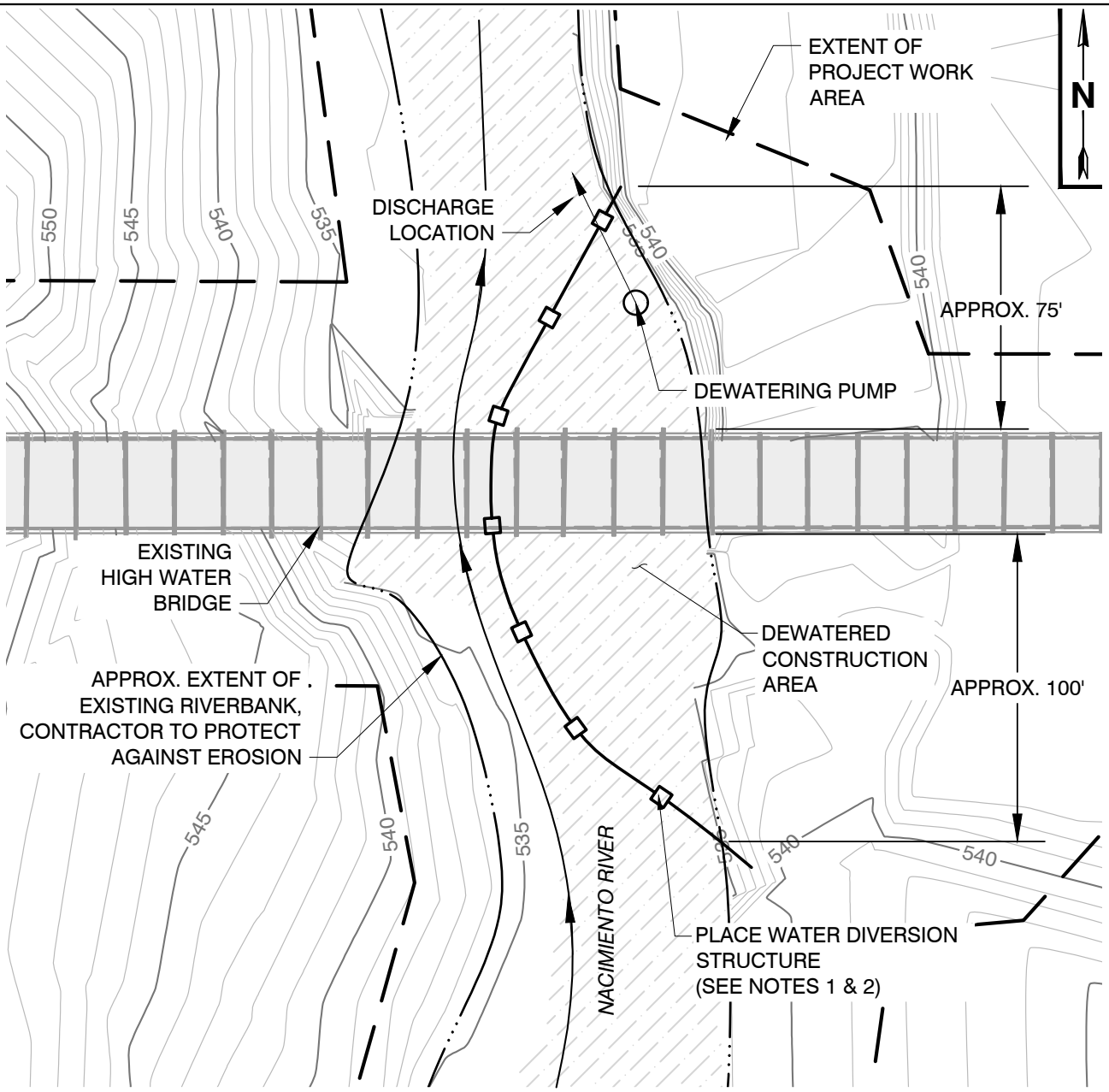
PROJECT NUMBER: 1802-1931

DATE: September 2022

# FIRE BREAKS

FIGURE 1-6

Z:\GIS Projects\GIS Maps\Map Project\Camp Roberts\Environmental Assessment\Fire Breaks.mxd 9/22/2022




NOTES:

1. WORK WITHIN THE RIVERBED WILL BE IN ACCORDANCE WITH APPLICABLE 1601, 404, AND 401 PERMITS. DEWATERING OF THE RIVERBED WILL FOLLOW BEST MANAGEMENT PRACTICES OUTLINED AND DESCRIBED IN CALTRANS STANDARD NS-5 FOR CLEAR WATER DIVERSIONS, OR OTHER APPROVED STANDARDS FOR DIVERTING AND WORKING WITHIN A RIVERBED.

2. CONTRACTOR MAY UTILIZE WATER FILLED BARRIERS, PORTADAMS, SHEET PILES, OR COMBINATION THEREOF TO DIVERT THE EXISTING RIVER FLOW TO FACILITATE REPAIRS TO THE BRIDGE FOUNDATIONS IN A PHASED APPROACH.

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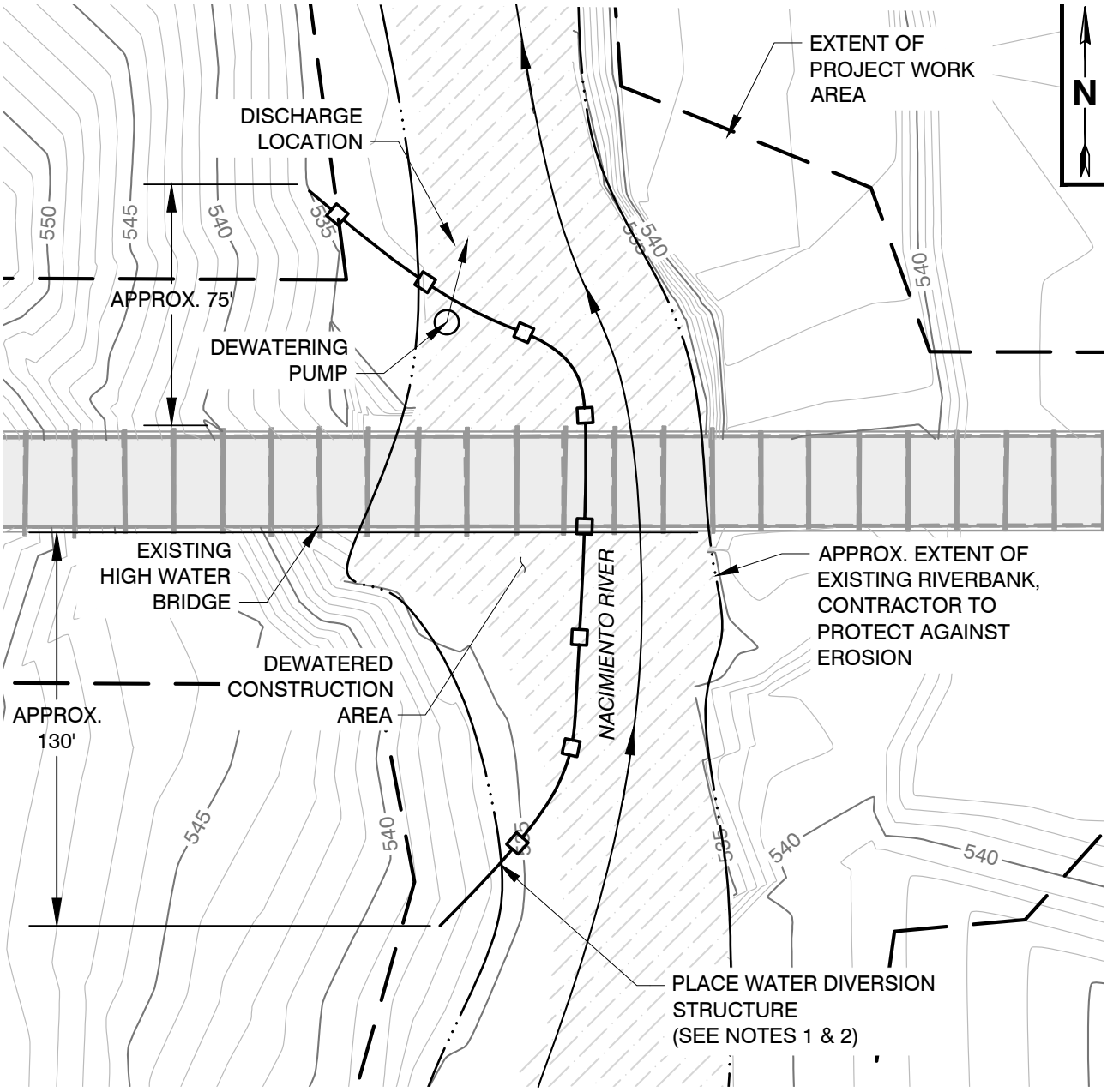
PROJECT NAME: CAMP ROBERTS HIGH WATER BRIDGE MONTEREY COUNTY, CA
PROJECT NUMBER: 1802-1931
DATE: March 2022

# EASTERN WATER DIVERSION AND DEWATERING SITE PLAN

FIGURE 1-7

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| PROJECT NAME: CAMP ROBERTS HIGH WATER BRIDGE MONTEREY COUNTY, CA | | WESTERN WATER DIVERSION AND DEWATERING SITE PLAN | FIGURE 1-8 |
|---|---|---|---|
| PROJECT NUMBER: 1802-1931 | DATE: March 2022 | | |

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#### 1.3.4.2 Bent Foundation Repair and Maintenance Activities

Once the Nacimiento River is diverted, debris from the bridge bent foundations within the extents of the existing streambed would be removed. The top two feet of streambed would be salvaged and stockpiled and would be replaced upon completion of the Project. The salvaged material would be stockpiled within the staging area. The stockpile would be left uncovered but would be monitored and treated for non-native invasive plants.

Approximately 3,250 cubic yards of excavation of non-structural, soft sediment would occur upstream and downstream of the footings. Once this material has been removed, 300 cubic yards of concrete would be poured around the footing extensions, followed by 3,900 cubic yards of rip rap for scour control.

As stated above, the bent foundation repair is scheduled to be completed in two construction seasons. Each phase would include one month for dewatering staging and installation, one month for foundation repair, and one month to remove the dewatering and to restore the site.

Equipment required to install dewatering and perform bent foundation repair work would include, but not be limited to, an excavator, backhoe/loader, dump truck, vibratory compactor, concrete truck, and water truck for dust control up the edge of the river.

The following provides the sequence of activities for the bent foundation repair. This sequence would be repeated for the second year of construction.

- Upon diverting river and dewatering work area, excavate silty soil that does not meet bearing capacity requirements for the bent foundation footing;
- Compact excavation subgrade and place aggregate base and geotextile fabric per geotechnical and structural requirements;
- Place formwork for bent foundation concrete footing extensions;
- Dowel rebar into existing bent foundation concrete footing;
- Place concrete for footing extension;
- Place rip rap within excavation per scour analysis and design recommendations; and
- Replace streambed material and restore streambed.

Maintenance activities include occasional debris removal from bent footings. Debris accumulation is dependent on storm events and is likely to vary from year to year. Debris removal will occur as detailed in the 2015 NMFS concurrence letter for debris removal at HWB. The following measures will be implemented to minimize impact to steelhead habitat:

- An environmental briefing outlining the biology and life history of steelhead will be provided to Camp Roberts' employees and contractors;
- Hand powered equipment (e.g., chainsaws) used near waterways will use vegetable-based lubricants or water as primary lubricant;
- Spill kits will be on-site during project activities and all workers will be briefed on appropriate spill containment procedures;

- Equipment will be inspected for leaks and excess dirt and debris will be removed from equipment prior to debris removal activities;
- Maintenance and fueling of construction equipment and vehicles will occur at least 15 meters from the ordinary high-water line or edge of sensitive habitats;
- Recovered large woody debris will be stored or offered to other entities for use in mitigation restoration projects where feasible. CA ARNG will retain the large logs for possible utilization in future fish habitat restoration projects.

## 1.4 PROJECT SCHEDULE AND DURATION

The Project would require access road construction, initial fire break establishment, and bent foundation repair requiring flow diversion to isolate the Nacimiento River from flowing or standing waters. The Project is likely to require two construction seasons to complete access road, fire break establishment and bent foundation repairs with work conducted between June 15 and October 15, or as restricted by agency permit conditions. Within the two annual construction windows, the access road would take approximately 20 days (first construction year only), fire break establishment approximately 10 days, fire break vegetation maintenance approximately 5 days (second construction year and annually thereafter), and diversion, dewatering, and bent foundation repair activities approximately 3 months (90 days) during each of the two construction years. Vegetation and maintenance activities would occur annually once the construction phase is complete.

## 1.5 PROJECT APPROVALS AND PERMITS

Upon Project approval, the CA ARNG would adopt the Initial Study/Mitigated Negative Declaration (IS/MND) as the lead agency pursuant to the California Environmental Quality Act (CEQA). Additionally, the following permits, reviews, consultations, and approvals would be required to be completed or approved prior to the commencement of Project construction (refer to Table 1-2).

**Table 1-2. Project Approvals and Permits**

| Agency | Permit/Approval |
|---|---|
| **Federal** | |
| United States Army Corps of Engineers (USACE) | Clean Water Act Section 404 Nationwide Permit Authorization |
| United States Fish and Wildlife Service (USFWS) | Federal Endangered Species Act Section 7 Consultation |
| National Marine Fisheries Service (NMFS) | Federal Endangered Species Act Section 7 Consultation |
| **State** | |
| Regional Water Quality Control Board (RWQCB) | Clean Water Act Section 401 Water Quality Certification |
| State Historic Preservation Office | Section 106 Consultation |

# 2.0 SUMMARY OF FINDINGS

## 2.1 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

This project would potentially affect the environmental issues checked below, involving at least one impact that is "Potentially Significant" or "Potentially Significant Unless Mitigation Incorporated" as indicated by the checklist on the following pages.

**Table 2-1. Environmental Issues and Potentially Significant Impacts**

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

## 2.2 ENVIRONMENTAL DETERMINATION

MILITARY DEPARTMENT
OFFICE OF THE ADJUTANT GENERAL
9800 Goethe Road
Sacramento, California 95827-3561

**Determination pertaining to the High Water Bridge Maintenance, Access Road Construction and Bent Foundation Repair Project at Camp Roberts, California**

On the basis of this initial study:

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

☒ I find that although the proposed project could have a significant effect on the environment, there would 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 would be prepared.

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

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

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, no further environmental documentation is required.

BRYCESON.DOUGLAS.A.1260632503 Digitally signed by BRYCESON.DOUGLAS.A.1260632503 Date: 2023.03.13 16:26:31 -07'00' 13 MAR 2023

Signature Date

Douglas Bryceson, Environmental Program Manager

Print Name Title

## 3.0 ENVIRONMENTAL ANALYSIS AND INITIAL STUDY CHECKLIST

The evaluation of environmental impacts provided in this Initial Study is based in part on the impact questions contained in Appendix G of the 2022 State CEQA Guidelines; these questions, which are included in an impact assessment matrix for each environmental category (Aesthetics, Agriculture/Forest Resources, Air Quality, Biological Resources, etc.), are "intended to encourage thoughtful assessment of impacts." Each question is followed by a check-marked box with column headings that are defined below.

- Potentially Significant Impact. This column is checked if there is substantial evidence that a Project-related environmental effect may be significant. If there are one or more "Potentially Significant Impacts," a Project Environmental Impact Report (EIR) would be prepared.
- Less than Significant with Mitigation. This column is checked when the Project may result in a significant environmental impact, but the incorporation of identified Project revisions or mitigation measures would reduce the identified effect(s) to a less than significant level.
- Less than Significant Impact. This column is checked when the Project would not result in any significant effects. The Project's impact is less than significant even without the incorporation of Project-specific mitigation measures.
- No Impact. This column is checked when the Project would not result in any impact in the category, or the category does not apply.

Detailed descriptions and analyses of impacts from Project activities and the basis for significance determinations are provided for each environmental factor on the following pages, beginning with Section 3.1, Aesthetics.

## 3.1 AESTHETICS

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

### 3.1.1 Environmental Setting

The Project area is within the north central portion of the Camp Roberts Military Base spanning the Nacimiento River in Monterey County and consists of bent foundation repair activities, construction of an access road, and the establishment of four fire breaks. The surrounding land within the vicinity of the Project site is used for military purposes in which the HWB serves as the most direct connection between the main Garrison on the east side of the Nacimiento River and multiple ranges on the west side. The Project site would be visible from within the Camp Roberts military base including Tower Road, G Street, Well Road, Bridge Road, and Bradley Road.

### 3.1.2 Impact Analysis

*a. Have a substantial adverse effect on a scenic vista?*

*b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*

**(a to b) No Impact.** There are no scenic vistas within the Project area. In addition, the proposed Project is not located within the vicinity of a State scenic highway (Caltrans, 2022). Therefore, there will be no impacts to scenic vistas or resources and historical buildings within a State scenic highway.

*c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?*

**Less than Significant Impact.** Project activities would take place within the Camp Roberts military base. The Project would include the construction of an access road and establishment of four fire breaks; however, all new construction would be relatively unnoticeable from public roads outside the military base. Project activities would enhance the surrounding land uses and would not conflict with applicable regulations governing scenic quality. Therefore, resulting in a less than significant impact.

*d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

**Less than Significant Impact.** The proposed Project would not include the installation of new substantial sources of light or glare including light fixtures or reflective surfaces. There would be no adverse effect to daytime or nighttime views in the area, resulting in a less than significant impact.

### 3.1.3 Mitigation Measures

The Project would not result in significant impacts to aesthetics; therefore, no mitigation is required.

## 3.2 AGRICULTURE AND FORESTRY RESOURCES

| **AGRICULTURE AND FORESTRY RESOURCES**[1] - Would the Project: | **Potentially Significant Impact** | **Less Than Significant with Mitigation** | **Less Than Significant Impact** | **No Impact** |
|---|---|---|---|---|
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Natural Resources Agency, to non-agricultural use? | ☐ | ☐ | ☐ | ☒ |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | ☐ | ☐ | ☐ | ☒ |
| c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Pub. Resources Code, § 12220, subd. (g)), timberland (as defined by Pub. Resources Code, § 4526), or timberland zoned Timberland Production (as defined by Gov. Code, § 51104, subd. (g))? | ☐ | ☐ | ☐ | ☒ |
| d) Result in the loss of forest land or conversion of forest land to non-forest use? | ☐ | ☐ | ☐ | ☒ |
| e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use? | ☐ | ☐ | ☐ | ☒ |

### 3.2.1 Environmental Setting

The proposed Project is located within the north central portion of Camp Roberts military base. Camp Roberts is utilized for general military purposes with land comprised of ruderal development and open grassland used for training exercises. Camp Roberts is located in a region mapped as grazing land; however, there are no agricultural land uses within the vicinity of the Project area.

[1] In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the State's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

### 3.2.2 Impact Analysis

a. *Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Natural Resources Agency, to non-agricultural* use?

*b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?*

*c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Pub. Resources Code, § 12220, subd. (g)), timberland (as defined by Pub. Resources Code, § 4526), or timberland zoned Timberland Production (as defined by Gov. Code, § 51104, subd. (g))?*

*d. Result in the loss of forest land or conversion of forest land to non-forest use?*

*e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?*

**(a to e) No Impact.** Project activities would take place within the Camp Roberts military base and consists of bridge repair activities and the construction of an access road. The proposed Project would not convert prime farmland to non-agricultural use and does not conflict with existing zoning for agricultural use, or a Williamson Act contract. There are no timberlands or forest land within the Project area and there would be no changes to the existing environment that would result in a conversion of farmland; therefore, no impact to agriculture or forestry resources would result from Project implementation.

### 3.2.3 Mitigation Measures

The Project would not result in significant impacts to agriculture and forestry resources; therefore, no mitigation is required.

## 3.3 AIR QUALITY

| **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** | **Less Than Significant Impact** | **No Impact** |
|---|---|---|---|---|
| a) Conflict with or obstruct implementation of the applicable air quality plan? | ☐ | ☐ | ☒ | ☐ |
| b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard? | ☐ | ☐ | ☒ | ☐ |
| c) Expose sensitive receptors to substantial pollutant concentrations? | ☐ | ☐ | ☒ | ☐ |
| d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? | ☐ | ☐ | ☒ | ☐ |

### 3.3.1 Environmental Setting

The U.S. Environmental Protection Agency (USEPA) has established national ambient air quality standards (NAAQS) to protect public health (primary standards) and welfare (secondary standards). Air basins are classified by the USEPA as in "attainment" or "non-attainment" based on meeting the NAAQS. The state of California Air Pollution Control Board (CARB) has established separate, more stringent California ambient air quality standards (CAAQS), which also requires air basins to be designated as in "attainment" or "non-attainment" based on meeting the CAAQS. NAAQS and CAAQS have been established for ozone ($O_3$), carbon monoxide (CO), nitrogen dioxide ($NO_2$), sulfur dioxide ($SO_2$), suspended particulate matter (e.g., dust) and lead. In addition, California has standards for ethylene, hydrogen sulfide, sulfates and visibility-reducing particles.

The Project site is located within the Camp Roberts military base in southern Monterey County. Monterey County is also located within the North Central Coast Air Basin (NCCAB). The NCCAB consists of Monterey, San Benito and Santa Cruz Counties. Currently, the NCCAB is in nonattainment for $O_3$ and particulate matter with a diameter of 10 microns or less ($PM_{10}$) CAAQS and in attainment for all other criteria pollutants. The NCCBA is in attainment or is unclassified for all NAAQS.

#### 3.3.1.1 Sensitive Receptors and Surrounding Area Land Use

The boundary of Camp Roberts is located approximately 1.7 miles east of the Project site at its closest location. The nearest sensitive receptor is a single-family residential home located approximately 2.5 miles to the east of the Project site. The community of San Miguel is located approximately 5.0 miles to the southeast of the Project site.

#### 3.3.1.2 Criteria Pollutants

Criteria air pollutants are those contaminants for which ambient air quality standards have been established for the protection of public health and welfare. Criteria pollutants include $O_3$, CO, oxides of nitrogen ($NO_X$), reactive organic gases (ROG), $SO_2$, $PM_{10}$, and diameter of 2.5 microns or less ($PM_{2.5}$).

**Ozone.** $O_3$ is formed in the atmosphere through complex photochemical reactions involving $NO_X$, ROG, and sunlight that occur over several hours. Since $O_3$ is not emitted directly into the atmosphere but is formed as a result of photochemical reactions, it is classified as a secondary or regional pollutant. These $O_3$-forming reactions take time; therefore, peak ozone levels are often found downwind of major source areas. $O_3$ is considered a respiratory irritant and prolonged exposure can reduce lung function, aggravate asthma, and increase susceptibility to respiratory infections. Children and those with existing respiratory diseases are at greatest risk from ozone exposure.

**Carbon Monoxide**. CO is primarily formed through the incomplete combustion of organic fuels. Higher CO values are generally measured during winter when dispersion is limited by morning surface inversions. Seasonal and diurnal variations in meteorological conditions lead to lower values in summer and in the afternoon. CO is an odorless, colorless gas. CO affects red blood cells in the body by binding to hemoglobin and reducing the amount of oxygen that can be carried to the body's organs and tissues, which can cause health effects to those with cardiovascular disease and can affect mental alertness and vision.

**Nitric Oxide and Nitrogen Dioxide**. NO is a colorless gas formed during combustion processes which rapidly oxidizes to form $NO_2$, a brownish gas. The highest nitrogen dioxide values are generally measured in urbanized areas with heavy traffic. Exposure to $NO_2$ may increase the potential for respiratory infections in children and cause difficulty in breathing even among healthy persons and especially among asthmatics.

**Sulfur Dioxide.** $SO_2$ is a colorless, reactive gas that is produced from burning sulfur-containing fuels, such as coal and oil, as well as by other industrial processes. Generally, the highest concentrations of $SO_2$ are found near large industrial sources. $SO_2$ is a respiratory irritant that can cause narrowing of the airways, leading to wheezing and shortness of breath. Long-term exposure to $SO_2$ can cause respiratory illness and aggravate existing cardiovascular disease.

**Particulate Matter.** Ambient air quality standards have been set for $PM_{10}$ and particulate matter with a $PM_{2.5}$. Both consist of different types of particles suspended in the air, such as metal, soot, smoke, dust, and fine mineral particles. The particles' toxicity and chemical activity can vary, depending on the source. The primary source of $PM_{10}$ emissions appears to be from the soil via road use, construction, agriculture, and natural windblown dust. Other sources include sea salt, combustion processes (such as those in gasoline or diesel vehicles), and wood burning. Primary sources of $PM_{2.5}$ emissions come from construction sites, wood stoves, fireplaces, and diesel truck exhaust. Particulate matter is a health concern because when inhaled it can cause permanent lung damage. While both sizes of particulates can be dangerous when inhaled, $PM_{2.5}$ tends to be more damaging because it remains in the lungs.

### 3.3.2 Regulatory Setting

Monterey County is within the jurisdiction of Monterey Bay Air Resources District (MBARD), which regulates air quality in the County and the NCCAB. The following MBARD rules potentially apply to the Project.

**Rule 400 - General Visible Emission Limitations:** A person shall not discharge into the atmosphere from any emission source whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour, which is as observed using the appropriate test method:

- As dark or darker in shade as that designated No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines, or
- Of such opacity as to obscure a human observer's view, or a certified calibrated in-stack opacity monitoring system to a degree equal to or greater than does smoke described in this rule.

**Rule 402 – Nuisance:** No person shall discharge from any source whatsoever such quantities of air contaminants or other materials which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or which endanger the comfort, repose, health, or safety of any such persons or the public; or which cause, or have a natural tendency to cause, injury or damage to business or property.

#### 3.3.2.1 MBARD Thresholds of Significance

The 2012–2015 Air Quality Management Plan (AQMP), which was adopted by MBARD on March 15, 2017, indicates that a project that does not exceed the MBARD thresholds of significance or cause a significant impact to air quality would be consistent with the AQMP.

The MBARD CEQA Air Quality Guidelines contain thresholds of significance for evaluating potential project criteria pollutant emissions. According to the MBARD CEQA Air Quality Guidelines, a project would not violate an air quality standard and/or have a significant impact to air quality if the projects criteria pollutant emissions were below the following thresholds.

**Table 3.3-1. Criteria Pollutant Thresholds**

| ROG (lbs/day) | $NO_X$ (lbs/day) | CO (lbs/day) | $PM_{10}$ (lb/day) | $PM_{2.5}$ (lb/day) | $SO_X$ (lb/day) |
|---|---|---|---|---|---|
| 137 | 137 | 550 | 82 | 55 | 150 |

### 3.3.3 Impact Analysis

Emissions modeling was conducted to estimate the criteria pollutant emissions for the construction phase of the Project. The emissions were estimated using the most recent emission factors and load factors obtained from the California Emissions Estimator Model® (CalEEMod) User's Guide, Emission Factors (EMFAC) model and the South Coast Air Quality Management District (SCAQMD). Detailed source information is provided in Appendix A.

Construction equipment emissions were estimated using the engine horsepower, engine emission factors, engine load factors and hours of engine use per day. On-road vehicle emissions were estimated using the vehicle type (i.e., passenger gasoline-powered vehicle, heavy-duty diesel-powered vehicle), engine emission factors and length of daily round trips. Fugitive dust

emissions from proposed soil disturbance activities related to the construction phase were calculated using emission factors, volumes of earth material disturbed, and areas of earth material disturbed. A tabulation of assumptions, references, and calculations for the project emission estimates are provided in Appendix A. Table 3.3-2 list the maximum daily estimated construction criteria pollutant emissions calculated for the Project.

**Table 3.3-2. Estimated Project Construction Criteria Pollutant Emissions**

| | Maximum Daily Emissions | | | | | |
|---|---|---|---|---|---|---|
| | $NO_X$ (lbs/day) | ROG (lbs/day) | $PM_{10}$ (lbs/day) | $PM_{2.5}$ (lb/day) | CO (lb/day) | $SO_2$ (lb/day) |
| **Maximum Emissions** | 10.31 | 1.81 | 6.15 | 0.91 | 116.96 | 0.05 |
| **MBARD Thresholds*** | 137 | 137 | 82 | 55 | 550 | 150 |
| **Threshold Exceeded?** | No | No | No | No | No | No |

**Notes:**
ROG – Reactive organic gases, NOx – Oxides of nitrogen, $PM_{10}$ – Particulate matter with a diameter of 10 microns or less, $PM_{2.5}$ – Particulate matter with a diameter of 2.5 microns or less, CO – Carbon Monoxide, $SO_2$ – Sulfur Dioxide
* MBARD, 2008 and 2016

As shown in Table 3.3-2 the implementation of the Project is not estimated to result in an exceedance of MBARD maximum daily emissions thresholds for ROGs, NOx, $PM_{10}$ and $PM_{2.5}$, CO, and $SO_2$. The emission analysis spreadsheets and the basis of criteria pollutant emissions analysis are provided in Appendix A.

*a. Conflict with or obstruct implementation of the applicable air quality plan?*

**Less than Significant Impact.** The emissions resulting from the Project would not exceed MBARD maximum daily emissions thresholds (refer to Table 3.4-2); therefore, would not conflict with or obstruct MBARD's existing AQMP, resulting in a less than significant impact.

Implementation of Fugitive Dust measures per MBARD CEQA Air Quality Guidelines are recommended, but are not provided as mitigation, as Project emissions do not exceed MBARD thresholds.

*b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?*

**Less than Significant Impact.** The Project would not result in a cumulatively considerable net increase of any criteria pollutants estimated.

**Construction Emissions.**

Construction activities would generate fugitive dust emissions, construction equipment exhaust emissions, on-road vehicle trucking exhaust emissions, and construction crew on-road vehicle exhaust emissions. Exhaust emissions during construction would vary daily as construction activity levels change. Although the construction phase of the Project would result in a net increase in criteria pollutants, these emissions would be temporary in nature and would only occur during construction.

The Project would not exceed the MBARD thresholds for construction emissions; therefore, the Project would not cause a substantial increase in $O_3$ and $PM_{10}$ which are the criteria

pollutants that the project region is in nonattainment. Additionally, the Project would not result in a cumulatively considerable increase of any criteria pollutant; therefore, operational impacts would be less than significant.

**Operational Emissions.**

The Project would not result in an increase in vehicle trips within the project area; therefore, the operation emissions for the Project would not result in a cumulatively considerable net increase of any criteria pollutant. Operational impacts would be less than significant.

*c. Expose sensitive receptors to substantial pollutant concentrations?*

**Less than Significant Impact**. The nearest sensitive receptor to the Project site is a single-family residence located approximately 2.5 miles to the east. Due to the limited nature of the Project and the distance to the nearest sensitive receptor, the construction phase of the Project would have a less than significant impact.

The Project would not result in an increase in vehicle trips within the project area; therefore, the operation emissions for the Project would not expose sensitive receptors to substantial pollutant concentrations. Operational impacts would be less than significant.

*d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?*

**Less than Significant Impact.** Due to the limited nature of the Project and the distance to the nearest sensitive receptor emissions generated by the Project would not create objectionable odors affecting a substantial number of sensitive receptors or personnel present within Camp Roberts; therefore, the construction phase of the Project would have a less than significant impact.

The Project would not result in an increase in vehicle trips within the project area; therefore, there would be no additional odors generated from operational emissions. Operational impacts would be less than significant.

### 3.3.4 Mitigation Measures

The Project would not result in significant impacts to air quality; therefore, no mitigation is required.

## 3.4 BIOLOGICAL RESOURCES

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

The following discussion contains information from the Preliminary Aquatic Resources Delineation Report and Biological Assessment (BA) prepared for the Project by Padre Associates, Inc. (Padre) (Padre, 2021; Padre, 2022). Both documents are included as Appendix B and C, respectfully. The aquatic resources report describes the vegetation communities and jurisdictional areas within the Project site, and the BA focuses on Federally protected species and designated Critical Habitat. In addition to the information from these documents, the following analysis also includes review of special-status plants and wildlife, migratory birds, and natural communities of special concern.

Sources of information for this analysis include literature review (i.e., pertinent biological reports completed for Camp Roberts) and database review (i.e., California Department of Fish and Wildlife [CDFW] California Natural Diversity Data Base [CNDDB], USFWS Information for Planning and Consultation [IPaC], NMFS California Species Tool, USFWS Environmental

Conservation Online System, NMFS Critical Habitat Website), as well as site inspections, and biological surveys completed for the Project site and surrounding vicinity.

### 3.4.1 Environmental Setting

The Project is located within the Camp Roberts military base within Monterey County along the Nacimiento River. Camp Roberts is located in the Salinas Valley of the California Coast Ranges. The Coast Ranges are characterized by a series of northwest-southeast trending mountain ridges that parallel the coast. The Salinas Valley extends 120 miles from the Santa Margarita region to Monterey Bay. The Nacimiento River generally runs year-round and flows through Camp Roberts toward the east and drains into the Salinas River. The Nacimiento River within Camp Roberts was altered by the installation of the Nacimiento Dam in 1957, approximately ten miles above the confluence with the Salinas River. The Camp Roberts High Water Bridge crosses over the Nacimiento River approximately 1.5 miles south of the confluence with the Salinas River.

#### 3.4.1.1 Vegetation Communities

The Project site is comprised of the following vegetation communities: Mixed marsh, Sandbar willow thickets, Mulefat thickets, Fremont cottonwood forest and woodland, Coyote brush scrub, and wild oats and annual brome grassland (Padre, 2021) (Figure 3-1). Table 3.4-1 Summary of Vegetation Communities lists the acreage of each vegetation community within the Project site.

**Table 3.4-1. Summary of Vegetation Communities**

| Vegetation Community | Acres |
|---|---|
| Sandbar willow thickets | 0.35 |
| Mulefat thickets | 0.35 |
| Mixed Marsh | 0.07 |
| Fremont cottonwood forest and woodland | 0.24 |
| Coyote brush scrub | 0.50 |
| Wild oats and annual brome grassland | 0.96 |

One state-designated Sensitive Natural Community was identified within the Project site, Fremont cottonwood forest and woodland (CDFW, 2022).

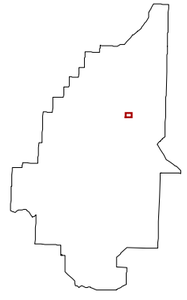
LEGEND:

- Construction Footprint
- Disturbance

**Vegetation Communities**

- Channel (.75 ac)
- Coyote brush scrub (.52 ac)
- Developed (2.56 ac)
- Fremont cottonwood forest and woodland (.24 ac)
- Marsh (.07 ac)
- Mulefat Thickets (.35 ac)
- Sandbar willow thickets (.35 ac)
- Wildoats and Annual brome grassland (1.05 ac)

MAP EXTENT:



0 60 120
FEET

*Source: NAIP Imagery 2016, Avocet Feb.2019*
*Coordinate System: NAD 1983 StatePlane California IV FIPS 0404 Feet*
*Notes: This map was created for informational and display purposes only.*

padre associates, inc.
ENGINEERS, GEOLOGISTS & ENVIRONMENTAL SCIENTISTS

PROJECT NAME: CAMP ROBERTS HIGH WATER BRIDGE MONTEREY COUNTY, CA
PROJECT NUMBER: 1802-1931
DATE: September 2022

# VEGETATION COMMUNITIES

FIGURE 3-1

Z:\GIS Projects\GIS Maps\Map Project\Camp Roberts\Delineation\Vegetation Communities.mxd, 9/22/2022

#### 3.4.1.2 Critical Habitat

No Critical Habitat is present within the Project site. Steelhead within the Nacimiento River at Camp Roberts have been identified as part of the South-Central California Coast (SCCC) Distinct Population Segment (DPS) (*Oncorhynchus mykiss irideus*) and the Nacimiento River was originally designated as part of SCCC steelhead DPS Critical Habitat by NMFS (Padre, 2022); however, the final designation in September 2005 excluded Critical Habitat for SCCC steelhead within lands controlled by the Department of Defense (including Camp Roberts) that have qualifying Integrated Natural Resource Management Plans (INRMP) (NMFS, 2005). No NMFS- or USFWS-designated Critical Habitat is present within the Project site or Camp Roberts.

#### 3.4.1.3 Special-Status Species

Based on the desktop review, several special-status plant species have the potential to occur in the Project region. The following plant species have the potential to occur based on regional occurrences and presence of suitable habitat within the Project site (Padre, 2022; CDFW, 2022; USFWS, 2022): Hoover's bent grass (*Agrostis hooveri*), oval-leaved snapdragon (*Antirrhinum ovatum*), La Panza mariposa lily (*Calochortus simulans*), dwarf calycadenia (*Calycadenia villosa*), San Luis Obispo owl's clover (*Castilleja densiflora* var. *obispoensis*), Lemmon's jewelflower (*Caulanthus lemmonii*), straight-awned spineflower (*Chorizanthe rectispina*), Jolon clarkia (*Clarkia jolonensis*), San Francisco collinsia (*Collinsia multicolor*), Koch's cord moss (*Entosthodon kochii*), Temblor buckwheat (*Eriogonum temblorense*), Kellogg's horkelia (*Horkelia cuneata* var. *sericea*), Santa Lucia dwarf rush (*Juncus luciensis*), Diablo Range hare-leaf (*Lagophylla diabolensis*), pale-yellow layia (*Layia heterotricha*), Jared's pepper-grass (*Lepidium jaredii* ssp. *jaredii*), Abbott's bush-mallow (*Malacothamnus abbottii*), Davidson's bush-mallow (*Malaconthamnus davidsonii*), Carmel Valley bush-mallow (*Malacothamnus palmeri* var. *involucratus*), woodland woollythreads (*Monolopia gracilens*), shining navarretia (*Navarretia nigelliformis* ssp. *radians*), prostrate vernal pool navarretia (*Navarretia prostrata*), Robbins' nemacladus (*Nemacladus secundiflorus* var. *robbinsii*), hooked popcornflower (*Plagiobothrys uncinatus*), and Santa Cruz microseris (*Stebbinsoseris decipiens*).

The remaining special-status plant species identified in the desktop review are not expected to occur based on lack of suitable habitat within the Project site.

In addition, several special-status wildlife species have the potential to occur in the Project region. The following wildlife species have the potential to occur based on regional occurrences, presence of suitable habitat within the Project site, and results of recent biological studies completed for Camp Roberts (Padre, 2022; Terra Verde, 2018; CDFW, 2022; USFWS, 2022): tricolored blackbird (*Agelaius tricolor*), Northern California legless lizard (*Anniella pulchra*), pallid bat (*Antrozous pallidus*), golden eagle (*Aquila chrysaetos*), great blue heron (*Ardea herodias*), California glossy snake (*Arizona elegans occidentalis*), burrowing owl (*Athene cunicularia*), ferruginous hawk (*Buteo regalis*), Townsend's big-eared bat (*Corynorhinus townsendii*), western pond turtle (*Emys marmorata*), California horned lark (*Eremophila alpestris actia*), prairie falcon (*Falco mexicanus*), bald eagle (*Haliaeetus leucocephalus*), hoary bat (*Lasiurus cinereus*), Monterey hitch (*Lavinia exilicauda harengus*), San Joaquin coachwhip (*Masticophis flagellum ruddocki*), Monterey dusky-footed woodrat (*Neotoma macrotis luciana*), south-central California coast steelhead (*Oncorhynchus mykiss irideus*), Salinas pocket mouse (*Perognathus inornatus*

*psammophilus*), coast horned lizard (*Phrynosoma blainvillii*), yellow warbler (*Setophaga petechia*), western spadefoot (*Spea hammondii*), and American badger (*Taxidea taxus*).

The remaining special-status wildlife species identified in the desktop review are not expected to occur based on lack of suitable habitat within the Project site and results of recent biological studies completed for Camp Roberts.

#### 3.4.1.4 Jurisdictional Areas

The Preliminary Aquatic Resources Delineation Report concluded that the proposed Project site supports approximately 1.08 acres of potentially jurisdictional waters of the U.S. (USACE jurisdiction), of which 0.07 acres is Federal wetland and 1.01 acres is streambed. Additionally, it has been concluded that the Project site contains approximately 1.69 acres of potentially State jurisdictional aquatic resources (RWQCB) including streambed, wetland, and riparian features. These preliminary jurisdictional findings are subject to the verification and approval of the USACE and RWQCB. CDFW does not have jurisdiction over this Project.

### 3.4.2 Impact Analysis

*a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*

**Less than Significant with Mitigation.** There is potential for adverse effects to the special-status species identified with potential to occur within the Project site from temporary and permanent Project impacts. Direct effects from construction activities could include decreased fitness, injury, and/or mortality of special-status species or their young/eggs. Vibrations from soil compaction and riprap installation may harass steelhead should they be near the project site. Further, debris accumulated at bridge bents may provide habitat for steelhead. Steelhead may be killed, injured, or harassed during debris removal activities. Indirect effects on plants and wildlife could also include temporary or permanent loss of riparian habitat, introduction of non-native invasive species, and potential hazardous material spills.

The Project site and surrounding areas consist of current and past land disturbance from military training activities, bridge rehabilitation activities, bridge maintenance, and vegetation removal. In addition, portions of the Project footprint would take place in a previous restoration area that was completed to address habitat disturbance from past bridge maintenance. A small amount of undeveloped/suitable habitat (approximately 3.2 acres) for special-status species is present within the Project site; however, due to the overall disturbed nature of the Project site, small permanent footprint, and temporary nature of the bent foundation repair and annual vegetation maintenance activities, impacts to special-status species would be less than significant with incorporation of **MM BIO-1** through **MM BIO-13**.

**MM BIO-1: Environmental Awareness Training.** An Environmental Awareness Training shall be prepared and presented to all onsite field personnel at the beginning of the initial work activities. The orientation shall discuss listed species with potential to occur in the work areas, and species-specific measures outlined in all Project permitting. The orientation shall explain the importance of minimizing disturbance, adhering to all

permit conditions, and proper reporting of observations or incidents. The orientation shall be repeated if additional field personnel are added to the Project.

**MM BIO-2: Biological Monitoring.** A qualified biologist shall be present onsite to monitor all initial ground disturbance, grubbing, and vegetation removal/trimming, and all work within the Nacimiento River corridor/banks, including all dewatering and diversion activities. A pre-activity survey shall be conducted by the qualified biologist immediately prior to the start of initial vegetation removal or grading activities to ensure that no sensitive species or sign are present in the work area. Biological monitors shall have the authority to stop equipment and work activities as needed to allow wildlife to self-relocate or relocate wildlife as permitted.

Encounters with sensitive or listed species shall be reported immediately to the onsite qualified biologist and reported to the appropriate agencies (i.e., CDFW, USFWS, NMFS, etc.) within 24 hours. The biologist shall maintain records of all listed species encountered during project activities, including the following information: location, habitat type, date of observation, general condition and health of wildlife, if moved, location moved to, and diagnostic markings. In the event that a dead or injured listed species is observed on the Project site during construction activities, notification shall be made within 24 hours to the appropriate agencies. Any listed species injured due to Project activities shall be transported to Pacific Wildlife Care in Morro Bay, California, or an approved wildlife veterinarian.

Pre-activity snorkel and/or bank surveys of the riverine habitat within the project area shall be performed no more than 10 days prior to project implementation. The survey area shall extend 50 feet upstream and downstream of temporary diversion dams, and along the bypass route for the purpose of identifying and quantifying steelhead presence in the project area. The pre-activity survey shall also include identification of plunge pools, scour pools, undercut banks, or other habitat features with potential to support steelhead. The survey would be performed by a qualified, NMFS-approved biologist;

**MM BIO-3: Nesting Birds and Raptors.** If the Project occurs within the nesting bird season (February 15 – August 31), a pre-activity nesting survey of the Project site plus a 500-ft buffer as feasible shall be conducted within one week prior to start of work activities. In addition, a daily clearance survey of vegetated work areas and equipment shall be conducted by a qualified biologist immediately prior to the start of vegetation removal or grading activities to document any bird nesting activity and ensure that no active bird nests are present in the work area. If an active bird nest is found (nest 50% or greater complete), a 150-ft buffer (or appropriate-sized buffer at the discretion of the qualified biologist) shall be established around the nest and no work shall be completed within the buffer until the nest is deemed inactive by the qualified biologist.

**MM BIO-4: Special-Status Amphibians and Reptiles.** A pre-activity survey of the Project site shall be conducted by a qualified biologist for special-status amphibians and reptiles within 48 hours of start of work activities. Hand search methods, including

raking, shall be used during the survey in areas where amphibians and reptiles are expected to be found (e.g., sandy/loose soils, under shrubs/leaf litter, other vegetation, or debris). Any special-status reptiles or amphibians encountered during surveys shall be relocated by a qualified biologist out of the Project site to adjacent suitable habitat, as permitted.

**MM BIO-5: Burrowing Owl and American Badger.** Within 30 days of the start of construction, a qualified biologist shall conduct a pre-activity survey of the Project site for signs of burrowing owl and American badger, including tracks, scat, or suitable burrows (burrows four inches or greater in diameter). Potential dens shall be tracked for a minimum of four nights with motion-activated cameras to determine if the burrow is actively being used by burrowing owl or badger. All potential dens shall be avoided by a minimum of 50 feet until they have been determined to be inactive. If active, an avoidance buffer from 50 to 500 feet shall be established around the den at the discretion of the qualified biologist based on species and Project impact level.

**MM BIO-6: Bat Maternity Roosts.** A qualified biologist shall conduct a bat roost-habitat assessment and conduct presence/absence surveys for special status pallid bat, Townsend's big-eared bat, and hoary bat where suitable maternity roosting habitat is present (i.e., High Water Bridge, mature trees, etc.) during the breeding/maternity season (approximately April 1 to September 30). Surveys shall be conducted using acoustic detectors and by searching bridge/tree cavities, crevices, and other areas where bats may roost. Surveys shall be conducted not more than 15 days prior to initiation of disturbance or construction activities during the bat breeding season.

Areas where bats' maternity roosts are located shall be avoided where feasible. If a maternity colony has become established, all construction activities shall be postponed within a 500-foot buffer around the maternity colony until it is determined by a qualified biologist that the young have dispersed. If necessary, bat roosts shall be removed under the supervision of the qualified biologist after the breeding season has ended but before the onset of winter when temperatures are too cold for bat movement.

**MM BIO-7: Spring Botanical Survey.** Prior to start of work, a springtime botanical survey of the Project site shall be completed during the typical blooming period of potentially occurring special-status plants. Survey results shall be used to document any occurrences of special-status plants within the Project site and determine the need for seed collection or plant avoidance.

**MM BIO-8: Work Limits.** Work areas, including equipment staging areas, shall be pre-designated on plans and Project limit flagging/fencing shall be installed throughout the Project site prior to the start of work. Heavy equipment, vehicles, and personnel shall be limited to designated work limits and all areas outside of work limits shall be treated as environmentally sensitive areas. All vehicles and heavy equipment shall be parked

at the end of each workday within designated staging areas. No heavy equipment or vehicles shall be left within the river corridor overnight.

**MM BIO-9: Construction Best Management Practices.** The following construction Best Management Practices (BMPs) shall be incorporated into all grading and construction plans:

- All construction activities shall be conducted during daylight hours and outside of rain events.
- Vehicles and heavy equipment shall follow all posted speed limits and follow 15 mph speed limit on unpaved/dirt roads.
- All personal and Project-related trash shall be disposed of in appropriate trash containers and removed from the work areas at the end of each working day.
- Drip pans shall be placed under stationary/staged vehicles and mechanical equipment.
- Vegetation removal around High Water Bridge will be limited to the greatest extent feasible to preserve riparian habitat along the river;
- Hand powered equipment (i.e. chainsaws) used near waterways will use vegetable-based lubricants or water as a primary lubricant.
- All refueling, maintenance, and staging of equipment and vehicles shall occur at least 50 feet from the Nacimiento River, in designated areas designed to contain spills, and not in a location where a spill would drain directly toward aquatic habitat.
- Temporary and/or permanent sediment and erosion control measures (e.g., silt fences, straw wattles, mulching, and/or hydroseeding) shall be implemented throughout the Project as necessary according to a Project-specific Storm Water Pollution Prevention Plan (SWPPP). Erosion and sediment controls shall be installed properly and maintained regularly. Other BMPs may also be implemented as necessary and/or as required by Project permits;
- Any fill materials and project-related debris resulting from bent foundation repair activities will be removed from the work area in their entirety, prior to final re-contouring and bank stabilization activities. In the event fine silts or other deleterious materials become intermixed into the existing bed gravels beyond ambient levels, the materials will be temporarily removed and rinsed of fine sediments before returning to the riverbed;

**MM BIO-10: Stream Diversion.** All stream diversion activities shall be completed under supervision of a qualified biologist and according to an agency-approved Stream Diversion Plan for the Project. The Stream Diversion Plan shall utilize methods in compliance with all water quality effluent limitations specified by the RWQCB and the NPDES General Construction Permit. To minimize disturbance, the proposed diversion method shall be limited to cofferdams, sheet-pile system, or a combination

thereof to isolate the construction work area from the river. Dewatering pumps shall then be used to dewater the enclosed construction area, and pump intakes shall be fitted with fish screens to prevent accidental take of wildlife during dewatering operations.

To avoid impacts to steelhead the following measures shall be implemented prior to and during stream diversion:

- Prior to conducting diversion activities, suitable relocation pools upstream of the project area shall be identified by the qualified biologist. An appropriate number of relocation pools shall be identified based on the estimated number of steelhead to be relocated to avoid overcrowding and competition for resources. Relocation pools shall contain suitable depth, dissolved oxygen concentrations, temperature, and in-stream cover to promote survival;
- A qualified, NMFS-approved biologist will be present during the installation and removal of temporary dams, and all stream diversion-related activities to monitor stream flow and capture stranded steelhead or other native fish species. Temporary dams shall be installed with adequate freeboard height to avoid fish passage into the dewatered work area and limit nuisance water to the greatest extent practicable;
- Steelhead captured for relocation shall be held in aerated buckets filled immediately prior to capture. Holding time shall be minimized to the greatest extent practicable. Protocols for the capture, handling, and release of fish will be developed and approved in coordination with NMFS and CA ARNG prior to implementation. The qualified biologist will notify NMFS within 24 hours if any steelhead are found dead or injured. Relocated steelhead will be enumerated by quantity, size, and life stage;
- Non-native fish species and/or other invasive species captured during the dewatering operations will be removed from the project area and dispatched humanely to avoid attracting wildlife into the work area;
- Dewatering equipment such as intake hoses will be equipped with screens with a mesh size not to exceed 3/32 inch (2.38 millimeters);
- Appropriate modifications shall be made to the designated bypass route through minor grading, vegetation trimming, and debris removal to maintain adequate base flows and connectivity to the downstream section of river;
- The qualified, NMFS-approved biologist shall evaluate the river bypass route during modifications and recommend minor trimming or removal of vegetation which may be impeding flows, fish passage, or the ability to adequately monitor the route for stranded fish;
- Vegetation impacts will be kept to the minimum necessary to facilitate sufficient flows and avoid disruption of underlying soils. Stump cutting will be the preferred

method rather than removal for vegetation, where feasible. Downed material will be removed from the diversion course. Non-native material will be disposed of at an appropriate facility. Native vegetation materials may be chipped and used for mulch in upland, temporary disturbance areas following project completion;

- Prior to project implementation, CA ARNG will notify the Monterey County Water Resources Agency of project activities and scheduling for diversion of the Nacimiento River to identify any anticipated changes in releases or other actions associated with the Nacimiento Lake Dam operation which may inhibit continual downstream flows in the project area;
- Prior to installing the upstream flow diversion, temporary sandbag berms and the downstream dam will be in place to minimize backwatering into the work area, interruption of normal downstream water flows, or reduction of downstream river volumes;
- Subject to the sufficiency of ambient conditions, fish passage shall be maintained by ensuring contiguous flows and water velocities during the duration of the diversion. The bypass route shall avoid creation of vertical drops more than 6 inches, or shallow areas less than ambient depth of the channel at the time of diversion installation;
- The qualified biologist shall have the ability to halt work and recommend measures for avoiding adverse effects to steelhead and their habitat throughout the duration of the project;
- Any fill materials and project-related debris resulting from bent foundation repair activities will be removed from the work area in their entirety, prior to final re-contouring and bank stabilization activities. In the event fine silts or other deleterious materials become intermixed into the existing bed gravels beyond ambient levels, the materials will be temporarily removed and rinsed of fine sediments before returning to the riverbed. A Turbidity Monitoring Plan will be developed for the Project, which will include provisions for monitoring turbidity before, during, and after stream diversion for all Project activities that have the potential to increase turbidity within the reach of the Nacimiento River within the Project site boundary, at a minimum; and
- The Turbidity Monitoring Plan will establish maximum thresholds for increased turbidity based on regulatory requirements and agency permit conditions. The Turbidity Monitoring Plan will be implemented during all work in and near water that has the potential to release sediment to ensure that turbidity levels upstream and downstream of the Project site are compliant with regulatory requirements. The Turbidity Monitoring Plan shall include monitoring methods, sampling locations and frequency, and installation of turbidity curtains, if necessary, based on site conditions.

**MM BIO-11: Habitat Restoration.** Temporarily impacted areas shall be reseeded and/or replanted with native plants as appropriate, according to an agency-approved Habitat Restoration Plan for the Project.

**MM BIO-12: Wetland Mitigation.** Permanently impacted riparian and wetland habitat shall be replaced at a ratio of 3:1, creation to impact. Upland habitat adjacent to the Project site shall be converted into riparian and wetland habitat.

**MM BIO-13: Construction Schedule.** Construction activities that have the potential to impact SCCC steelhead, such as stream diversion, shall be scheduled from May 1 through December 31, to avoid the spawning period.

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

**Less than Significant with Mitigation.** The Project site and surrounding areas consist of current and past land disturbance from bridge rehabilitation activities, bridge maintenance, and vegetation removal. One designated sensitive natural community is present within the Project site and approximately 1.83 acres of riparian habitat is present within the Project disturbance area. Impacts to riparian habitat and a Sensitive Natural Community, would be less than significant with incorporation of the following mitigation measures: **MM BIO-1**, **MM BIO-8**, **MM BIO-9**, **MM BIO-11, and MM BIO-12.**

*c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

**Less than Significant with Mitigation.** The Nacimiento River flows through the Project site under the High Water Bridge and some temporary and permanent impacts are expected to occur in the jurisdictional aquatic features in the Project site (1.83 acres); however, due to the small permanent footprint, temporary nature of the bent foundation repair and annual vegetation maintenance activities, impacts to riparian habitat would be less than significant with incorporation of the following mitigation measures: **MM BIO-1**, **MM BIO-8**, **MM BIO-9**, **MM BIO-10**, **MM BIO-11, and MM BIO-12**.

*d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

**Less than Significant with Mitigation.** The Nacimiento River and associated riparian corridor have the potential to be used by several common and sensitive wildlife species as migratory/dispersion corridors throughout various times of the year. In addition, the Nacimiento River is considered habitat for the SCCC steelhead Distinct Population Segment. SCCC steelhead have been documented within the Nacimiento River at Camp Roberts and are considered likely to occur within the Project site. With incorporation of the **MM BIO-1** through **MM BIO-13**, impacts to wildlife movement and the Nacimiento River migratory corridor would remain less than significant.

*e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

**No Impact.** Camp Roberts has an INRMP (CA ARNG, 2014) which aims to strike a balance between the ability of the military to accomplish its training mission, while at the same time being a good steward of the land and natural resources, including sensitive species located on Camp Roberts. The INRMP identifies management goals and policies to accomplish this balance and includes information and instructions for personnel at Camp Roberts to maintain the natural resources during training, mission, or construction activities. In addition, the California Army National Guard has developed an Endangered Species Management Component for steelhead (ESMC) and its habitat within Camp Roberts (Stillwater Sciences, 2018). The ESMC restricts activities within the stream channel that have the potential to impact SCCC steelhead from May through December, which is consistent with **MM BIO-13**.

No additional local policies or ordinances protecting biological resources are established within Camp Roberts or the Project site. All Project activities would be completed in accordance with the Camp Roberts INRMP and ESMC in addition to applicable permit measures; therefore, the Project will not conflict with any local policies or ordinances, resulting in no impact.

*f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?*

**No Impact.** The Camp Roberts INRMP and ESMC described above have established guidelines and policies to protect sensitive species and habitats during training, mission, or construction activities completed within the base. No additional Habitat Conservation Plans, Natural Community Conservation Plans, or other plans are established within Camp Roberts or the Project site. All Project activities would be completed in accordance with the Camp Roberts INRMP and ESMC in addition to applicable permit measures; therefore, the Project will not conflict with any adopted conservation plans, resulting in no impact.

### 3.4.3 Mitigation Measures

Implementation of the following mitigation measures would reduce potential Project-related impacts regarding biological resources to less than significant:

- MM BIO-1: Environmental Awareness Training
- MM BIO-2: Biological Monitoring
- MM BIO-3: Nesting Birds and Raptors
- MM BIO-4: Special-Status Amphibians and Reptiles
- MM BIO-5: Burrowing Owl and American Badger
- MM BIO-6: Bat Maternity Roosts
- MM BIO-7: Spring Botanical Survey
- MM BIO-8: Work Limits
- MM BIO-9: Construction Best Management Practices

- MM BIO-10: Stream Diversion
- MM BIO-11: Habitat Restoration
- MM BIO-12: Riparian/Wetland Creation
- MM BIO-13 Construction Schedule

## 3.5 CULTURAL RESOURCES

| **CULTURAL RESOURCES** - Would the Project: | **Potentially Significant Impact** | **Less Than Significant with Mitigation** | **Less Than Significant Impact** | **No Impact** |
|---|---|---|---|---|
| a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5? | ☐ | ☐ | ☐ | ☒ |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5? | ☐ | ☒ | ☐ | ☐ |
| c) Disturb any human remains, including those interred outside of formal cemeteries? | ☐ | ☒ | ☐ | ☐ |

### 3.5.1 Environmental Setting

An overview of the ethnography, cultural resources, prehistory, and history of the Camp Roberts region is provided in the CAARNG's *Integrated Cultural Resources Management Plan for 2005 – 2009* (Jones and Stokes, 2004). A comprehensive discussion of the cultural history of the Camp Roberts area is provided in *Cultural Resource National Register-Eligibility Assessments of Eleven Selected Locations at Camp Roberts Military Training Facility, Monterey and San Luis Obispo Counties, California* (Stevens et al., 2013).

The Project site has been the subject of cultural resource investigations on at least three separate occasions. Jones and Stokes completed the first investigation in 1995 (Jones and Stokes, 2004). In 2004, CAARNG Cultural Resources staff conducted a supplemental inventory of the riverbanks and the terrace within the Project site on either side of the river in support of the HWB Replacement Project (Bertrando, 2009). Prior to the HWB Replacement Project in 2016, California State University, Sacramento completed an archaeological survey of the southern riverbank next to the Project site (Stevens et al., 2013). None of these surveys identified cultural resources within the Project site.

In October 2012, Far Western conducted exploratory backhoe trenching on the south end of the Project site to test for the presence of buried cultural deposits in advance of construction impacts during the bridge replacement. Four exploratory trenches were excavated around the south side of the former bridge and approximately 48.5 cubic meters of materials were excavated. No cultural materials were identified during the testing. The testing further determined that the Project site has a low potential for buried cultural deposits (Stevens et al., 2013).

Jones and Stokes conducted an architectural survey of Camp Roberts in 1997 that included a variety of historic built properties on the installation, including military buildings and a historic ranch house, all of which are outside the Project site (JRP, 2005; Jones and Stokes, 2004). During this survey, the former HWB was evaluated and was determined to be ineligible for listing on the National Register of Historic Places, based on a 1986 Programmatic Memorandum of Agreement (PMOA) (amended in 1991) among the Department of Defense, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers (SHPOs) (JRP, 2005; Bertrando, 2009). The former HWB was renovated in 2016.

The CAARNG consulted with the California SHPO regarding eligibility of historic and archaeological resources in the Project site. The SHPO gave concurrence on February 23, 2010, that the former HWB was not eligible for inclusion on the National Register of Historic Places (NRHP), and no historic properties will be affected by the Project.

The CAARNG initiated consultation with the California SHPO for the proposed Project on

### 3.5.2 Impact Analysis

*a. Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?*

**No Impact.** There are no historical resources listed in or eligible for listing in the California Register of Historical Resources (which can include resources such as buildings, structures, districts, or sites) in the Project site. This includes the bridge itself, which was reconstructed in 2016. The Project would not result in any impacts on historical resources; therefore, no mitigation is required.

*b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?*

**Less than Significant with Mitigation.** No archeological resources were identified in proximity to the Project site. However, archaeological resources may still be discovered during Project activities. **MM-CUL-1/TCR-1** through **MM CUL-3/TCR-3** would ensure that in the event of an accidental discovery, further disturbance would halt until the resource had been appropriately assessed and treated, if necessary. With the implementation of these measures, the impacts would be less than significant.

**MM CUL-1/TCR-1: Cultural Resources Awareness Training.** A worker cultural resources awareness training shall be implemented for the Project. Prior to any ground-disturbing activity, the CA ARNG shall provide an initial sensitivity training session to all Project employees, contractors, subcontractors, and other workers prior to their involvement in any ground-disturbing activities, with subsequent training sessions to accommodate new personnel becoming involved in the Project. The program may be conducted together with other environmental or safety awareness and education programs for the Project, provided that the program elements pertaining to cultural resources are provided by a qualified archaeologist.

The training shall include, at a minimum:

- A brief overview of the cultural sensitivity of the Project site and surrounding area;
- What resources could potentially be identified during ground disturbance;
- The protocols that apply in the event unanticipated cultural or tribal cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated;
- Consequences in the event of noncompliance; and,

- Safety procedures when working with monitors.

**MM CUL-2/TCR-2:** Cultural Resources **Monitoring.** Cultural resources monitoring shall be conducted during Project-related ground-disturbing activities for the purpose of identifying and avoiding impacts to cultural resources, consistent with the procedures outlined in CAARNG's Integrated Cultural Resources Management Plan for 2005 – 2009 (Jones and Stokes 2004). In the event of any inadvertent discovery of prehistoric or historic period archaeological resources during construction, all work within 50 feet of the discovery shall immediately cease (or greater or lesser distance as needed to protect the discovery and determined in the field by the Project archaeologist). CA ARNG and other relevant agencies shall be notified immediately. The Project archaeologist shall evaluate the significance of the discovery prior to resuming any activities that could impact the site/discovery. If the Project archaeologist determines that the find may qualify for listing in the CRHR, the site shall be avoided or shall be subject to a mitigation program, such as data recovery excavations, and funded by CA ARNG.

*c. Disturb any human remains, including those interred outside of formal cemeteries?*

**Less than Significant with Mitigation.** The Project is not expected to disturb human remains. However unlikely, unmarked burials could be unearthed during subsurface construction activities and consequently the Project could disturb human remains, including those interred outside formal cemeteries. **MM CUL-3/TCR-3** would ensure that, in the event of accidental discovery, further disturbance would halt until the human remains had been appropriately assessed and treatment, if necessary, approved. With the implementation of **MM CUL-3/TCR-3**, the impact would be less than significant.

**MM CUL-3/TCR-3: Unanticipated Discovery of Human Remains.** If human remains are encountered, all provisions provided in California Health and Safety Code section 7050.5 and California Public Resources Code section 5097.98 shall be followed. Work shall stop within 100 feet of the discovery, and both an archaeologist and CAARNG staff must be contacted within 24 hours. The archaeologist shall consult with the County Coroner. If human remains are of Native American origin, the County Coroner shall notify the Native American Heritage Commission within 24 hours of this determination, and a Most Likely Descendent shall be identified. No work is to proceed in the discovery area until consultation is complete and procedures to avoid or recover the remains have been implemented.

### 3.5.3 Mitigation Measures

Implementation of the following MMs would reduce the potential for Project-related impacts to cultural resources to less than significant.

- MM CUL-1/TCR-1: Cultural Resources Awareness Training
- MM CUL-2/TCR-2: Cultural Resources Monitoring
- MM CUL-3/TCR-3: Unanticipated Discovery of Human Remains

## 3.6 ENERGY

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

### 3.6.1 Environmental Setting

Pacific Gas and Electric (PG&E) is the primary energy provider within Monterey County with Camp Roberts being within PG&E's electric service territory. Electricity and natural gas are the primary forms of energy used for commercial, industrial, and residential purposes while petroleum fuels are the primary energy source for most modes of transportation.

### 3.6.2 Impact Analysis

*a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*

**Less than Significant Impact.** The proposed Project involves the use of heavy equipment and motor vehicles, all powered by non-renewable petroleum-based resources (e.g., gasoline and diesel fuel). Project activities would not draw energy from the local power grid and construction would be temporary in nature. From an operational standpoint, bridge repair activities would allow the structure to remain open, keeping the most direct route to and from training ranges accessible; thus, decreasing fuel consumption. Although the Project proposes to construct a new access road, the road would only be 330 feet long and would be used on an annual basis for bridge maintenance including vegetation trimming and debris removal. Therefore, resulting in a less than significant impact.

*b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

**No Impact.** The Project would not conflict with or obstruct a State or local plan for renewable energy efficiency. There are no local plans relating to renewable energy in Monterey County; however, the Project would be consistent with the Conservation and Open Space Element of the Monterey County General Plan. Therefore, there would be no impact.

### 3.6.3 Mitigation Measures

The Project would not result in significant impacts on energy; therefore, no mitigation is required.

## 3.7 GEOLOGY AND SOILS

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

### 3.7.1 Environmental Setting

3.7.1.1 Regional and Site Geomorphology and Geology

The Project site is located within the southern portion of the Coast Ranges geomorphic province in Central California. The Coast Ranges stretch over 500 miles from the Oregon border to the Santa Ynez River and fall into two sub-provinces: the ranges located north of San Francisco Bay and those from the San Francisco Bay south to Santa Barbara County. The northern ranges lie east of the San Andreas Fault Zone, whereas most of the southern ranges are located to the west. The province contains many elongate ranges and narrow valleys that are approximately

parallel to the coast, although the coast usually shows a somewhat more northerly trend than do the ridges and valleys. Therefore, some valleys intersect the shore at acute angles and some mountains terminate abruptly at the sea (Norris and Webb, 1990).

The dominant characteristic of the Coast Ranges is its division into elongate topographic and lithographic strips underlain by discrete basement rocks that are separated by profound structural discontinuities. The pattern extends east, and probably also west onto the sea floor. On the east, concealed beneath the Central Valley, is the enigmatic boundary between the Sierra Nevada basement and the Coast Range Franciscan. Most of the boundary between the Sierran and Franciscan basement lies beneath several thousand feet of late Mesozoic and Cenozoic sedimentary rocks in the Salinas Valley. North of the city of Red Bluff, the boundary emerges as the South Fork Mountain Thrust, which separates the Klamath Mountains from the Coast Ranges. Westward, the next major boundary is the San Andreas Fault Zone, which separates Franciscan basement from the granitic-metamorphic basement of the Salinian Block. South of Monterey, the Sur-Nacimiento Fault Zone separates Salinian rocks from additional Franciscan basement to the southwest. Another boundary occurs farther west, offshore, where Franciscan basement is replaced by normal oceanic crust.

According to the *Geologic Map of the Bradley Quadrangle, Monterey & San Luis Obispo Counties, California, 1:24,000 (Dibble, 2006),* the Project site surficial sediments are comprised of Holocene age alluvial gravel and sand of stream channels (Qg) and Holocene age alluvial clay and sand of valley areas (Qa). The alluvial gravel and sand of stream channels are found within the Nacimiento River stream channel, and the alluvial clay and sand of valley areas are found on the east and west of the HWB landings. Quaternary age alluvial terrace deposits (Qoa2) can be found just east of the Project site and the Paso Robles Formation can be found approximately 0.5 mile west of the Project site. It is expected that the Pliocene age Paso Robles Formation underlies the younger Holocene age deposits. The Paso Robles Formation consists of valley sediments and alluvial conglomerate consisting of pebbles and mostly white siliceous shale from the Monterey Formation.

In 2021, eight test pits were completed along within the Project site as part of a geotechnical investigation. Geotechnical test pits KTP-1 through KTP-8, located south of the HWB, encountered coarse sand and fine gravel deposits to a depth of at least 13 feet below ground surface (bgs) (KCG, 2021). These soil types are consistent with mapped soil and geologic units.

#### 3.7.1.2 Soils

Based on a review and analysis of the Natural Resources Conservation Service (NRCS) Web Soil Survey for the Project area (NRCS, 2022) and the Soil Survey of Monterey County (1978), the Project site is underlain by Corducci and Typic Xerofluvents, 0 to 5 percent slopes, occasionally flooded, MLRA 14 (map unit symbol 300), Elder loam, gravelly substratum, 0 to 2 percent slopes (map unit symbol EcA), and the Metz Complex (map unit symbol Mg). Elder loam and the Metz Complex have a low shrink-swell potential; however, Corducci and Typic Xerofluvents was not listed in the Soil Survey of Monterey County. A geotechnical investigation

conducted by Kling Consulting Group, Inc. (KCG) in 2021 found that the soils below the HWB footings are “non-expansive” (KCG, 2021).

#### 3.7.1.3 Seismicity, Faulting, and Liquefaction

An active fault is a fault that has experience seismic activity during historic time (approximately within the last 200 years) or exhibits evidence of surface displacement during the Holocene (within the last 11,700 years). The Project site is located in a relatively high seismically active region as compared to other areas of California. The Project site is located approximately six miles east of the Rinconada Fault Zone, approximately 17 miles west of the San Andreas Fault Zone, and 27 miles east of the San Simeon Fault Zone. The closest active faults to the Project location are the San Andreas Fault (historical displacement, 1901, 1922, 1966, and 2004) located approximately 17 miles east of the Project site and the Arroya Laguna Fault (Holocene displacement) located approximately 27 miles west of the Project site.

The Project site is not in an Alquist-Priolo Earthquake Fault Zone and no known active faults traverse the site (California Department of Conservation, California Geologic Survey, 2022). However, based on published data and current understanding of the geologic framework and tectonic setting, the primary source of seismic shaking at the Project site would likely be the San Andreas Fault Zone located approximately 17 miles east of the Project site.

Liquefaction takes place when loosely packed, water-logged sediments at or near the ground surface lose their strength in response to strong ground shaking. Liquefaction occurring beneath buildings and other structures can cause major damage during earthquakes. Although earthquake shock is the best-known cause of liquefaction, certain construction practices, including blasting and soil compaction produce this phenomenon intentionally. Poorly drained fine-grained soils such as sandy, silty, and gravelly soils are the most susceptible to liquefaction. The California Geologic Survey (CGS) has designated certain areas within California as potential liquefaction hazard zones. These are areas considered at risk based upon mapped surficial deposits and the presence of a relatively shallow water table. While the Project site is currently not mapped as a liquefaction hazard zone, the HWB foundations rest on saturated sandy and gravely soils which may be susceptible to liquefaction during seismic shaking or Project related compaction activities.

#### 3.7.1.4 Subsidence

Subsidence is the gradual settling or sudden sinking of the land surface from changes that take place underground, primarily from groundwater or oil pumping. According to TRE ALTAMIRA InSAR Subsidence Data (DWR), remote sensing of ground elevation displacement estimates that subsidence at the Project site ranged from -0.07 feet to 0.05 feet between January 2015 and April 2022. Monterey County has mapped Elder loam (map unit symbol EcA), and the Metz Complex (map unit symbol Mg) at the Project site. Elder loam and the Metz Complex have a low shrink-swell potential.

KCG reviewed and reported on a previous geotechnical investigation (GSI, 2012) within their geotechnical report (KCG, 2021). The GSI geotechnical investigation conducted a preliminary seismic settlement assessment based on soil borings drilled in the stream banks on either side of the Nacimiento River and within Project site. Seismically induced settlements as assessed by GSI are 1.25 to 2.5 inches. Additionally, GSI evaluated lateral spreading based on the borings performed on the stream bank. The results of the GSI lateral spreading analysis indicated lateral displacement between 10 to 15 inches. GSI recommended an abutment setback of 20 feet from the top of the stream bank and dead man anchors to mitigate structural distress from lateral spreading. It should be noted that the GSI geotechnical investigation utilized data collected outside of the streambed and it is considered very likely that the probable streambed settlements would exceed those stated by GSI (KCG, 2021).

### 3.7.2 Impact Analysis

*a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:*

*i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.*

**Less than Significant Impact.** The Project site is not in an Alquist-Priolo Earthquake Fault Zone and no known active faults traverse the Project site (California Department of Conservation, California Geologic Survey 2022). Therefore, resulting in a less than significant impact.

*ii. Strong seismic ground shaking?*

**Less than Significant Impact.** Site-specific geotechnical investigations were used to develop the proposed bent foundation repair design to minimize the risk of ground failure posed by strong seismic ground shaking. The Project would be constructed to withstand a strong seismic ground shaking event; therefore, resulting in a less than significant impact.

*iii. Seismic-related ground failure, including liquefaction?*

**Less than Significant Impact.** The potential for liquefaction to occur within the Project site is likely due to the shallow static groundwater table and loose to medium dense nature of the underlying, mostly granular soils (KCG, 2021). Site-specific geotechnical investigations evaluated the potential seismic-induced ground failure. The foundation designs based on the geotechnical evaluation would minimize risk of substantial ground deformation for the foundation design. The Project would be constructed to withstand seismic related ground failure or liquefaction; therefore, resulting in a less than significant impact.

*iv. Landslides?*

**No Impact.** The Project site is not with a mapped landslide risk area. While there are minor slopes associated with the channel banks, these are not expected to be at risk of substantial movement during Project activities. Therefore, no impact to landslides would result.

*b. Result in substantial soil erosion or the loss of topsoil?*

**Less than Significant with Mitigation.** The purpose of the Project is to construct an access road to provide access for equipment and materials used for the bent foundation repair which is designed to reduced further erosion from under the bent footings. There is current a three-to-five-foot gap between the underside of the bridge foundation and the streambed. This Project would maintain the integrity and extend future use of the HWB by reducing erosion and the loss of topsoil within the stream channel over time.

A new gravel access road would be constructed upstream of the HWB on the eastern bank of the Nacimiento River to facilitate debris removal and other maintenance activities with the bridge and adjacent embankments. The access road would be 330 feet long and 15 feet wide with a maximum turn-around radius of 10,600 square feet, for a total area of 15,550 square feet. The access road would be permanent for annual vegetation maintenance use and future bridge maintenance requirements. Construction of the access road would require 750 cubic yards of excavation to clear and grub the construction area of vegetation, debris, and rocks. A total of 850 cubic yards of fill material would be used to construct the access road, including 350 cubic yards of gravel base. The gravel base would consist of 6-inch thick 0.75-inch crushed rock with a minimum of 6-inch thick geocell.

Prior to in-water construction activities, the water diversion comprised of cofferdams, sheet-pile system, or combination would be installed to fully enclose the construction area. Plastic sheeting may be used to minimize water seepage into and out of the construction area and would be firmly anchored, using sandbags, to the riverbed. The upstream section of the cofferdam would be constructed first and continuing towards the downstream end and would be installed to reduce sedimentation, siltation, or erosion upstream or downstream of the Project area. When possible, timing of the cofferdam installation would be coordinated with the release schedule of the Nacimiento Dam, which feeds a majority of the flow of the Nacimiento River at the Project site, so that installation would coincide with the low flow conditions. Erosion control would be installed at all dewatering discharge locations and would include filter fabric, riprap, or other standard energy dissipation best management practices (BMPs).

Additionally, Project activities would require approximately 1,040 cubic yards of excavation of non-structural, soft sediment. The top two feet of streambed would be salvaged and stockpiled within the staging area and would be replaced upon completion of the Project. Once this material has been removed, 100 cubic yards of concrete would be poured around the footing extensions, followed by 820 cubic yards of rip rap for scour control, then 260 cubic yards of streambed material (two feet thick) would restore the streambed. Implementation of **MM HYDRO-1** and **MM HYDRO-2** would result in a less than significant impact.

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

**Less than Significant Impact.** Seismically induced settlements as assessed by GSI are 1.25 to 2.5 inches. The results of the GSI lateral spreading analysis indicated lateral displacement between 10 to 15 inches. GSI recommended an abutment setback of 20 feet from the top of the

stream bank and dead man anchors to mitigate structural distress from lateral spreading (GSI, 2012).

The purpose of the Project is to construct an access road to provide access for equipment and materials used for the bent foundation repair which is designed to reduced further erosion from under the bent footings. This Project would maintain the integrity and extend future use of the HWB by stabilizing the streambed sediments. Therefore, resulting in a less than significant impact.

*d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risk to life or property?*

**No Impact.** Based on a geotechnical investigation (included sieve and hydrometer analysis) by KCG, the Project site soils are non-expansive (KCG, 2021). Therefore, no impact would result.

*e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?*

**No Impact.** The Project does not include the use of septic tanks or on-site sewage disposal. Portable restrooms would be provided on-site for construction workers and would be regularly services to remove sewage which would be disposed at a nearby municipal wastewater treatment facility. Therefore, no impact would result.

*f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

**Less than Significant Impact.** The nearest paleontological resource may be the Paso Robles Formation and located approximately 0.5 mile west from the Project site. The Paso Robles Formation is known to preserve shallow marine fossils dating through the Neogene Period (USGS, 1973). Though the Pliocene age Paso Robles Formation is expected to underly the Holocene age stream and valley alluvial sediments within the Project site, it is unlikely that the Paso Robles Formation would be encountered during Project related shallow excavation and grading activities. The deepest excavations within the streambed would be approximately 12 feet deep. Therefore, the Project impacts area expected to be primarily in recent alluvial deposits with low paleontological sensitivity, resulting in a less than significant impact.

### 3.7.3 Mitigation Measures

Implementation of the following mitigation measures would reduce potential Project-related impacts regarding geology and soils to less than significant:

- MM HYDRO -1: Erosion Control Measures
- MM HYDRO-2: Stormwater Pollution Prevention Plan

## 3.8 GREENHOUSE GAS EMISSIONS

| **GREENHOUSE GAS EMISSIONS** -Would the Project: | **Potentially Significant Impact** | **Less Than Significant with Mitigation** | **Less Than Significant Impact** | **No Impact** |
|---|---|---|---|---|
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | ☐ | ☐ | ☒ | ☐ |
| b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | ☐ | ☐ | ☒ | ☐ |

### 3.8.1 Environmental Setting

Greenhouse Gases (GHGs), defined as any gas that absorbs infrared radiation in the atmosphere, include, but are not limited to, water vapor, carbon dioxide ($CO_2$), methane ($CH_4$), nitrous oxide ($N_2O$), and fluorocarbons. These GHGs trap and build up heat in the atmosphere near the earth's surface, commonly known as the Greenhouse Effect. The atmosphere and the oceans are reaching their capacity to absorb $CO_2$ and other GHGs, leading to significant global climate change. Unlike criteria pollutants and toxic air contaminants, which are pollutants of regional and local concern, GHGs and climate change are a local, regional, and global issue. There is widespread international scientific consensus that human-caused increases in GHGs have and will continue to contribute to climate change.

In addition, the Intergovernmental Panel on Climate Change (IPCC), in the section of its Sixth Assessment Report (AR6) by Working Group I, "Climate Change 2021: The Physical Science Basis," (IPCC 2021; released August 7, 2021) Human Influence on the Climate System (Chapter 3), stated in part:

> *The evidence for human influence on recent climate change strengthened from the IPCC Second Assessment Report to the IPCC Fifth Assessment Report and is now even stronger in this assessment. The IPCC Second Assessment Report (1995) concluded 'the balance of evidence suggests that there is a discernible human influence on global climate'. In subsequent assessments the evidence for human influence on the climate system was found to have progressively strengthened. AR5 concluded that human influence on the climate system is clear, evident from increasing greenhouse gas concentrations in the atmosphere, positive radiative forcing, observed warming, and physical understanding of the climate system.*
>
> *It is unequivocal that human influence has warmed the global climate system since pre-industrial times. Combining the evidence from across the climate system increases the level of confidence in the attribution of observed climate change to human influence and reduces the uncertainties associated with assessments based on single variables. Large-scale indicators of climate change in the atmosphere, ocean, cryosphere and at the land surface show clear*

*responses to human influence consistent with those expected based on model simulations and physical understanding.*

AR6 indicated that, due to climate change, average temperatures in North America are very likely to increase and will continue to do so in future decades. Extreme temperatures in all regions of North America are projected to increase in intensity, frequency and duration, and cold spells are projected to decrease. The report indicates a medium confidence of a precipitation decrease in the western and southwestern portions of North America (IPCC, 2021).

Climate change is having and will continue to have widespread impacts on California's environment, water supply, energy consumption, public health, and economy. Many impacts already occur, including increased fires, floods, severe storms, and heat waves (California Governor's Office of Planning and Research [CGOPR], 2018). Documented effects of climate change in California include increased average, maximum, and minimum temperatures; decreased spring runoff to the Sacramento River; shrinking glaciers in the Sierra Nevada; sea level rise at the Golden Gate Bridge and in San Francisco Bay; warmer temperatures in Lake Tahoe, Mono Lake, and other major lakes; and plant and animal species found at changed elevations (CGOPR, 2018).

According to the IPCC, the concentration of $CO_2$, the primary GHG, has increased from approximately 280 parts per million (ppm) in pre-industrial times (Fifth Assessment Report) to well over 410 ppm in 2021 (AR6). $CO_2$ concentrations as of 2019 are increasing about 1.9 ppm/year; present $CO_2$ concentrations are higher than any time in at least the last 2 million years. $CO_2$ is used as a reference gas for climate change. To account for different GHG global warming potentials for other gases, emissions are often quantified and reported as $CO_2$ equivalents ($CO_2e$). For example, if the $CO_2$ global warming potential is set at a reference value of 1, $CH_4$ has a warming potential of 27.9 (i.e., 1 ton of methane has the same warming potential as 27.9 tons of $CO_2$ [IPCC, 2021]), while nitrous oxide has a warming potential of 273.

To meet both the statewide 2030 GHG reduction target that requires California to reduce its total statewide GHG emissions to 40 percent below 1990 levels (Health & Safety. Code, § 38550) and the 2050 goal of 80 percent below 1990 levels (Executive Order S-3-05), projects must contribute to slowing the increase in GHG emissions and should contribute to reducing the state's GHG output. In order to reach California's GHG reduction targets, per capita emissions would need to be reduced by approximately five percent each year from 2022 to 2030, with continued reductions through 2050.

### 3.8.2 Regulatory Setting

Various entities address this issue at the state and regional levels. In efforts to reduce and mitigate climate change impacts, State and local governments are implementing policies and initiatives aimed at reducing GHG emissions. California, one of the largest state contributors to the national GHG emission inventory, has adopted significant reduction targets and strategies. The State Legislature passed Senate Bill (SB) 32 (Pavley; Chapter 249, Statutes of 2016), which codifies a 2030 GHG emissions reduction target of 40 percent below 1990 levels. With SB 32, the Legislature passed companion legislation AB 197 (Eduardo Garcia; Chapter 250, Statutes of 2016), which provides additional direction for developing CARB's Scoping Plan for Climate

Change. The 2017 Scoping Plan focuses on strategies to achieve the 2030 target set by Executive Order B-30-15 and codified by SB 32, and a 2022 Climate Change Scoping Plan is in progress.

MBARD has not adopted GHG emission thresholds for construction related GHG emissions; however, MBARD has adopted an operational emission threshold of 10,000 metric tons of carbon dioxide equivalent ($MTCO_2E$) per year for stationary sources. MBARD indicates in their CEQA guidance documents that an operational project with emissions below the GHG emissions threshold would not result in a cumulatively considerable contribution of GHG emissions to the district. In order to evaluate the Project's GHG construction emissions Padre will compare the estimated GHG emissions to the operational emissions threshold of 10,000 $MTCO_2E$ per year.

### 3.8.3 Impact Analysis

Padre conducted emissions modeling to estimate the GHG emissions for the construction phase of the Project (refer to Appendix A). The emissions were estimated using the most recent emission factors, load factors and electricity use were obtained from the CalEEMod User's Guide, EMFAC model and EPA Emission Factors for Greenhouse Gas.

Construction equipment emissions were estimated using the engine horsepower, engine emission factors, engine load factors and hours of engine use per day. On-road vehicle emissions were estimated using the vehicle type (i.e., passenger gasoline-powered vehicle, heavy-duty diesel-powered vehicle), engine emission factors and length of daily round trips.

**Table 3.8-1. Estimated Project Construction GHG Emissions**

| Phase | $N_2O$ (Tons/Year) | $CH_4$ (Tons/Year) | $CO_2$ (Tons/Year) | $MTCO_2E$ (MT/Year) |
|---|---|---|---|---|
| **Construction Emissions** | 0.012 | 0.146 | 255.592 | 238.6 |
| | | | **MBARD Threshold** | 10,000 |
| | | | **Threshold Exceeded?** | No |

The Project's estimated construction GHG emissions do not exceed the MBARD emissions threshold of 10,000 $MTCO_2E$ per year for the construction phases.

*a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

**Less than Significant Impact.** MBARD does not have significance thresholds for construction related GHG emissions; however, the Project's total construction GHG missions of 238.6 $MTCO_2E$ is negligible when compared to the operational GHG significance threshold of 10,000 $MTCO_2E$ per year.

The Project would not result in an increase in vehicle trips within the Project area; therefore, the operation emissions for the Project would not result in the generation of additional operational GHG emissions, resulting in a less than significant impact.

*b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

**Less than Significant Impact.** MBARD does not have significance thresholds for construction related GHG emissions; therefore, the construction phase of the Project would not conflict with MBARD's policies or regulations.

The Project would not result in an increase in vehicle trips within the project area; therefore, the operation emissions for the Project would not conflict with an applicable plan, policy or regulation, resulting in a less than significant impact.

### 3.8.4 Mitigation Measures

The Project would not result in significant impacts to greenhouse gas emissions; therefore, no mitigation is required.

## 3.9 HAZARDS AND HAZARDOUS MATERIALS

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

### 3.9.1 Environmental Setting

The Project site spans the Nacimiento River in Monterey County. There are no residences or schools within the immediate vicinity of the Project site. There are two airstrips within Camp Roberts; East Garrison Assault Strip and McMillian Airfield. The Project site is approximately 0.8 miles west of the East Garrison Assault Strip and approximately 6.5 miles north of the McMillian Airfield.

The State Water Resources Control Board (SWRCB) GeoTracker database identifies 12 sites within Camp Roberts. Below is a summary of the closest sites to the Project site.

- Camp Roberts PFAS Investigation (T10000016364) is an open site assessment as of October 30, 2020. The potential contaminants of concern are PER and Polyfluoroalkyl Substances (PFAS). The potential media of concern is an aquifer used for drinking water supply, other groundwater uses (uses other than drinking water), soil and surface water. This site is located approximately 0.15 miles east of the Project site (SWRCB, 2022).

- The FMC Corps Buildings (CPRO-60) (T0607988253) is a closed case as of February 18, 2010. The potential contaminants of concern were diesel, waste oil/motor/hydraulic/lubricating. The potential media of concern was soil. This site is located approximately 0.4 miles southeast of the Project site (SWRCB, 2022).
- Nacimiento Tributary Landfill (CPRO-61) (T0607902622) is a closed case as of June 30, 2005. The potential contaminants were lead and metals. The potential media of concern were other groundwater (uses other than drinking water). This site is located approximately 0.95 miles southwest of the Project site (SWRCB, 2022).
- Camp Roberts Former Vehicle Wash Pads and Main Garrison Former Fire Training Area (T10000003643) is an open-inactive case as of July 1, 2028. There is no potential contaminants, and the potential media of concern is soil, which is under investigation. This site is located approximately 0.9 miles southeast of the Project site (SWRCB, 2022).
- Camp Roberts Former Pesticide Storage and Mixing Areas CPRO-25 (T10000003641) is a closed case as of July 7, 2015. The potential contaminants of concern were DDD/DDE/DDT, and the potential media was soil. The site is located approximately 1.3 miles to the southeast of the Project site (SWRCB, 2022).

The Department of Toxic Substances Control (DTSC) EnviroStor database (commonly referred to as the "Cortese List" Gov Code, §65962.5) identified two sites within Camp Roberts.

- Camp Roberts (J09CA0030) (80001045) is approximately 20 miles north of San Luis Obispo and lies within the San Luis Obispo and Monterey counties in California. The property contains seven sites around the Camp Roberts installation border. Site 1 currently consists of residential homes and grazing pastures. Site 3 is divided into three parcels of land. The two northern parcels are owned by the U.S. and are used as wildlife areas. The only improvements to this site include a wind-powered water well. The southern parcel is privately owned. Site 6 is owned by the State of California and is used as a bird sanctuary (DTSC, 2022). The site is not on the national priorities list and there is no further action as of May 16, 2012.
- Camp Roberts (27910001) is listed as having several ranges that were identified to have explosive ordinance disposal and buried drums. Camp Roberts is enclosed by a fence. The site is listed as an open base with cleanup oversight by the Regional Water Quality Control Board – Central Coast Region 3.

### 3.9.2 Impact Analysis

*a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

**Less than Significant with Mitigation.** The Project would involve routine storage, transport, use, and disposal of small quantities of hazardous materials during construction. These materials may include gasoline, diesel, hydraulic fluids, lubricants, coolants, and solvents all of which are regulated by Federal, State, and local laws and regulations. Improper storage and handling of these materials during Project activities could be considered a potentially significant

impact to the environment and nearby residences. **MM HAZ-1** would ensure the correct storage and handling through a Project Work and Safety Plan (PWSP). The PWSP would require separate storage for incompatible hazardous materials, secondary containment for hazardous materials storage, trained personnel for hazardous materials handling, on-site spill clean-up kits, and equipment refueling stations to be in specific sites with appropriate spill containment. With the implementation of this measure, the impact would be less than significant.

**MM HAZ-1: Project Work and Safety Plan.** A Project Work and Safety Plan (PWSP) shall be submitted to Camp Roberts Public Works staff for review and approval at least 30 days prior to the implementation of the Project. The PWSP shall include the following information (at a minimum):

- Contact information
- Hazardous Spill Response and Contingency Plan
- Emergency Action Plan
- Summary of the Project Execution Plan
- Project Management Plan
- Site Safety Plan, including measures for proper handling of hazardous materials including, but not limited to soils containing residual pesticides
- Permit Condition Compliance Matrix

*b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

**Less than Significant with Mitigation.** Project construction activities have the potential to result in an accidental release of hazardous materials into the Project site, specifically the Nacimiento River. This release of unanticipated hazardous materials into the environment is considered a potentially significant impact. **MM HAZ-1** would include a hazardous Spill Response and Contingency Plan and Site Safety Plan to address the accidental release of any hazardous materials. Implementation of **MM HAZ-1** would reduce the impact to a less than significant impact.

*c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

**No Impact.** The nearest school, Lillian Larson Elementary School, is located over five miles to the southeast in San Ardo, California. Hazardous materials, substances, or wastes would not be transported within the vicinity of the Project; therefore, no impact would result.

*d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

**No Impact.** The Geotracker and EnviroStor databases identifies hazardous materials sites within the Project vicinity; closes and active. However, none of the sites would pose an impact to the Project or would be impacted during construction; therefore, no impact would result.

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

**Less than Significant Impact.** The Project site is approximately 0.8 miles west of the East Garrison Assault Strip (Airstrip L2). The East Garrison Assault Strip is used on a weekly basis. Currently, it takes fixed-wing aircraft ranging from heavy to light-fighters, along with rotary-wing aircraft. Construction activities will primarily be within the banks of the Nacimiento River and would not interfere with the flight path of aircraft utilizing the East Garrison Assault Strip; therefore, resulting in a less than significant impact.

*f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

**Less than Significant Impact.** The Project site is located with Camp Roberts Military Facility. There is no public access to the Project site, nor is it within an emergency response and/or evacuation plan. The HWB will be closed to traffic during construction; however, it will remain open in the case of an emergency. Therefore, resulting in a less than significant impact.

*g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?*

**Less than Significant Impact.** The Project area is located within a Federal Responsibility Area and is not located within a region designated by CAL FIRE as a very high fire hazard severity zone. Fire safety in the Project area is provided by military personnel within Camp Roberts; however, Camp Roberts is authorized to contact CAL FIRE for additional fire and ambulance services, if necessary. The Project site includes the Nacimiento River floodplain, which has relatively high soil moisture. However, the Project involves potential ignition sources such as mobile and stationary equipment, vehicles, welders, and grinders. Standard safety features would be utilized such as spark arrestor mufflers and grinder shields. Therefore, the impact would be less than significant.

### 3.9.3 Mitigation Measures

Implementation of the following mitigation measure would reduce potential Project-related impacts regarding hazards and hazardous materials to less than significant:

- MM HAZ-1: Project Work and Safety Plan

## 3.10 HYDROLOGY AND WATER QUALITY

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

### 3.10.1 Environmental Setting

#### 3.10.1.1 Surface Water Characteristics

The Project site is located in the northern portion of the Nacimiento River, about 8.5 miles northeast from Lake Nacimiento. The Nacimiento River is part of the Nacimiento River watershed which totals 361.5 square miles. Construction of the Nacimiento Dam was completed in 1956 and formed Lake Nacimiento, which has a capacity of 377,000 acre-feet. The dam is used for flood control in the region and since its construction, the Nacimiento River's flow rate is largely regulated by periodic releases of water through the Nacimiento Dam. The Monterey County Water Resources Agency (MCWRA) is responsible for operation of the dam.

#### 3.10.1.2 Surface Water Quality

MCWRA has jurisdiction over all water within Monterey County including the Nacimiento and San Antonio Dams although they are located within San Luis Obispo County. The Nacimiento Dam is owned and operated by MCWRA to provide flood control services and maintain water resources for the County of Monterey (Monterey County, 2022). Surface water in the Project area (the Nacimiento River) is not considered impaired under Section 303(d) of the Clean Water Act (SWRCB, 2022a).

#### 3.10.1.3 Flood Hazard

The Project site is included within Flood Insurance Rate Map 06053C1925G in Monterey County. As shown on the Flood Insurance Rate Map, the Project site is within a 1 percent annual chance flood hazard area (Zone A) (Federal Emergency Management Agency [FEMA], 2022). Flood management within the region surrounding the Project area is primarily served by the Nacimiento Dam. The Nacimiento Dam protects the residing public and their property from flooding events by controlling stormwater runoff. Other flood controls within the water basin include Lake Antonio and Arroyo Seco (Salinas Valley Basin GSA, 2020).

#### 3.10.1.4 Groundwater Environment and Management

The Project site is within the Salinas Valley-Upper Valley Aquifer. The aquifer has 606 total wells. The closest well (well 24S11E26D001M) is used for water supply and is located approximately 0.3 miles north of the Project site (SWRCB, 2022b). Water-bearing units within the Salinas Valley consist of gravel, sand, silt, and alluvial-fan and river deposits.

In general, groundwater within the Salinas Valley Basin is of good quality and safe for agricultural and urban uses. The median total dissolved solids (TDS) within groundwater samples from the 2005 Groundwater Ambient Monitoring and Assessment (GAMA) study was 467 milligrams per liter (mg/L) (USGS, 2005). These TDS levels coincide with very hard water, measured by the presence and concentration of calcium carbonate.

The 2014 Sustainable Groundwater Management Act requires the formation of groundwater sustainability agencies (GSAs) in high- and medium-priority groundwater basins and sub-basins. The Project site is located within the boundaries of the Salinas Valley Basin GSA which is categorized by the California Department of Water Resources as medium priority for management and development of a groundwater sustainability plan (GSP). The most recent revision of the GSP was adopted on January 9, 2020. The GSP manages the basin in a sustainable manner for at least 20 years.

#### 3.10.1.5 Potentially Affected Groundwater Basins

Project activities would use limited water for work crew needs and dust control. Project water demands would be met using groundwater from the Salinas Valley Groundwater Basin supplied through onsite hydrant access equipped with backflow preventers and valves for construction water.

### 3.10.2 Impact Analysis

*a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?*

**Less than Significant with Mitigation.** In the absence of proper controls, ground disturbance associated with setting up the Nacimiento River diversion, work and staging areas, and vegetation and debris removal for construction of the access road could result in erosion and sedimentation. The proposed river diversion method would consist of the installation of cofferdams, sheet-pile system, or a combination thereof to isolate the construction work area from the flow of water and reduce erosion and water quality ramifications to the Nacimiento River. The Project would not generate organic waste or include the use of fertilizers that would impact the water quality of adjacent surface waters. Additionally, there would be no treatment of wastewater on site that may introduce bacteria or pathogens to nearby waters.

Prior to Project implementation, Camp Roberts personnel would coordinate with MCWRA to ensure that a water release from the dam does not occur during Project activities, affecting the construction within the Project site. Implementation of **MM HYDRO-1** would provide proof of coordination and provide a definitive schedule in which water releases and Project activities do not coincide.

As discussed in Section 3.9, *Hazards and Hazardous Materials*, potentially significant water quality impacts could also result from creosote and lubricants and fuels from construction equipment entering the riverbed. **MM HAZ-1** would address potential spills through the PWSP, which includes a Hazardous Spill Response and Contingency Plan. **MM HYDRO-2** requires a SWPPP consistent with the Statewide Construction General Permit (Order No. 2012-0006-DWQ), that would avoid significant impacts associated with runoff and sedimentation. With the implementation of these measures, the impact would be less than significant.

**MM HYDRO-1: Water Release Coordination.** Prior to Project implementation, the applicant shall provide documented proof of coordination between Camp Roberts personnel and MCWRA regarding scheduled water releases from the Nacimiento Dam. Documentation shall include written correspondence providing the dates that water release episode(s) would normally be scheduled to occur. If a water release is scheduled to occur during Project activities, action shall be made to arrange an agreed upon plan by both parties in which releases do not coincide with Project activities. Water Release Coordination shall be provided to California Military Department Facilities and Engineering staff a minimum of 30 days prior to Project implementation.

**MM HYDRO-2: Stormwater Pollution Prevention Plan**. The Applicant or their contractor shall develop and implement a Stormwater Pollution Prevention Plan (SWPPP) consistent with the Statewide NPDES Construction General Permit (Order No. 2012-0006-DWQ). At a minimum, the SWPPP shall include measures for:

- Maintaining adequate soil moisture to prevent excessive fugitive dust emissions, preservation of existing vegetation outside the scope of work, and effective soil

cover (e.g., geotextiles, straw mulch, hydroseeding) for inactive areas and finished slopes to prevent sediments from being dislodged by wind, rain, or flowing water.

- Standard best management practices, such as installing fiber rolls on slopes to capture and remove particles that have already been dislodged.
- Establishing good housekeeping measures such as construction vehicle storage and maintenance, handling procedures for hazardous materials, and waste management BMPs including procedural and structural measures to prevent the release of wastes and materials used at the site.
- The SWPPP shall also detail spill prevention and control measures to identify the proper storage and handling techniques of fuels and lubricants, and the procedures to follow in the event of a spill. The SWPPP shall be provided to California Military Department Facilities and Engineering staff a minimum of 30 days prior to Project implementation.

*b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?*

**Less than Significant Impact.** The Nacimiento River would be diverted during construction, but active flow would remain in the riverbed. The Project would not interfere with groundwater recharge such that there would be conflicts with sustainable groundwater management of the basin; therefore, there would be a less than significant impact.

*c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:*

*i.Result in a substantial erosion or siltation of on- or off-site?*

**Less than Significant with Mitigation.** The Project would utilize cofferdams, sheet-pile system, or a combination thereof to direct river flow down the half of the riverbed within the inactive worksite to keep the active worksite dry during bent foundation repair activities. The volume of water passing beneath the HWB would remain unaffected and water would continue to travel within the natural confines of the riverbed. However, erosional forces may increase within the riverbed due to increased water velocity resulting from the water diversion during construction activities within the riverbed. Additionally, stormwater run-off from Project work areas outside the riverbed may result in short-term erosion and siltation, which could be exacerbated by vegetation removal to establish the fire breaks in addition to vegetation and debris removal activities during access road construction. **MM HYDRO-2** and **MM HYDRO-3** would avoid significant impacts associated with runoff and sedimentation through adherence to regulatory permit conditions as well as by preserving vegetation within inactive areas and on finished slopes. **MM BIO-7** requires habitat restoration that would further reduce erosion and siltation impacts by mitigating for habitat loss due resulting from Project activities by stabilizing all soil disturbance areas and restoring vegetated habitats. With the implementation of these measures, the impacts would be less than significant.

**MM HYDRO-3: Erosion Control Measures.** Contractors shall prepare an Erosion Control Plan for implementation for any construction to occur between October 15 and May 15 of any year. In the absence of such an approved plan, all construction shall cease on or before October 15, except that necessary to implement erosion control measures. If necessary, the plan shall be submitted to the California Military Department Facilities and Engineering staff for review and approval prior to construction.

*ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?*

*iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources or polluted runoff?*

**(*ii* and *iii*) Less than Significant with Mitigation.** The Project involves the construction of an access road for future maintenance activities. Access road construction would involve excavation of 750 cubic yards to clear and grub the construction area of vegetation, debris, and rocks. The road would be constructed with geocell and gravel which would allow for natural water percolation down to the water table. Furthermore, implementation of **MM HYDRO-4** would reduce impacts that result from changes in surface runoff or stormwater drainage. The Project does not involve any new impervious surfaces and no Project components would contribute any pollutants to storm runoff in the Project area. With the implementation of **MM HYDRO-4**, the impacts would be less than significant.

**MM HYDRO-4: Prepare and Implement a Drainage Plan.** A Drainage Plan for the Project site shall be prepared that specifies how runoff on the site shall be managed in order to protect water quality within the adjacent Nacimiento River. The plans shall be developed with detailed runoff calculations for the appropriately sized access road, bridge and fire breaks to meet the drainage requirements of the Project site. The purpose of the plan is to prevent the creation of localized on- or off-site flooding and to prevent any negative water quality effects nearby. As envisioned, stormwater would be collected through the habitat restoration area and access road, where it would settle, then be metered out to the groundwater of the on-site ephemeral drainages and the adjacent Nacimiento River. The plan shall be submitted to the California Military Department Facilities and Engineering staff for review and approval prior to construction.

*iv. Impede or redirect flood flows?*

**Less than Significant Impact**. Although the Project site is located within a flood hazard area, there would be no substantial re-contouring of land within the Project site and flood flows would not require redirection. The riverbed substrate would be restored to pre-project conditions and elevation upon completion of Project activities, and prior to release of the diversion. Therefore, there would be a less than significant impact.

*d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?*

**No Impact.** Although the Project site is located within a flood hazard area, no Project components would release pollutants during flooding events. The Project site is not located within a Tsunami Inundation Hazard Zone or subject to seiches. Therefore, there would be no impact.

*e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?*

**No Impact.** The Project would not discharge any construction byproducts of pollutants into the Nacimiento River. The Project site is located within the Salinas Valley Basin. Although the Project water demand would likely be supplied by the Salinas Valley Basin, Project water demands would be limited to dust control and worker needs which is small and temporary in nature. The Project would not conflict or obstruct groundwater management in the area. Therefore, there would be no impact.

### 3.10.3 Mitigation Measures

Implementation of the following mitigation measures would reduce potential Project-related impacts regarding hydrology and water quality to less than significant:

- MM HAZ-1: Project Work and Safety Plan
- MM HYDRO-1: Water Release Coordination
- MM HYDRO-2: Preparation of a Stormwater Pollution Prevention Plan
- MM HYDRO -3: Erosion Control Measures
- MM HYDRO-4: Drainage Plan

## 3.11 LAND USE AND PLANNING

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

### 3.11.1 Environmental Setting

The Project site is located within southern Monterey County outside of the coastal zone and is a part of a land use designation for public/quasi-public uses (Monterey County Resource Management Agency, 2012).

### 3.11.2 Impact Analysis

*a. Physically divide an established community?*

**No Impact.** The Project would serve as the most direct point of connection between the ranges on the west side of the Nacimiento River and the Main Garrison on the east side. The Project would not divide an existing community; therefore, there would be no impact.

*b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?*

**No Impact.** Camp Roberts is within Monterey and San Luis Obispo Counties. The Project site is completely within Monterey County and is zoned for public/quasi-public land use according to the Land Use Element of the General Plan. The Project would be consistent with the surrounding land uses and includes safety improvements to the existing bridge; therefore, there would be no impact.

### 3.11.3 Mitigation Measures

The Project would not result in significant impacts to land use; therefore, no mitigation is required.

## 3.12 MINERAL RESOURCES

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

### 3.12.1 Environmental Setting

Within Monterey County, granite and metamorphic rocks are the dominating mineral resources that form the mountain ranges. Key mineral resources that are mined within Monterey County include sand, gravel and petroleum (Monterey County, 2008; Monterey County, 2010). There are no active mines within five miles of the Project site.

### 3.12.2 Impact Analysis

a. *Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?*

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?*

**(a to b) No Impact.** There are no known mineral resource recovery sites or known mineral resources in or near the Project area, and Project activities would not hinder access to nearby mineral resource extractions. The access road would not result in the loss of any known mineral resource in the area; therefore, there would be no impact.

### 3.12.3 Mitigation Measures

The Project would not result in significant impacts on mineral resources; therefore, no mitigation is required.

## 3.13 NOISE

| **NOISE** - Would the Project: | **Potentially Significant Impact** | **Less Than Significant with Mitigation** | **Less Than Significant Impact** | **No Impact** |
|---|---|---|---|---|
| a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | ☐ | ☐ | ☒ | ☐ |
| b) Generation of excessive groundborne vibration or groundborne noise levels? | ☐ | ☐ | ☒ | ☐ |
| c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | ☐ | ☐ | ☒ | ☐ |

### 3.13.1 Environmental Setting

The Project site is located in Monterey County within Camp Roberts, an active military base. Existing ambient noise levels in the Project vicinity are largely dictated by military training operations, vehicles associated with base operations and maintenance, military air traffic take off and landings at airfields and helipads operated by the base, traffic on U.S. Highway 101 and trains operating on the Union Pacific Railroad.

The nearest sensitive receptor is a single-family residential home located approximately 2.5 miles to the east of the Project site. The community of San Miguel is located approximately 5 miles to the southeast of the Project site.

3.13.1.1 Basis of Environmental Acoustics and Vibration

Sound, Noise, and Acoustics

Sound is the mechanical energy from a vibrating object that is transmitted by pressure waves through a liquid or gaseous medium (e.g., air). Noise is defined as unwanted sound (i.e., loud, unexpected, or annoying). Acoustics is the physics of sound. A sound source generates pressure waves, the amplitude of which determines the source's perceived loudness. Sound pressure level is described in terms of decibel (dB), with near-total silence for human hearing corresponding to 0 dB. When two sources at the same location each produce the same pressure waves, the resulting sound level at a given distance from that location is approximately 3 dB higher than the sound level produced by only one source. For example, if one automobile produces a 70 dB sound pressure level when it passes an observer, two cars passing simultaneously do not produce 140 dB; rather, they combine to produce 73 dB.

The perception of loudness can be approximated by filtering frequencies using the standardized A-weighting network. The "A-weighted" noise level de-emphasizes low and very

high frequencies of sound in a manner similar to the human ear's de-emphasis of these frequencies (see Table 3.14-1) (OSHA 2013; AIHA 2003). There is a strong correlation between A-weighted sound levels (expressed as dBA) and community response to noise. All noise levels reported in this section are in terms of A-weighting.

**Table 3.14-1. Common Sound Levels/Sources and Subjective Human Responses**

| Sound Level (dBA) | Typical Outdoor Noise Source | Typical Indoor Noise Sources | Typical Human Response/Effects |
|---|---|---|---|
| **140** | Carrier Jet takeoff (50 feet) | -- | --Threshold for Pain-- |
| **130** | Siren (100 feet)<br>Live Rock Band | -- | ---Hearing Damage--- |
| **120** | Jet takeoff (<br>200 feet)<br>Auto horn (3 feet) | -- | -- |
| **110** | Chain Saw<br>Snow Mobile | -- | ---Deafening--- |
| **100** | Lawn Mower (3 feet)<br>Motorcycle (50 feet) | -- | -- |
| **90** | Heavy Duty Truck (50 feet) | Food Blender (3 feet) | ---Very Loud--- |
| **80** | Busy Urban Street, Daytime | Garbage Disposal (3 feet) | |
| **70** | Automobile (50 feet) | Vacuum Cleaner (9 feet) | ---Loud--- |
| **60** | Small plane at ¾ mi | Conversation (3 feet) | |
| **50** | Quiet Residential Daytime | Dishwasher Rinse (10 feet) | ---Moderate--- |
| **40** | Quiet Residential Nighttime | Quiet Home Indoors | ---Quiet--- |
| **30** | Slight Rustling of Leaves | Soft Whisper (15 feet) | ---Very Quiet--- |
| **20** | -- | Broadcasting Studio | |
| **10** | -- | Breathing | --Barely Audible-- |
| **0** | -- | -- | --Threshold of Hearing-- |

Source: AIHA 2003, and OSHA 2013

In typical noisy environments, noise-level changes of 1 to 2 dB are generally not perceptible by the healthy human ear. However, people can begin to detect 3 dB increases in noise levels, with a 5 dB increase generally perceived as distinctly noticeable, and a 10 dB increase generally perceived as doubling the loudness. Four sound level descriptors are commonly used in environmental noise analysis:

- Equivalent sound level ($L_{eq}$): The $L_{eq}$ is the average sound level that contains the same acoustical energy as the time-varying sound that actually occurs during that period.
- Maximum sound level ($L_{max}$): The highest instantaneous sound level measured during a specified period.
- Day-night average level ($L_{dn}$): The energy average of A-weighted sound levels occurring over a 24-hour period, with a 10 dB penalty applied to A-weighted sound levels occurring during nighttime hours (10:00 p.m. to 7:00 a.m.)

- Community noise equivalent level (CNEL): Similar to $L_{dn}$, CNEL is the energy-average of the A-weighted sound levels occurring over a 24-hour period, with a 10 dB penalty applied to A-weighted sound levels occurring during the nighttime hours (10:00 p.m. to 7:00 a.m.) plus a 5 dB penalty applied to the A-weighted sound levels occurring during evening hours (7:00 p.m. to 10:00 p.m.). The CNEL is usually within one dB of the $L_{dn}$.

Sound from a localized source (i.e., point source) propagates uniformly outward in a spherical pattern, and the sound level decreases at a rate of 6 dB each time the distance doubles from a point or stationary source. Roadways, highways, and moving trains (to some extent) consist of several localized noise sources on a defined path; these are treated as "line" sources, which approximate the effect of several point sources. Sound levels decrease at a rate of 3 dB for each time the distance doubles from a line source. Therefore, noise from a line source decreases less with distance than noise from a point source. To limit population exposure to physically or psychologically significant noise levels, the state and various local cities and counties in the state have established guidelines and ordinances to control noise as discussed in Appendices A and B.

#### 3.13.1.2 Ground-borne Vibration

In contrast to airborne noise, ground-borne vibration is not a common environmental problem. Vibration from sources such as buses and trucks are not usually perceptible, even in locations close to major roads. Some common sources of ground-borne vibration are trains, buses on rough roads, and construction activities such as blasting, pile-driving, and operating heavy earth-moving equipment.

Ground-borne vibration can cause detectable building floor movement, window rattling, items shaking on shelves or walls, and rumbling sounds. In extreme cases, the vibration can cause damage to buildings. Building damage is not a factor for most projects, with the occasional exception of blasting and pile-driving during construction. Human annoyance from vibration can often occur and can happen when the vibration exceeds the threshold of perception by only a small margin. A vibration level that causes annoyance would be well below the damage threshold for normal buildings.

Vibration is an oscillatory motion which can be described in terms of displacement, velocity, or acceleration. Displacement is the easiest descriptor to understand. For a vibrating floor, the displacement is simply the distance that a point on the floor moves away from its static position. The velocity represents the instantaneous speed of the floor movement, and acceleration is the rate of change of the speed. The peak particle velocity (PPV) is defined as the maximum instantaneous positive or negative peak of the vibration signal. PPV is often used in monitoring of blasting vibration since it is related to the stresses that buildings undergo.

### 3.13.2 County of Monterey Code of Ordinances

The County of Monterey Noise Control Ordinance noise element establishes a maximum noise-level standard of 85 dB at 50 feet for non-transportation noise sources. The County's 2104 noise ordinance update includes nighttime noise limitations for non-transportation noise sources. During the nighttime hours between 10:00 p.m. and 7:00 a.m., noise levels shall not exceed 45 dBA $L_{eq}$ or 65 dBA $L_{max}$ as measured at the property line.

### 3.13.3 Impact Analysis

*a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

**Less than Significant Impact.** Due to the distance between the Project and the nearest sensitive receptor of approximately 2.5 miles noise modeling was not conducted. Typical maximum noise levels at the Project site generated by equipment proposed to be utilized at the Project could range from 77 dB to 85 dB (FHWA, 2006). Noise levels will attenuate approximately 6 dB as the distance from the source doubles; therefore, noise levels would likely be well below the County of Monterey noise standards within 1,000 feet of the Project site. Noise levels would likely be imperceptible at a distance of 1.0 mile from the Project site. It is unlikely that temporary increases in noise levels resulting from the Project would be perceived by a human receptor located at the nearest residential receptor. It should be noted that U.S. Highway 101 and the Union Pacific Railroad are located between the Project site and the nearest sensitive receptor.

The Project would not result in an increase in vehicle trips within the Project area; therefore, would not result in the generation of additional noise at the Project site, resulting in a less than significant impact

*b. Generation of excessive groundborne vibration or groundborne noise levels?*

**Less than Significant Impact.** The nearest sensitive receptor is located approximately 2.5 miles from the Project site. It is unlikely that groundborne vibration or groundborne noise levels resulting from the Project will be perceived by a human receptor located at the nearest residential receptor and is even less likely that the residential structure located at the nearest sensitive receptor would be damaged by groundborne vibration or groundborne noise levels. Based on the distance to the nearest sensitive receptor there would be no impact to sensitive receptors. The nearest structure to the Project site is located approximately 500 feet to the southeast of the Project site. Based on the distance to the nearest structure it is unlikely that groundborne vibration or groundborne noise levels resulting from the Project would cause damage to this; therefore, the impact would be less than significant.

The Project would not result in an increase in vehicle trips within the Project area; therefore, would not result in the generation of excessive groundborne vibration or groundborne at the Project site, resulting in a less than significant impact.

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

**Less than Significant Impact.** The nearest airport is the East Garrison Assault Strip (Airstrip L2) located within Camp Roberts approximately 0.8 miles to the east of the Project site. The nearest public airport (Paso Robles Municipal Airport) is located approximately 12 miles to the southeast of the Project site. The nearest private airport (Sinclair Field / Flying R Ranch Airfield) is located approximately 5.5 miles to the southeast of the Project site. The Project site is not located within the vicinity of a public airport or private airstrip land use plan.

The East Garrison Assault Strip is used on a weekly basis. Currently, it takes fixed-wing aircraft ranging from heavy to light-fighters, along with rotary-wing aircraft. The Project would not involve any aircraft use, affect any airport or airstrip operations, or expose people on- or off-site to excessive aircraft noise levels. Therefore, resulting in a less than significant impact.

### 3.13.4 Mitigation Measures

The Project would have no significant impacts from noise; therefore, no mitigation is required.

## 3.14 POPULATION AND HOUSING

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

### 3.14.1 Environmental Setting

According to the U.S. Census Bureau, Monterey County had a population of 439,035 in 2020 (U.S. Census Bureau, 2022). In addition, the nearest city to Camp Roberts is San Miguel, located approximately two miles from the Project site. San Miguel had a population of 2,536 in 2020 (Census Reporter, 2022).

### 3.14.2 Impact Analysis

a. *Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?*

b. *Displace substantial numbers of people or housing, necessitating the construction of replacement housing elsewhere?*

**(a to b) No Impact.** The proposed Project includes repair activities to the existing HWB and the construction of an access road. During Project activities, an average of 20 personnel would be working on the Project, which may slightly increase the demand for temporary (rental) housing or hotel amenities; however, the small number of people employed during the Project would not create a significant demand for housing or displace substantial numbers of available housing. The Project would not increase production of or generate the need for additional housing, generate new permanent jobs in the region, affect population growth, or displace existing housing or owners/tenants. Therefore, there would be no impact.

### 3.14.3 Mitigation Measures

The Project would not result in significant impacts on population and housing; therefore, no mitigation is required.

## 3.15 PUBLIC SERVICES

| **PUBLIC SERVICES** - Would the Project: | **Potentially Significant Impact** | **Less Than Significant with Mitigation** | **Less Than Significant Impact** | **No Impact** |
|---|---|---|---|---|
| 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? | ☐ | ☐ | ☒ | ☐ |
| Police Protection? | ☐ | ☐ | ☒ | ☐ |
| Schools? | ☐ | ☐ | ☐ | ☒ |
| Parks? | ☐ | ☐ | ☐ | ☒ |
| Other public facilities? | ☐ | ☐ | ☐ | ☒ |

### 3.15.1 Environmental Setting

The Project area is within a military base which is part of a Federal Responsibility Area. The nearest incorporated city is San Miguel, located approximately 5.5 miles southeast of the Project site.

Project site service providers are listed below in Table 3.15-1.

**Table 3.15-1. Summary of Public Service Providers**

| Service | Providers |
|---|---|
| Fire Protection | Emergency Services Division at Camp Roberts<br>California Department of Forestry and Fire Protection (CAL FIRE) |
| Police Protection | Emergency Services Division at Camp Roberts<br>California Highway Patrol (CHP) |
| Schools | Bradley Elementary School |
| Parks | Camp Roberts Recreational Vehicle (RV) Park |

#### 3.15.1.1 Fire Protection

The Project site is not inhabited and has a low fire risk due to generally high soil moisture content associated with the adjacent Nacimiento River. Fire protection services are provided by military personnel on base; however, if necessary, Camp Roberts is authorized to receive fire and paramedic assistance from CAL FIRE. The nearest fire department is the Camp Roberts Fire Department located at 4050 Arizona Boulevard in Camp Roberts which is equipped with 16 firefighters on staff. The nearest off-base fire department is the CAL FIRE Bradley Unit Station located at 65789 Bradley Road in Bradley, California. For added safety, the Project would establish four fire breaks surrounding the bridge, which would be maintained on an annual basis.

#### 3.15.1.2 Police Protection

Police protection services are provided by military personnel on base; however, if necessary, Camp Roberts is authorized to receive security assistance from the California Highway Patrol (CHP).

#### 3.15.1.3 Schools

The nearest school to the Project site is Bradley Elementary School located at 65600 Dixie St. in Bradley, approximately 4.3 miles northwest of the Project site.

#### 3.15.1.4 Parks

The nearest park to the Project site is Camp Roberts RV Park located approximately 3.4 miles southeast of the Project site. Impacts to parks are discussed in Section 3.16, *Recreation*.

### 3.15.2 Impact Analysis

*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?
- Police protection?
- Schools?
- Parks?
- Other public facilities?

**Less than Significant Impact.** The Project involves short term bridge repair activities with the construction of an access road and establishment of four fire breaks surrounding the bridge. Although the bridge is scheduled to close temporarily during construction, it would be open to emergency access if necessary. The Project does not involve the construction of any residences, buildings, or other land uses requiring public services. The Project would not generate a need for any new government facilities or public services during or after proposed activities are completed. Therefore, there would be a less than significant impact.

In addition, there are no children living at Camp Roberts; therefore, there would be no impact to local schools.

Impacts to wildfire are discussed in Section 3.20, *Wildfire*.

### 3.15.3 Mitigation Measures

The Project would not result in significant impacts on public services; therefore, no mitigation is required.

## 3.16 RECREATION

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

### 3.16.1 Environmental Setting

As noted in Section 3.15, *Public Services*, the closest recreational park to the Project site is Camp Roberts RV Park located on the military base and is situated just off U.S. Highway 101 approximately 3.4 miles southeast of the Project site. Access to this RV Park requires military identification. The park includes 20 sites with electric, water and sewer hook-ups. The next nearest park is the San Miguel Community Park located approximately 5.5 miles southeast of the Project site in the city of San Miguel. Park amenities within the San Miguel Community Park include a playground, restrooms, and a baseball field.

### 3.16.2 Impact Analysis

a. *Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*

b. *Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?*

**(a to b) No Impact.** The Project would not result in population growth in the area or otherwise result in the increased use of existing recreational facilities. The Project does not include any recreational facilities and would not require the construction or expansion of recreational facilities or restrict use of existing recreational facilities; therefore, there would be no impact.

### 3.16.3 Mitigation Measures

The Project would not result in significant impacts on recreation; therefore, no mitigation is required.

## 3.17 TRANSPORTATION

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

### 3.17.1 Environmental Setting

The Project site is located within Camp Roberts with restricted access to only military personnel and approved government contractors. Access to Camp Roberts is primarily from U.S. Highway 101 which is a major highway in California. The Project site is located just southwest of U.S. Highway 101 and immediately west of Well Road. It would be accessed via the access gate on Bradley Road. The HWB is the most direct access route between the main Garrison in the east side of the Nacimiento River and the various training ranges on the west side. Within Camp Roberts, there are no designated walking or bike paths. The Project site is isolated from public traffic within Monterey County due to Camp Roberts' limited access. There are no military programs, plans or ordinances in place that pertain to circulation or transportation within the military base. The Circulation Element within the Monterey County General Plan recognizes ongoing population growth within the County and identifies community planning strategies to help alleviate issues regarding traffic congestion. Impact Analysis

*a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?*

**Less than Significant Impact.** The Project involves repair activities to the existing HWB and the construction of an access road for future maintenance activities. Project construction and operation would be located within Camp Roberts which is a prohibited location to public access. Public roads outside of Camp Roberts would be utilized for equipment transfer before and after construction activities in addition to minimal truck trips to dispose of construction-related debris and hazardous waste, if encountered. As a result of restricted access within the area surrounding the Project site and the Project's minimal use of County roads, the Project would not interfere with any of the policies within the Circulation Element of the Monterey County General Plan. Therefore, resulting in a less than significant impact.

*b. Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?*

**Less than Significant Impact.** CEQA Guidelines section 15064.3(b) indicates that vehicles miles traveled (VMT) is the most appropriate measure for transportation impacts. In December 2018, the Office of Planning and Research (OPR) provided an updated Technical Advisory to help evaluate transportation impacts under CEQA. In particular, the Technical Advisory provides that a project generating or attracting fewer than 110 one-way trips per day generally may be assumed to cause a less than significant transportation impact (OPR 2018). During Project activities, an average of 20 personnel would be traveling daily to the Project area from nearby residences, hotels, or rental properties at any given time. The HWB would be closed to vehicular traffic during excavation, and concrete and backfill work around the foundations. During this time, traffic would be detoured eight miles upstream to the Low Water Bridge.

County roads would be utilized for mobilization and demobilization of large construction equipment to and from the Project site in addition to occasional truck trips to recycling and other disposal facilities for Project-related debris. The peak one-way trips that would occur in any one day would be under 110 which would create a less than significant impact according to the Technical Advisory's guidance.

From an operational standpoint, continued use of the HWB would keep VMT low on the post for the soldiers at Camp Roberts who would be traveling between the main Garrison on the east side of the Nacimiento River and the training ranges on the west side. Without Project implementation, the HWB would require decommissioning, shifting the route across the Nacimiento River to the Low Water Bridge located approximately eight miles upstream. Therefore, resulting in a less than significant impact.

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

**Less than Significant Impact.** The HWB would be closed to vehicular traffic during excavation and concrete and backfill work around the foundations. During this time, adequate signage and construction fencing would be utilized to notify vehicles of construction activities and guide vehicles to the designated detour. The operational phase of the Project would not involve any roadway modifications or incompatible uses that would increase traffic hazards. Therefore, resulting in a less than significant impact.

*d. Result in inadequate emergency access?*

**Less than Significant with Mitigation.** The Project would require the use of a detour to re-route routine HWB traffic during excavation, concrete and backfill work around the foundations. However, if necessary, the bridge will reopen to allow for emergency access. The inclusion of a Traffic Control Plan outlined in **MM T-1** would minimize impacts to emergency access by coordinating how HWB access would be achieved as quickly as possible. It would also ensure that appropriate signage and the use of flaggers is maintained in order to direct routine traffic along the designated detour to safely direct vehicles and help to reduce traffic and circulation impacts. With the implementation of this measure, the impact would be less than significant.

**MM T-1 : Traffic Control Plan.** Prior to commencement of Project activities, a Traffic Control Plan shall be devised by the construction contractor and submitted to California Military Department Facilities and Engineering for review and approval. It shall include measures that ensure prompt emergency access to the HWB during Project construction in addition to the inclusion of appropriate signage, traffic cones, and flaggers to reduce potential hazards to motorists and workers during the Project.

### 3.17.2 Mitigation Measures

Implementation of the following mitigation measure would reduce the potential for Project-related impacts to transportation to less than significant.

- MM T-1 : Traffic Control Plan

## 3.18 TRIBAL CULTURAL RESOURCES

| TRIBAL CULTURAL RESOURCES | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: | ☐ | ☒ | ☐ | ☐ |
| i) Listed or eligible for listing in the California Register of historical resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or | ☐ | ☒ | ☐ | ☐ |
| ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. | ☐ | ☒ | ☐ | ☐ |

### 3.18.1 Environmental Setting

Camp Roberts lies within the ancestral tribal lands of two distinct groups: the Salinans to the north and the Chumash to the south. In 2009, the Santa Ynez Band of Chumash Indians (SYBCI) expressed interest in activities and land use at Camp Roberts. In 2010, the CAARNG and the SYBCI entered into a formal government-to- government consultation wherein the SYBCI is provided opportunity to review all ground disturbing activities at Camp Roberts and also coordinates tribal monitoring of projects and other activities. The CAARNG is currently in discussion with local tribal members to identify sacred sites, traditional cultural properties, and other resources and places that the tribes perceive as important to their heritage and way of life. To date, no such resources have been identified within or in the vicinity of the Project site.

During consultation in support of the 2016 High Water Bridge Replacement Project, the SYBCI requested subsurface testing within the Project site prior to demolition of the former bridge. In October 2012, Far Western conducted exploratory backhoe trenching on the south end of the Project site to test for the presence of buried cultural deposits in advance of construction impacts during the bridge replacement. Four exploratory trenches were excavated around the south side of the former bridge and approximately 48.5 cubic meters of materials were excavated. No cultural materials were identified during the testing. The testing further determined that the Project site has a low potential for buried cultural deposits (Stevens et al., 2013).

*a. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:*

*i. Listed or eligible for listing in the California Register of Historical Resources (CRHR), or in a local register of historical resources as defined in Public Resources Code section 5020.1, subdivision (k), or*

*ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.*

**Less than Significant with Mitigation.** Non-tribal cultural resources are addressed in Section 3.5. No tribal resources were identified in proximity to the Project site. However, tribal resources may be discovered during Project disturbance. **MM-CUL-1/TCR-1** and **MM-CUL-2/TCR-2** would ensure that tribal resources, in the event of accidental discovery, further disturbance would halt until the resource had been appropriately assessed and treatment, if necessary, approved. With the implementation of **MM CUL-1/TCR-1** and **MM-CUL-2/TCR-2**, impacts to tribal resources would be less than significant. In addition, if human remains of Native American origin are discovered in Project areas, **MM CUL-3/TCR-3** would ensure proper coordination with the most likely descendent(s). With the implementation of **MM CUL-1/TCR-1** through **MM CUL-3/TCR-3** impacts would be reduced to less than significant.

### 3.18.2 Mitigation Measures

Implementation of the following MMs would reduce the potential for Project-related impacts to tribal cultural resources to less than significant.

- MM CUL-1/TCR-1: Cultural Resources Awareness Training
- MM CUL-2/TCR-2: Cultural Resources Monitoring
- MM CUL-3/TCR-3: Unanticipated Discovery of Human Remains

## 3.19 UTILITIES AND SERVICE SYSTEMS

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

### 3.19.1 Environmental Setting

The Project does not include permanent components that would require or alter existing utilities or service systems. All solid waste generated from the Project would be disposed of at Camp Roberts landfill located on the National Guard post within San Luis Obispo County. This landfill is permitted for disposal of industrial and construction/demolition waste as described per *CCR Title 27 Section 20220* and has 450,156 cubic yards of remaining capacity as of July 2015. Effective August 2021, Assembly Bill (AB) 332 repealed *Section 25150.8* of the Health and Safety Code and now mandates proper disposal of treated wood at a Class 1 hazardous waste facility. Some footings that currently support the HWB may consist of wood treated with creosote which is a hazardous waste material covered under AB 332. If discovered, the creosote-containing wood would be disposed of at the City of Paso Robles Landfill which is a permitted Class 1 landfill located approximately 16.75 miles southeast of the Project site. The Paso Robles Landfill has a remaining capacity of 3,082,600 cubic yards as of December 31, 2022 and accepts creosote waste (personal communication, Matt Thompson).

### 3.19.2 Impact Analysis

*a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?*

**Less than Significant Impact.** The Project does not include activities or permanent components that require new or expanded water, wastewater treatment, stormwater drainage, electrical power, or telecommunications facilities. Project activities would not require the relocation or construction of any other natural gas facilities. There are water pipes and electrical lines present on top of the HWB; however, no interaction with these existing utility lines would occur that would disrupt transmission or require relocation. There are no underground utility lines at the Project site that would be impacted due to excavation activities around the bent foundation. Project activities would use limited water for work crew needs and dust control, as necessary, and would not require new or expanded water supplies or facilities. Therefore, resulting in a less than significant impact.

*b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?*

**Less than Significant Impact.** Water usage for the Project would be limited to dust control during construction. Water would be supplied by hydrants onsite equipped with backflow preventers and valves for construction water. Water usage would be minimal and temporary in nature; Therefore, resulting in a less than significant impact.

*c. Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

**No Impact.** The Project does not require the treatment of wastewater and will not affect the capacity of wastewater treatment services. Portable restrooms would be provided on-site for workers and resulting domestic wastewater/sewage would be disposed of at a municipal wastewater treatment plant located within 20 miles of the Project site. Therefore, there would be no impact.

*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?*

**Less than Significant Impact.** Solid waste generated from the Project would consist of construction related debris including vegetation and materials from the existing bent foundation. These materials would be disposed of in accordance with applicable regulatory guidelines and is not foreseen to be in excess of the local waste standards or capacity. Therefore, resulting in a less than significant impact.

*e. Comply with federal, state, and local statutes and regulations related to solid waste?*

**Less than Significant Impact.** The Project would dispose of waste in accordance with the applicable Federal, State, and local statutes and regulations; therefore, resulting in a less than significant impact.

### 3.19.3 Mitigation Measures

The Project would not result in significant impacts regarding utilities and service systems; therefore, no mitigation is required.

## 3.20 WILDFIRE

| **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** | **Less Than Significant Impact** | **No Impact** |
|---|---|---|---|---|
| a) Substantially impair an adopted emergency response plan or emergency evacuation plan? | ☐ | ☐ | ☒ | ☐ |
| b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? | ☐ | ☐ | ☒ | ☐ |
| c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment? | ☐ | ☐ | ☒ | ☐ |
| d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes? | ☐ | ☐ | ☒ | ☐ |

### 3.20.1 Environmental Setting

The Project area is located within a Federal Responsibility Area and is not located within a region designated by CAL FIRE as a very high fire hazard severity zone. Fire safety in the Project area is provided by military personnel within Camp Roberts; however, Camp Roberts is authorized to contact CAL FIRE for additional fire and ambulance services, if necessary.

### 3.20.2 Impact Analysis

*a. Substantially impair an adopted emergency response plan or emergency evacuation plan?*

*b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?*

*c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?*

*d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?*

**(a to d) Less than Significant Impact.** Impacts the Project has on emergency response is discussed in Section 3.9 Hazards and Hazardous Materials, Section 3.15 Public Services, and Section 3.17 Transportation. The Project would include vegetation maintenance and establishment of four fire breaks and an access road to aid in bridge and fire break maintenance. Vegetation would be maintained on an annual basis. Therefore, there would be a less than significant impact.

### 3.20.3 Mitigation Measures

The Project would not result in significant impacts regarding wildfire; therefore, no mitigation is required.

## 3.21 MANDATORY FINDINGS OF SIGNIFICANCE

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

*a. Does the project have the potential to 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?*

**Less than Significant with Mitigation.** As described in the impact sections above, the potential of the proposed Project to substantially degrade the environment is less than significant with incorporation of mitigation measures. Specifically, the Project has potential to impact biological resources, cultural resources, hazards and hazardous materials, hydrology and water quality, transportation, and tribal cultural resources. However, these impacts would be avoided or reduced to a less than significant level with incorporation of mitigation measures discussed in each section.

*b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of past, present and probable future projects.)*

**Less than Significant Impact.** For any Project-related impact to contribute cumulatively to the impacts of past, present, or reasonably foreseeable projects, the other projects would need to result in an impact on the same resource area, occur at the same time, or occur within an area overlapping the proposed Project. Camp Roberts currently does not have any projects scheduled

to occur within the same time or within the same vicinity which would cause a cumulative impact; therefore, resulting in a less than significant impact.

*c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?*

**Less than Significant Impact**. The Project would not result in any substantial adverse effects to human beings, either directly or indirectly, since each potentially significant impact can be reduced to a less than significant level with the implementation of mitigation measures provided in this document. No other substantial adverse effects to human beings are anticipated as a result of this Project.

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## 4.1 LIST OF PREPARERS

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# APPENDIX A

## AIR QUALITY AND GREENHOUSE GAS EMISSIONS ESTIMATES

**Camp Roberts High Water Bridge Access Road and Bent Foundation Repair Project**
**CRITERIA POLLUTANTS & GREENHOUSE GAS EMISSIONS**
**TABLE 1: CONSTRUCTION EMISSIONS SUMMARY**

| Source | Peak Day Emissions, lbs/day | | | | | | | | | Annual Emissions, tons/yr | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $NO_x$ | ROG | $PM_{10}$ | $PM_{2.5}$ | CO | $SO_2$ | $N_2O$ | $CH_4$ | $CO_2$ | $NO_x$ | ROG | $PM_{10}$ | $PM_{2.5}$ | CO | $SO_2$ | $N_2O$ | $CH_4$ | $CO_2$ | $MTCO_2e$ |
| Construction Phase | 10.31 | 1.81 | 6.15 | 0.91 | 116.96 | 0.05 | 2.47 | 27.02 | 16,683 | 0.390 | 0.071 | 0.338 | 0.049 | 1.413 | 0.002 | 0.012 | 0.146 | 255.592 | 238.6 |
| ***Peak Day within Monterey County*** | ***10.31*** | ***1.81*** | ***6.15*** | ***0.91*** | ***116.96*** | ***0.05*** | ***2.47*** | ***27.02*** | ***16,683*** | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| ***Total Annual Emissions within Monterey County*** | *--* | *--* | *--* | *--* | *--* | *--* | *--* | *--* | *--* | ***0.390*** | ***0.071*** | ***0.338*** | ***0.049*** | ***1.413*** | ***0.002*** | ***0.012*** | ***0.146*** | ***255.6*** | ***238.6*** |
| ***MBARD Significance Thresholds*** | ***137*** | ***137*** | ***82*** | ***55*** | ***550*** | ***150*** | *--* | *--* | *--* | *--* | *--* | *--* | *--* | *--* | *--* | *--* | *--* | *--* | *--* |
| ***Threshold exceeded?*** | ***No*** | ***No*** | ***No*** | *--* | ***No*** | ***No*** | *--* | *--* | *--* | | | | | | | | | | |
| | | | | | | | | | | | | | | | | ***GHG - $MTCO_2e$ conversions*** | ***273*** | ***28*** | ***1*** | *--* |
| | | | | | | | | | | | | | | | | ***Total $MTCO_2e$, tons/yr*** | ***238.6*** | | | |
| | | | | | | | | | | | | | | | | ***MBARD Significance Threshold*** | ***10,000*** | | | |
| | | | | | | | | | | | | | | | | ***Threshold exceeded?*** | ***No*** | | | |

**Notes:**
- Global Warming Potentials (273 for $N_2O$, 27.9 for $CH_4$, and 1 for $CO_2$, Table 7.SM.6, Intergovernmental Panel on Climate Change (IPCC). 2021. Sixth Assessment Report

MBARD - Monterey Bay Air Resources District
$NO_x$ - Oxides of Nitrogen
ROG - Reactive Organic Gases
$PM_{2.5}$ - Particulate Matter 2.5 Microns or Less
$PM_{10}$ - Particulate Matter 10 Microns or Less
DPM - Diesel Particulate Matter
CO - Carbon Monoxide
$SO_2$ - Sulfur Dioxide
$N_2O$ - Nitrous Oxide
$CH_4$ - Methane
$CO_2$ - Carbon Dioxide



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**Camp Roberts High Water Bridge Access Road and Bent Foundation Repair Project**
**CRITERIA POLLUTANTS & GREENHOUSE GAS EMISSIONS**
**TABLE 2: Construction Phase**

**On-Site Sources**

| Source | BHP | Load Factor | Number | Hours/ Day* | Duration (days) | Emission Factors (g/bhp-hr) | | | | | | | | | Emissions (lb/day) | | | | | | | | | Total Emissions (tons) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | $NO_x$ | ROG | $PM_{10}$ | $PM_{2.5}$ | CO | $SO_2$ | $N_2O$ | $CH_4$ | $CO_2$ | $NO_x$ | ROG | $PM_{10}$ | $PM_{2.5}$ | CO | $SO_2$ | $N_2O$ | $CH_4$ | $CO_2$ | $NO_x$ | ROG | $PM_{10}$ | $PM_{2.5}$ | CO | $SO_2$ | $N_2O$ | $CH_4$ | $CO_2$ |
| Asphalt Fugitive | -- | -- | 1 | 0.000 | 0 | -- | 2.600 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0E+00 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0E+00 | -- | -- | -- | -- | -- | -- | -- |
| Backhoe | 125 | 37 | 1 | 8 | 110 | 0.260 | 0.060 | 0.008 | 0.008 | 3.700 | 0.005 | 0.004 | 0.151 | 468 | 0.212 | 0.049 | 0.007 | 0.007 | 3.018 | 0.004 | 0.003 | 0.1232 | 381 | 0.012 | 0.003 | 0.000 | 0.000 | 0.166 | 0.000 | 0.000 | 0.007 | 20.974 |
| Compactor | 220 | 38 | 1 | 6 | 12 | 0.260 | 0.060 | 0.008 | 0.008 | 2.200 | 0.005 | 0.004 | 0.153 | 473 | 0.288 | 0.066 | 0.009 | 0.009 | 2.433 | 0.006 | 0.005 | 0.1692 | 523 | 0.002 | 0.000 | 0.000 | 0.000 | 0.015 | 0.000 | 0.000 | 0.001 | 3.141 |
| Excavator | 320 | 38 | 1 | 8 | 110 | 0.260 | 0.060 | 0.008 | 0.008 | 2.200 | 0.005 | 0.004 | 0.154 | 475 | 0.558 | 0.129 | 0.017 | 0.017 | 4.718 | 0.011 | 0.009 | 0.3303 | 1019 | 0.031 | 0.007 | 0.001 | 0.001 | 0.260 | 0.001 | 0.000 | 0.018 | 56.056 |
| Generator -1 | 50 | 74 | 1 | 8 | 110 | 4.075 | 0.691 | 0.194 | 0.194 | 3.995 | 0.007 | 0.004 | 0.062 | 568 | 2.659 | 0.451 | 0.127 | 0.127 | 2.607 | 0.005 | 0.003 | 0.0405 | 371 | 0.146 | 0.025 | 0.007 | 0.007 | 0.143 | 0.000 | 0.000 | 0.002 | 20.397 |
| Generator -2 | 50 | 74 | 1 | 8 | 110 | 4.075 | 0.691 | 0.194 | 0.194 | 3.995 | 0.007 | 0.004 | 0.062 | 568 | 2.659 | 0.451 | 0.127 | 0.127 | 2.607 | 0.005 | 0.003 | 0.0405 | 371 | 0.146 | 0.025 | 0.007 | 0.007 | 0.143 | 0.000 | 0.000 | 0.002 | 20.397 |
| Loader | 250 | 36 | 1 | 6 | 110 | 0.260 | 0.060 | 0.008 | 0.008 | 2.200 | 0.005 | 0.004 | 0.152 | 470 | 0.310 | 0.071 | 0.010 | 0.010 | 2.619 | 0.006 | 0.005 | 0.1810 | 559 | 0.017 | 0.004 | 0.001 | 0.001 | 0.144 | 0.000 | 0.000 | 0.010 | 30.742 |
| Water Truck | 210 | 38 | 1 | 8 | 110 | 0.260 | 0.060 | 0.008 | 0.008 | 2.200 | 0.005 | 0.004 | 0.153 | 473 | 0.366 | 0.084 | 0.011 | 0.011 | 3.096 | 0.007 | 0.006 | 0.2153 | 665 | 0.020 | 0.005 | 0.001 | 0.001 | 0.170 | 0.000 | 0.000 | 0.012 | 36.601 |
| | | | | | | | | | | | | | | **Total** | **7.051** | **1.30** | **0.31** | **0.307** | **21.098** | **0.042** | **0.033** | **1.100** | **3890** | **0.374** | **0.068** | **0.016** | **0.016** | **1.041** | **0.002** | **0.002** | **0.052** | **188.31** |

**On-Road Sources**

| Source | Peak Round Trips/Day | Average Round Trips/Day | Number of Vehicles | Length of Round Trip (miles) | Duration (days) | Emission Factors (g/mile) | | | | | | | | | Peak Day Emissions (lb/day) | | | | | | | | | Total Emissions (tons) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | $NO_x$ | ROG | $PM_{10}$ | $PM_{2.5}$ | CO | $SO_2$ | $N_2O$ | $CH_4$ | $CO_2$ | $NO_x$ | ROG | $PM_{10}$ | $PM_{2.5}$ | CO | $SO_2$ | $N_2O$ | $CH_4$ | $CO_2$ | $NO_x$ | ROG | $PM_{10}$ | $PM_{2.5}$ | CO | $SO_2$ | $N_2O$ | $CH_4$ | $CO_2$ |
| Passenger Vehicle -LDA (offsite) | 1 | 1 | 5 | 50 | 110 | 0.0412 | 0.0079 | 0.0011 | 0.0010 | 0.556 | 0.0025 | 0.0044 | 0.002 | 249 | 0.023 | 0.004 | 0.001 | 0.001 | 0.306 | 0.001 | 0.002 | 0.001 | 137.0 | 0.001 | 0.000 | 0.000 | 0.000 | 0.017 | 0.000 | 0.000 | 0.000 | 7.536 |
| Light-Duty Truck - LDT2 (offsite) | 1 | 1 | 5 | 50 | 110 | 0.0443 | 0.0097 | 0.0055 | 0.0053 | 0.087 | 0.0028 | 0.0471 | 0.000 | 300 | 0.024 | 0.005 | 0.003 | 0.003 | 0.048 | 0.002 | 0.026 | 0.000 | 165 | 0.001 | 0.000 | 0.000 | 0.000 | 0.003 | 0.000 | 0.001 | 0.000 | 9.080 |
| Med-Heavy Duty - T6 Utility (onsite) | 1 | 1 | 2 | 0.25 | 20 | 0.5438 | 0.0053 | 0.0068 | 0.0065 | 0.032 | 0.0081 | 0.1344 | 0.000 | 855 | 0.001 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.942 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.009 |
| Med-Heavy Duty - T6 Utility (offsite) | 1 | 1 | 2 | 50 | 20 | 0.9282 | 0.3255 | 0.0053 | 0.0049 | 3.733 | 0.0310 | 0.0445 | 0.067 | 3137 | 0.205 | 0.072 | 0.001 | 0.001 | 0.823 | 0.007 | 0.010 | 0.015 | 692 | 0.002 | 0.001 | 0.000 | 0.000 | 0.008 | 0.000 | 0.000 | 0.000 | 6.916 |
| Heavy Duty Haul Truck - T7T (offsite) | 1 | 1 | 2 | 50 | 20 | 1.3471 | 0.2022 | 0.0049 | 0.0047 | 45.202 | 0.0000 | 1.1340 | 12.368 | 5563 | 0.297 | 0.045 | 0.001 | 0.001 | 9.965 | 0.000 | 0.250 | 2.727 | 1226 | 0.003 | 0.000 | 0.000 | 0.000 | 0.100 | 0.000 | 0.003 | 0.027 | 12.264 |
| Heavy Duty Haul Truck - T7T (offsite) | 1 | 1 | 3 | 50 | 2 | 1.3471 | 0.2022 | 0.0049 | 0.0047 | 45.202 | 0.0000 | 1.1340 | 12.368 | 5563 | 0.445 | 0.067 | 0.002 | 0.002 | 14.95 | 0.000 | 0.375 | 4.090 | 1840 | 0.000 | 0.000 | 0.000 | 0.000 | 0.015 | 0.000 | 0.000 | 0.004 | 1.840 |
| Heavy Duty Haul Truck - T7T (onsite) | 1 | 1 | 3 | 0.25 | 2 | 1.6218 | 0.0169 | 0.0212 | 0.0203 | 0.101 | 0.0120 | 0.1989 | 0.001 | 1265 | 0.003 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 2.09 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.002 |
| Heavy Duty Haul Truck - T7T (offsite) | 1 | 1 | 8 | 50 | 10 | 1.3471 | 0.2022 | 0.0049 | 0.0047 | 45.202 | 0.0000 | 1.1340 | 12.368 | 5563 | 1.188 | 0.178 | 0.004 | 0.004 | 39.86 | 0.000 | 1.000 | 10.907 | 4906 | 0.006 | 0.001 | 0.000 | 0.000 | 0.199 | 0.000 | 0.005 | 0.055 | 24.528 |
| Heavy Duty Haul Truck - T7T (onsite) | 1 | 1 | 8 | 0.25 | 10 | 1.6218 | 0.0169 | 0.0212 | 0.0203 | 0.101 | 0.0120 | 0.1989 | 0.001 | 1265 | 0.007 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.001 | 0.000 | 5.579 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.028 |
| Heavy Duty Haul Truck - T7T (onsite) | 1 | 1 | 1 | 50 | 20 | 1.6218 | 0.0169 | 0.0212 | 0.0203 | 0.101 | 0.0120 | 0.1989 | 0.001 | 1265 | 0.179 | 0.002 | 0.002 | 0.002 | 0.011 | 0.001 | 0.022 | 0.000 | 139 | 0.002 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.395 |
| Heavy Duty Haul Truck - T7T (onsite) | 1 | 1 | 1 | 0.25 | 20 | 1.6218 | 0.0169 | 0.0212 | 0.0203 | 0.101 | 0.0120 | 0.1989 | 0.001 | 1265 | 0.001 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.70 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.007 |
| Heavy Duty Haul Truck - T7T (offsite) | 1 | 1 | 6 | 50 | 2 | 1.3471 | 0.2022 | 0.0049 | 0.0047 | 45.202 | 0.0000 | 1.1340 | 12.368 | 5563 | 0.891 | 0.134 | 0.003 | 0.003 | 29.896 | 0.000 | 0.750 | 8.180 | 3679 | 0.001 | 0.000 | 0.000 | 0.000 | 0.030 | 0.000 | 0.001 | 0.008 | 3.679 |
| | | | | | | | | | | | | | | **Total** | **3.26** | **0.507** | **0.02** | **0.02** | **95.86** | **0.011** | **2.437** | **25.920** | **12793** | **0.017** | **0.003** | **0.000** | **0.000** | **0.372** | **0.000** | **0.011** | **0.094** | **67.28** |

**Notes:**

- Hours per day and durations estimated or provided by Project Applicant.
- Round trips for supplies deliveries estimated from within the Monterey County (50-miles).
- Round trips for LDA and LDT2 is estimated from within the Monterey County (50-miles).
- Estimated trucks to transport of equipment from within Monterey County, 50 mile round trip.
- Round trips to transport waste, concrete and export estimated from within the Monterey County (50-miles)

* apshalt in acres.

**Camp Roberts High Water Bridge Access Road and Bent Foundation Repair Project**
**CRITERIA POLLUTANTS & GREENHOUSE GAS EMISSIONS**
**TABLE 3: Construction - Fugitive Dust Emissions**

Construction

| Activity | Source | Source Units | Number of Days | Emission Factor | Emission Factor, Units | Peak Day Emissions (lbs/day) | | Total Emissions (tons) | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | $PM_{10}$ | $PM_{2.5}$ | $PM_{10}$ | $PM_{2.5}$ |
| Site Grading | 0.450 | acres/day | 10 | 0.429 | lbs PM10/day/acre | 0.1931 | 0.0176 | 0.0010 | 0.0001 |
| Truck Loading & Dumping (Rip Rap) | 92.9 | tons/day | 15 | 1.72E-04 | lbs/ton | 0.0160 | 0.0024 | 0.0001 | 0.0000 |
| Truck Loading & Dumping (River bed) | 121.3 | tons/day | 15 | 1.72E-04 | lbs/ton | 0.0209 | 0.0032 | 0.0002 | 0.0000 |
| Vehical Miles Off-Road | 5.00 | vehicle-miles/day | 110 | 1.17 | lbs/vehicle-mile | 5.8276 | 0.5828 | 0.3205 | 0.0321 |
| | | | | | **Max/Total** | **5.828** | **0.583** | **0.322** | **0.0322** |

**Fugitive Dust Emissions: Inputs for the Table**

| | | |
|---|---|---|
| *Emission factors based on following inputs* | | |
| *Mean number of rain days per year* | *0* | *worst case* |
| *Silt content of soil, fill storage pile, %* | *1.5* | *SCAQMD default value* |
| *Roadway inputs (paved and unpaved, as per URBEMIS)* | | |
| *Roads mean vehicle weight, tons* | *20.61* | *based on project description, HHDT + LDT and vehicles weight (average of full and empty)* |
| *unpaved dirt road silt content, %* | *8.4* | *AP-42 construction sites* |
| *Truck Loading inputs* | | |
| *k, particle size multiplier, default=0.35 fpr pm10* | *0.35* | |
| *U, mean wind speed, mph range 1.3-15* | *8.15* | |
| *M, moisture content, default=12%* | *12* | |
| *PM2.5/PM10 ratio truck loading* | *0.15* | |
| *Site grading emissions from CalEEMod for grading* | *0.091* | *ratio of PM2.5/PM10 CalEEMod* |
| *Demolition materials, tons/yds3* | *1.000* | *estimated for concrete debris* |
| *Fill materials, tons/yds3* | *1.000* | *estimated for soils* |
| | | |
| *Mitigation: demolition area watering (fraction reduction)* | *0.61* | *0.61 for watering every 3 hours (SCAQMD)* |
| *Mitigation: grading/dist area watering (fraction reduction)* | *0.61* | *0.61 for watering every 3 hours (SCAQMD)* |
| *Mitigation: dumping soil moisture (fraction reduction)* | *0.69* | *0.69 for minimum 12% soil moisture (SCAQMD)* |
| *Mitigation: storage piles (fraction reduction)* | *0.90* | *0.90 for watering by hand and covering (SCAQMD)* |
| *Mitigation: roads (fraction reduction)* | *0.55* | *0.55 for watering 3X per day (SCAQMD), 0.80 for soil binders applied monthly (AP-42)* |

**Notes:**

PM2.5/PM10 ratio as per AP-42 k factor for PM10 and PM2.5
Demolition dust calculations as per EPA AP-42 11.19 and 13.2.4
Truck loading dumping cut/fill based on CalEEMod
Storage pile emissions based on SCAQMD Handbook (URBEMIS does not address emissions from storage piles)
Paved and unpaved road dust emissions based on AP-42 2006 (unpaved) Chapt 13. EPA AP-42 2006 is the same as URBEMS and CalEEMod
One month assumes 22 days of activity, as per URBEMIS

**Camp Roberts High Water Bridge Access Road and Bent Foundation Repair Project**
**CRITERIA POLLUTANTS & GREENHOUSE GAS EMISSIONS**
**TABLE 4: Emission Factors and Assumptions**

| Onsite | | | | Emission Factors (g/bhp-hr) | | | | | | | | | Emission Factors (lb/bhp-hr) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Source | Tier | Operational Horsepower | Load Factor | $NO_x$ | ROG | $PM_{10}$ | $PM_{2.5}$ | CO | $SO_2$ | $N_2O$ | $CH_4$ | $CO_2$ | $NO_x$ | ROG | $PM_{10}$ | $PM_{2.5}$ | CO | $SO_2$ | $N_2O$ | $CH_4$ | $CO_2$ |
| Asphalt Fugitive | EF = lb/acre | -- | -- | -- | 2.600 | -- | -- | -- | -- | -- | -- | -- | 0.0057 | -- | -- | -- | -- | -- | -- | -- | -- |
| Backhoe | 4 | 125 | 37 | 0.260 | 0.060 | 0.008 | 0.008 | 3.700 | 0.005 | 0.0042 | 0.151 | 468 | 0.0006 | 0.0001 | 0.0000 | 0.0000 | 0.0082 | 0.00001 | 0.00001 | 0.00033 | 1.0307 |
| Compactor | 4 | 220 | 38 | 0.260 | 0.060 | 0.008 | 0.008 | 2.200 | 0.005 | 0.0042 | 0.153 | 473 | 0.0006 | 0.0001 | 0.0000 | 0.0000 | 0.0049 | 0.00001 | 0.00001 | 0.00034 | 1.0436 |
| Excavator | 4 | 320 | 38 | 0.260 | 0.060 | 0.008 | 0.008 | 2.200 | 0.005 | 0.0042 | 0.154 | 475 | 0.0006 | 0.0001 | 0.0000 | 0.0000 | 0.0049 | 0.00001 | 0.00001 | 0.00034 | 1.0477 |
| Generator -1 | -- | 50 | 74 | 4.075 | 0.691 | 0.194 | 0.194 | 3.995 | 0.007 | 0.0042 | 0.062 | 568 | 0.0090 | 0.0015 | 0.0004 | 0.0004 | 0.0088 | 0.00002 | 0.00001 | 0.00014 | 1.2529 |
| Generator -2 | -- | 50 | 74 | 4.075 | 0.691 | 0.194 | 0.194 | 3.995 | 0.007 | 0.0042 | 0.062 | 568 | 0.0090 | 0.0015 | 0.0004 | 0.0004 | 0.0088 | 0.00002 | 0.00001 | 0.00014 | 1.2529 |
| Loader | 4 | 250 | 36 | 0.260 | 0.060 | 0.008 | 0.008 | 2.200 | 0.005 | 0.0042 | 0.152 | 470 | 0.0006 | 0.0001 | 0.0000 | 0.0000 | 0.0049 | 0.00001 | 0.00001 | 0.00034 | 1.0351 |
| Water Truck | 4 | 210 | 38 | 0.260 | 0.060 | 0.008 | 0.008 | 2.200 | 0.005 | 0.0042 | 0.153 | 473 | 0.0006 | 0.0001 | 0.0000 | 0.0000 | 0.0049 | 0.00001 | 0.00001 | 0.00034 | 1.0424 |

| Offsite | | | | Emission Factors (g/mile) | | | | | | | | | Emission Factors (lb/mile) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Source | Tier | Region | Speed | $NO_x$ | ROG | $PM_{10}$ | $PM_{2.5}$ | CO | $SO_2$ | $N_2O$ | $CH_4$ | $CO_2$ | $NO_x$ | ROG | $PM_{10}$ | $PM_{2.5}$ | CO | $SO_2$ | $N_2O$ | $CH_4$ | $CO_2$ |
| Passenger Vehicle - LDA (offsite) | N/A | Monterey County | 55 | 0.0412 | 0.0079 | 0.0011 | 0.0010 | 0.5560 | 0.0025 | 0.0044 | 0.0020 | 248.6 | 0.0001 | 0.0000 | 0.0000 | 0.0000 | 0.0012 | 0.00001 | 0.00001 | 0.00000 | 0.5481 |
| Light-Duty Truck - LDT2 (offsite) | N/A | Monterey County | 55 | 0.0443 | 0.0097 | 0.0055 | 0.0053 | 0.0872 | 0.0028 | 0.0471 | 0.0004 | 299.5 | 0.0001 | 0.0000 | 0.0000 | 0.0000 | 0.0002 | 0.00001 | 0.00010 | 0.00000 | 0.6604 |
| Med-Heavy Duty - T6 Utility (onsite) | N/A | Monterey County | 15 | 0.5438 | 0.0053 | 0.0068 | 0.0065 | 0.0320 | 0.0081 | 0.1344 | 0.0002 | 854.9 | 0.0012 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.00002 | 0.00030 | 0.00000 | 1.8848 |
| Med-Heavy Duty - T6 Utility (offsite) | N/A | Monterey County | 55 | 0.9282 | 0.3255 | 0.0053 | 0.0049 | 3.7333 | 0.0310 | 0.0445 | 0.0667 | 3137.0 | 0.0020 | 0.0007 | 0.0000 | 0.0000 | 0.0082 | 0.00007 | 0.00010 | 0.00015 | 6.9158 |
| Heavy Duty Haul Truck - T7T (onsite) | N/A | Monterey County | 15 | 1.6218 | 0.0169 | 0.0212 | 0.0203 | 0.1010 | 0.0120 | 0.1989 | 0.0008 | 1265.2 | 0.0036 | 0.0000 | 0.0000 | 0.0000 | 0.0002 | 0.00003 | 0.00044 | 0.00000 | 2.7893 |
| Heavy Duty Haul Truck - T7T (offsite) | N/A | Monterey County | 55 | 1.3471 | 0.2022 | 0.0049 | 0.0047 | 45.2020 | 0.0000 | 1.1340 | 12.3682 | 5563.0 | 0.0030 | 0.0004 | 0.0000 | 0.0000 | 0.0997 | 0.00000 | 0.00250 | 0.02727 | 12.2642 |
| Heavy Duty Trucks - T7TC (onsite) | N/A | Monterey County | 15 | 1.8886 | 0.0181 | 0.0324 | 0.0310 | 0.1162 | 0.0120 | 0.1995 | 0.0008 | 1269.2 | 0.0042 | 0.0000 | 0.0001 | 0.0001 | 0.0003 | 0.00003 | 0.00044 | 0.00000 | 2.7981 |
| Heavy Duty Trucks - T7TC (offsite) | N/A | Monterey County | 55 | 5.4977 | 0.0558 | 0.0043 | 0.0041 | 0.9333 | 0.0304 | 0.5059 | 0.0026 | 3218.8 | 0.0121 | 0.0001 | 0.0000 | 0.0000 | 0.0021 | 0.00007 | 0.00112 | 0.00001 | 7.0962 |

# APPENDIX B

## PRELIMINARY AQUATIC RESOURCES DELINEATION REPORT

# PRELIMINARY AQUATIC RESOURCES DELINEATION REPORT

## CAMP ROBERTS HIGH WATER BRIDGE MAINTENANCE ACCESS ROAD AND BENT FOUNDATION REPAIR PROJECT MONTEREY COUNTY, CALIFORNIA

**Project No. 1802-1931**

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**NOVEMBER 2021**

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# 1.0 INTRODUCTION

The following Preliminary Aquatic Resources Delineation Report (Report) was prepared by Padre Associates, Inc. (Padre) for Avocet Environmental, Inc (Avocet) for the proposed High Water Bridge Maintenance Access Road and Bent Foundation Repair Project (Project) located at Camp Roberts in Monterey County, California (Project site). The California Military Department leases Camp Roberts from the Federal government through the United States Army Corps of Engineers (ACOE). The California Army National Guard (CA ARNG), a component of the California Military Department, is the primary tenant at Camp Roberts, and is proposing to construct an unpaved road and turnaround area to provide vehicle access during routine and emergency maintenance activities at the High Water Bridge (HWB), to maintain fire breaks in the vicinity of the bridge supporting structures, and repair undermined bridge pier foundations caused by upstream scouring. The jurisdictional determination investigation included a desktop review and a field survey to the proposed Project location. The primary objectives of the investigation were to determine the type and extent of water resources within the proposed Project area, and the limits of jurisdictional boundaries defined by Federal, State, and local regulatory agencies. This Report is intended to support permitting for the Project.

## 1.1 PROJECT LOCATION

The Project site is located along the Nacimiento River, within the north central section of Camp Roberts, approximately four miles southeast of the town of Bradley, Monterey County, California (Bradley NE 7.5-minute United States Geological Survey [USGS] quadrangle) (Figure 1 - Project Location). The Nacimiento River originates in the coastal mountains of San Luis Obispo County and flows northeast to the Salinas River in Monterey County, which ultimately leads to the Pacific Ocean. The Nacimiento River within Camp Roberts was altered by the installation of the Nacimiento Dam in 1957, approximately ten miles above the confluence with the Salinas River.

## 1.2 PROJECT DESCRIPTION

The proposed Project will consist of construction of one unpaved maintenance access road to enable access from an adjacent paved road to the HWB support structures. The HWB spans across the Nacimiento River and adjacent low-lying flood plain and banks and connects Bridge Road on the east side to Bradley Road on the west side of the span. The proposed maintenance access road will comprise approximately 0.3 acres (ac), with an additional 0.85 ac of turnaround and staging areas and will be constructed with a base layer of geotextile fabric, covered with gravel. The gravel will be approximately 0.75-inch diameter, installed slightly below grade and reinforced within a geogrid layer to minimize disturbance during winter flooding. The primary purpose of the access road will be to accommodate heavy equipment and vehicles that will be used for maintenance and repair of the HWB support structures when necessary, and fire suppression vehicles in the event of a fire. The proposed Project includes preparation of three fire breaks that will be maintained by trimming all vegetation to a maximum height of approximately 3 feet within 25 feet of the HWB supports (approximately 0.3 ac total). The total disturbance area including staging and construction areas will be approximately 4.58 ac in size.

The proposed Project also includes construction activities related to the repair of undermined HWB pier foundations within the Nacimiento River channel.

## 1.3 PROJECT SETTING

The Camp Roberts HWB crosses over the Nacimiento River, which originates in the coastal mountains of San Luis Obispo County and flows northeast to the Salinas River in Monterey County, which ultimately leads to the Pacific Ocean. The Nacimiento River within Camp Roberts was altered by the installation of the Nacimiento Dam in 1957, approximately ten miles above the confluence with the Salinas River. The HWB is located approximately 1.5 miles south of the confluence with the Salinas River.

The CA ARNG is tasked with maintenance of facilities, including the HWB, at Camp Roberts. In 2014, as part of the bridge deck replacement project, the Camp Roberts Department of Public Works removed vegetation around the HWB using methods that were not included in the approved vegetation removal plan. As a result of the grading, 1.090 ac of Regional Water Quality Control Board (RWQCB) jurisdiction was impacted. These impacts included 0.139 ac of ACOE jurisdictional wetland, 0.374 ac of State jurisdictional wetland, and 0.577 ac of riparian habitat. In addition, 0.150 ac of upland habitat was graded. Subsequently, in January 2015, the RWQCB issued a Notice of Violation (NOV) requiring stabilization of the disturbed area through a winterization plan, followed by implementation of mitigation and restoration plans. In January 2016, upon approval of the *Final Restoration Plan, Camp Roberts High Water Bridge Rehabilitation Project* (Restoration Plan) (Padre, 2016a), and the *Final Mitigation Plan, Camp Roberts High Water Bridge Rehabilitation Project* (Mitigation Plan) (Padre, 2016b), the RWQCB issued an after the fact Clean Water Act (CWA) Section 401 WQC (Certification Number 32715WQ05) for restoration and mitigation of the disturbance area. In addition, in April 2016, the ACOE issued authorization for the restoration and mitigation under Nationwide Permit 3 for maintenance, pursuant to Section 404 of the CWA.

In October 2017 (at the time of the initial aquatic resources delineation survey), the HWB restoration site was in the third year of monitoring, and the mitigation area was in the second year of monitoring, of the expected five-year monitoring period (Padre, 2017). The HWB restoration area consisted of replanted and restored ACOE and RWQCB jurisdictional areas. Restoration activities have been documented and submitted in compliance with existing permits, and a figure has been included in this Report for reference. As of June 2021, the HWB restoration area has met all performance criteria and is pending sign-off approval by RWQCB.

## 1.4 CLIMATE SUMMARY

The Project site is situated in Climate Zone 4, or the Central Coastal Range, which is located inland of the coast but retains some ocean influence that keeps temperatures more moderate throughout the year (PEC, 2006). This zone encompasses several microclimates from northern to southern parts of California and is characterized by hot, dry summers and cool but not severe winters. At the King City Station, located approximately 40 miles northwest of the Project site, the average maximum temperature includes a range from 63.1° Fahrenheit (F) in December to 85.1°F in September for the 76-year period between 1945 and 2021. The average minimum temperature for this time period includes a range of 35.8°F in December to 52.0°F in July and August. The average annual precipitation for this station is 11.17 inches with a range 0.01 inches

in July to 2.35 inches in January. Average annual snowfall for this Project site is 0.1 inches in January. Most of the rainfall in this region occurs between November and March.

Using climate data from the King City Station, it was determined that the initial October 2017 delineation field effort occurred during a period of higher rainfall. Therefore, climatic conditions at the Project site should be considered wetter than normal. Table 1-1 – Precipitation Analysis shows analysis of climate data obtained from the National Resources Conservation Service (NRCS) Climate Analysis for Wetlands Table (WETS table) used to determine site conditions at the time of surveys (NRCS, 2021a) (Appendix A – WETS table). The three months prior to the survey are shown on the left followed by the lower-than-average rainfall, average rainfall, and above average rainfall amounts as determined based on long-term rainfall records. Under the Rain Fall column are the actual precipitation values for each of the three months leading up to the survey. Each month's condition (dry, normal, wet) is assigned based on comparison to the long-term rainfall records and is considered against a weighted number that prioritizes the month prior to surveys over the two preceding months. The condition value and month weight value are then multiplied, and the results summed and compared to an index evaluating values from six to 18. The sum value of fifteen that was generated using the King City Station climate data indicates that the October 2017 delineation survey was conducted at a time that had wetter than normal rainfall conditions.

**Table 1-1. Precipitation Analysis**

| **Long-term Rainfall Records (Period of Record 1945-2021)** | | | | | **Analysis** | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Timing** | **Month** | **30 yrs in 10 less than (Inches)** | **Average (Inches)** | **30 yrs in 10 greater than (Inches)** | **2017 Rain Fall (Inches)** | **Condition[1]** | **Condition Value[1]** | **Month Weight Value** | **Products of previous two columns** |
| 1st prior Month | Sept | 0.00 | 0.00 | 0.05 | 0.03 | N | 2 | 3 | 6 |
| 2nd prior Month | Aug | 0.00 | 0.00 | 0.00 | 0.02 | W | 3 | 2 | 6 |
| 3rd prior month | Jul | 0.00 | 0.00 | 0.00 | 0.02 | W | 3 | 1 | 3 |
| | | | | | | | | **Sum[2]** | **15** |

| **[1]Condition / Condition Value:** | **[2]Index for Sum:** |
|---|---|
| D = Dry / 1 | 6 - 9 = period preceding surveys has been drier than normal |
| N = Normal / 2 | 10-14 = period preceding surveys has been normal |
| W = Wet / 3 | 15-18 = period preceding surveys has been wetter than normal |

## 1.5 GEOLOGY AND SOILS

The Project site is located approximately 0.85 miles southeast of the Salinas River, between the Santa Lucia range to the west and the Coastal Range to the east. The Salinas River Basin is a northwest-trending alluvial valley with a depositional thickness of up to approximately 10,000 to 15,000 feet of terrestrial and marine sediments (State of California Department of Water Resources [DWR], 2003).

United States Department of Agriculture Natural Resources Conservation Service (NRCS) Web Soil Survey indicated that there were three soil types within the Project site: Corducci-Typic Xerofluvents, occasionally flooded, 0 to 5 percent slopes, Elder loam, Gravely Substratum, 0 to 2 percent slopes, and Metz complex, 0 – 15 percent slopes. Corducci soil series consists of very deep, somewhat excessively drained soils that formed in alluvium from mixed sedimentary and igneous sources. Corducci soils are on alluvial fans, low stream terraces and floodplains. Elder soil series consists of very deep and deep, well drained soils that formed in alluvial material derived from mixed rock sources. Elder soils are on alluvial fans and in flood plains. Metz soil series consists of very deep, somewhat excessively drained soils that formed in alluvial material from mixed, but dominantly sedimentary rocks. Metz soils are on floodplains and alluvial fans. All three soils are not considered to be hydric soils (NRCS, 2021b) (Figure 2 – Soil Map).

## 1.6 HYDROLOGY

The Project site is located within the Central coast Hydrologic Region, in the Salinas Valley Groundwater Basin, and Paso Robles Area subbasin (3.4-06) (DWR, 2003). Two groundwater-bearing zones are located in the Paso Robles Area Groundwater Subbasin: Holocene-age alluvium and the Pleistocene-age Paso Robles Formation. The unconsolidated Holocene-age alluvium consists of fine-to-coarse-grained sand with pebbles and boulders up to 130 feet thick near the Salinas River, and groundwater is present in unconfined conditions. Recharge of the subbasin occurs primarily from percolation through stream channels, seepage from streams, and irrigation return flow (DWR, 2015).

Based on a query of the National Wetland Inventory, the Nacimiento River is considered a Riverine feature (USFWS, 2021). The Nacimiento River originates in the coastal mountains of San Luis Obispo County and flows northeast to the Salinas River in Monterey County, which ultimately leads to the Pacific Ocean. The Nacimiento River within Camp Roberts has been altered by the installation of the Nacimiento Dam in 1957, approximately ten miles above the confluence with the Salinas River. Stream flows during the winter and spring have been greatly reduced by the dam, while stream flows during the dry season have increased in duration, resulting in an increase in riparian vegetation (CDFW, 1969).

# 2.0 REGULATORY AUTHORITY

This section provides a summary of Federal, State, and local regulatory agencies that provide protection to water/wetland resources.

## 2.1 FEDERAL REGULATIONS

### 2.1.1 Clean Water Act

The ACOE is responsible for the issuance of permits for the placement of dredged or fill material into waters of the U.S. pursuant to Section 404 of the Clean Water Act (CWA) (33 USC 1344).

#### 2.1.1.1 Waters of the United States

The ACOE is responsible for the issuance of permits for the placement of dredged or fill material into waters of the U.S. pursuant to Section 404 of the Clean Water Act (CWA) (33 USC 1344).

In non-tidal waters the lateral extent of Federal jurisdiction is determined by the ordinary high water mark (OHWM), which is defined as the: "…*line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.*" (33 CFR 328[e]). Additional physical characteristics, including matted vegetation, sediment sorting, multiple observed flow events, water staining, and others, have also been used to determine the OHWM (U.S. Army Corps of Engineers, 2005).

Wetlands could also be regulated as waters of the U.S if they were adjacent to jurisdictional waters (other than waters that are themselves wetlands). The ACOE regulation concerning wetlands adjacent to jurisdictional waters is defined at 33 CFR 328.4(c)(4).

Non-tidal waters of the U.S. The limits of jurisdiction in non-tidal waters:

- In the absence of adjacent wetlands, the jurisdiction extends to the ordinary high water mark, or
- When adjacent wetlands are present, the jurisdiction extends beyond the ordinary high water mark to the limit of the adjacent wetlands.

The term adjacent is defined at 33 CFR 328.3(C) as:

The term adjacent means bordering, contiguous, or neighboring. Wetlands separated from other waters of the U.S. by man-made dikes or barriers, natural river berms, beach dunes and the like are "adjacent wetlands."

In 2015, the ACOE and EPA issued new definitions for waters/wetlands (U.S. Army Corps of Engineers and U.S. Environmental Protection Agency, 2015), known as the 2015 Clean Water Rule. In December 2018 the ACOE and EPA proposed a revised definition of waters of the U.S. that was published in the Federal Register in early 2019, and subsequently repealed the 2015 Clean Water Rule reverting regulation back to the 1986 regulations with subsequent guidance. On January 23, 2020, the ACOE and EPA finalized the Navigable Waters Protection Rule to

define waters of the U.S and it became effective on June 23, 2020. On August 30, 2021, in the case of Pascua Yaqui Tribe v. U.S. Environmental Protection Agency, the U.S. District Court for the District of Arizona vacated and remanded the Navigable Waters Protection Rule. Subsequently, the EPA and ACOE halted implementation of the Navigable Waters Protection Rule and, until further notice, are interpreting "waters of the U.S." consistent with the pre-2015 regulations (USEPA, 2021).

According to the USEPA, under the current implementation of CWA regulation, the term waters of the U.S. means:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
    - Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
    - From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
    - Which are used or could be used for industrial purposes by industries in interstate commerce;
4. All impoundments of waters otherwise defined as waters of the U.S. under this definition;
5. Tributaries of waters identified in paragraphs (s)(1) through (4) of this section;
6. The territorial sea;
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (s)(1) through (6) of this section; waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the U.S.

In addition, the pre-2015 regulations use the 1986 definition and subsequent guidance from previous U.S. Supreme Court decisions.

In January 2001, the U.S. Supreme Court ruled in the case of Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers *et al*. (SWANCC) that isolated intrastate non-navigable waters could not be considered "waters of the U.S." under Section 404 of the Clean Water Act on the basis of the migratory bird rule (U.S. Supreme Court, 2001). Based on the SWANCC decision and subsequent guidance from the ACOE (2001), waters covered by

subsection (a) (3) that could affect interstate commerce solely by virtue of their use as habitat by migratory birds were no longer considered waters of the U.S.

In 2006, the U.S. Supreme Court, in its decision in Rapanos v. United States and Carabell v. United States (*Rapanos* decision), revisited the jurisdictional scope of Section 404 of the CWA with respect to waters of the U.S. The Court confirmed ACOE jurisdiction over waters that have been or are navigable waters. However, disputes arose over waterbodies and wetlands associated with intermittent and ephemeral waterbodies.

The Court provided two new analytical standards for determining whether waterbodies that are not traditional navigable waters (TNWs), including wetlands adjacent to those non-TNWs, are subject to CWA jurisdiction. These standards are:

1) if the water body is relatively permanent, or if the water body is a wetland that directly abuts (e.g., the wetland is not separated from the tributary by uplands, a berm, dike, or similar feature) a relatively permanent water body (RPW) it is under the jurisdiction of the CWA, or

2) if a water body, in combination with all wetlands adjacent to that water body, has a significant nexus with TNWs, it is under the jurisdiction of the CWA.

In response to the *Rapanos* Decision, the ACOE and the U.S. EPA issued new guidance to determine over which waters bodies to assert jurisdiction (U.S. Army Corps of Engineers and U.S. Environmental Protection Agency, 2006). The agencies will assert CWA jurisdiction over:

a) Traditional Navigable Waters (TNWs)

b) All wetlands adjacent to TNWs

c) Non-navigable tributaries of TNWs that are relatively permanent tributary waters (RPW tributaries typically flow year-round or have continuous flow at least seasonally); and,

d) Wetlands that directly abut RPWs

e) Non-RPWs determined to have a “significant nexus” with a TNW, based on a fact-specific analysis.

The classes of water bodies that are subject to CWA jurisdiction only if such a significant nexus is demonstrated are: non-navigable tributaries that do not typically flow year-round or have continuous flow at least seasonally; wetlands adjacent to such tributaries; and wetlands adjacent to but that do not directly abut a relatively permanent, non-navigable tributary. A significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or an insubstantial effect on the chemical, physical, and/or biological integrity of a TNW. Principal considerations when evaluating significant nexus include the volume, duration, and frequency of the flow of water in the tributary and the proximity of the tributary to a TNW, plus the hydrologic, ecological, and other functions performed by the tributary and all of its adjacent wetlands.

#### 2.1.1.2 Wetlands of the United States

Wetlands are a special category of waters of the U.S., and are defined at 33 CFR 328.3(b) as: *"...those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."*

The ACOE utilizes the *Corps of Engineers Wetland Delineation Manual* (1987), herein referred to as *1987 ACOE Manual*, to identify wetlands subject to regulatory jurisdiction (jurisdictional wetlands) under the CWA. In central and southern California, Nevada, Arizona, and the other arid regions of the western U.S. the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*, herein referred to as the *AW Regional Supplement* prepared by the ACOE's Engineer Research and Development Center (2008) is used to delineate jurisdictional wetlands.

The ACOE identifies jurisdictional wetlands based on a three-parameter definition using vegetation, soil, and hydrological characteristics. Excluding unusual conditions (atypical conditions or disturbed sites), all three parameters must be present for a site to be considered a jurisdictional wetland. In addition, these wetlands must be adjacent to jurisdictional Waters of the U.S.

### 2.1.2 Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403)

The ACOE is also responsible for authorizing work affecting navigable waters of U.S. Structures or work under or over a navigable water of the U.S. is considered to have an impact on the navigable capacity of the waterbody (33 CFR 322.3[a]). There are no Section 10 waters on or near the Project site.

## 2.2 STATE REGULATIONS

### 2.2.1 Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (CA Water Code §§ 13000-13999.10) mandates that waters of the State of California shall be protected. Current policy in California is that activities that may affect waters of the State shall be regulated to attain the highest quality. Waters of the State include any surface water or groundwater, including saline waters, within the boundaries of the State. The Porter-Cologne Act establishes that the State assumes responsibility for implementing portions of the Federal CWA, rather than operating separate State and Federal water pollution control programs in California. Consequently, the State is involved in activities such as setting water quality standards, issuing discharge permits, and operating grant programs. Pursuant to Section 401 of the CWA, the ACOE cannot issue a Federal CWA permit until the State of California first issues a water quality certification to ensure that a project will comply with State water quality standards. The CWA's 401 certification requirement applies to many types of permits and is an important tool for the State to control projects that might degrade State waters.

In 2019, the State Water Resources Control Board adopted the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material (Procedures), for inclusion in the Water Quality Control Plan for Inland Surface Waters and Enclosed Bays and Estuaries and Ocean Waters of California. The Procedures consist of four major elements: 1) a wetland definition; 2)

wetland delineation procedures; 3) a wetland jurisdictional framework; and 4) procedures for the submittal, review and approval of applications for Water Quality Certifications and Waste Discharge Requirements for dredge or fill activities. The Procedures took effect in May 2020.

#### 2.2.1.1 Waters of the State

State Water Code defines waters of the State broadly to include any surface water or groundwater including saline waters, within the boundaries of the State. These include:

- Natural wetlands;
- Wetlands created by modification of a water of the State;
- Wetlands that meet definition of waters of the U.S.; and
- Artificial wetlands that meet the following criteria:
    - Agency approved mitigation projects,
    - Specifically identified in a water quality control plan as a wetland or other water of the State,
    - Resulting from historic human activity, not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape, and
    - Greater than or equal to one acre in size, unless constructed for one of a variety of industrial or land management purposes.

#### 2.2.1.2 Wetlands of the State

A State wetland is defined in the new Procedures as an aquatic feature that "…*under normal circumstances has continuous or recurrent saturation of the upper substrate caused by groundwater, shallow surface water, or both; duration of saturation sufficient to cause anaerobic conditions in the upper substrate; and vegetation that is dominated by hydrophytes or lacks vegetation."*

If an aquatic feature meets the definition of a wetland, it may be considered a water of the State.

# 3.0 METHODOLOGY

Padre completed the initial aquatic resources delineation survey fieldwork on October 10, 2017. On August 12, 2021, Padre conducted a second delineation survey to update the initial results based on current site conditions. Prior to each of the field surveys, Padre conducted a literature review to determine the general character of the Project site, and to identify potential aquatic and riparian features. Documents and resources reviewed included the following:

- Natural Resources Conservation Service (NRCS) Soil survey for the Project region;
- United States Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) Map for the Project region;
- Federal Emergency Management Agency (FEMA) 100 Year Floodplain Map;
- Final Restoration Plan, Camp Roberts High Water Bridge Rehabilitation Project, Monterey County, California (Padre, 2016a);
- Final Mitigation Plan, Camp Roberts High Water Bridge Rehabilitation Project, Monterey County, California (Padre, 2016b); and
- Draft Jurisdictional Wetland Delineation Report, Camp Roberts High Water Bridge Replacement Project (Tetra Tech, Inc., 2009).

## 3.1 WATERS OF THE UNITED STATES

Physical indicators of OHWM, such as the natural line on the bank, shelving, destruction of terrestrial vegetation, and the presence of litter and debris are used to record the location of OHWM within a waters of the U.S. The Project site contained numerous ephemeral channel features that exhibited distinct bed and bank. One riverine feature (Nacimiento River) was identified that exhibited distinct bed and bank. In the field, this feature was evaluated using the guidelines of *A Field Guide to the Identification of the Ordinary High-Water Mark (OHWM) in the Arid West Region of the Western United States* (Lichvar *et al.*, 2008) and *data was recorded on* the *Updated Datasheet for the Identification of the OHWM in the Arid West Region of the Western United States* (Curtis and Lichvar, 2010).

## 3.2 WETLANDS OF THE UNITED STATES

Padre employed methodologies for delineating waters and wetlands pursuant to the CWA according to the *1987 ACOE Manual* (Environmental Laboratory, 1987) and the *AW Regional Supplement* (U.S. Army Corps of Engineers, 2008). These manuals require that, under normal circumstances, an area possess three technical criteria (parameters) to be designated as a jurisdictional wetland. These criteria are prevalence of hydrophytic vegetation, presence of hydric soils, and wetland hydrology.

Paired sample plots were located within three potential wetland features (and adjacent upland habitat based on observations of topographical depressions, changes in plant assemblage, and the results of the Tetra Tech (2009) report. The locations of sample plots were recorded using a Global Positioning System (GPS) unit. Sample plot locations are depicted on Figure 4 – Preliminary Aquatic Resources Delineation Map. The vegetation, soil, and hydrology were examined at all sample plots and wetland data sheets were prepared (Appendix B – Wetland

Delineation Data Forms and Appendix C - Plant List). Sampling methods are discussed in this section.

### 3.2.1 Hydrophytic Vegetation

Hydrophytic vegetation is plant life that occurs in areas that are frequently flooded or have saturated soil for a prolonged duration during the growing season. In accordance with ACOE methodology, for a site to display a positive wetland vegetation indicator, a dominance or prevalence of hydrophytic (water-loving) plants species must be present.

To determine the dominance or prevalence of hydrophytic vegetation, a sample plot located in the lowest topographic area of each potential seasonal wetland was selected. The plot size was determined according to the Regional Supplement. A five-foot radius plot is used in areas with only herbaceous vegetation and a 15-foot radius plot is used in areas with shrubs and sub-shrubs, and a 30-foot radius plot is used in wooded areas (U.S. Army Corps of Engineers, 2008). The shape of the sample plot areas can be adjusted in order to fit within vegetation communities observed in the field. Within each plot, the plants were identified to species using standard taxonomic references (Baldwin et. al., 2012; Mason, 1957). The hydrophytic class of each plant species was determined in accordance with the *National Wetland Plant List, version 3.4* (U.S. Army Corps of Engineers, 2018b) as facultative, facultative-wetland, or obligate wetland species. A complete list of plant species observed during the field survey is compiled and attached in Appendix C – Comprehensive Plant List.

### 3.2.2 Hydric Soils

At each sample plot location, a soil pit was excavated to a depth of approximately 18 inches below ground surface (bgs), where possible, to determine the extent of saturation and to examine the soil for evidence of wetland hydrology. Once the pit was excavated, a soil sample was obtained from below the A horizon, approximately ten inches bgs, and examined for evidence of redoximorphic characteristics, such as low matrix chroma, gleying, and/or mottling resulting from anaerobic conditions. After moistening, the soil color was determined using Munsell soil color charts (Munsell Color, 1990). Soil texture was evaluated using field methods described by the ACOE (Environmental Laboratory, 1987). The characteristics of the soils were then compared against descriptions of soil-mapping units detailed in the Natural Resources Conservation Service Web Soil Survey (Natural Resources Conservation Service, 2021c).

### 3.2.3 Wetland Hydrology

Hydrologic characteristics of the sample plots were evaluated by identifying primary and secondary indicators including evidence of inundation, free water in the soil pit, soil saturation, drainage patterns, oxidized root channels in the upper 12 inches of the soil, and/or surface soil cracking.

## 3.3 WATERS AND WETLANDS OF THE STATE

Waters of the State were delineated based on ACOE guidance for field investigations. For State jurisdictional wetlands regulated by the RWQCB, the methodology described for Federal wetland delineations was employed. For non-wetland Waters of the State regulated by RWQCB, field survey methodology primarily consisted of reconnaissance-level assessment and verification of presence/absence of bed, bank, and/or riparian vegetation.

## 3.4 VEGETATION COMMUNITIES

On August 12, 2021, Padre biologists Alyssa Berry and Christina Santala conducted a field survey to identify, classify, and map the vegetation communities to provide context for the aquatic resources delineation survey results. The California Department of Fish and Wildlife (CDFW) California Native Plant Society (CNPS) rapid assessment methods were used to determine and classify the existing vegetation communities within the Project site.

## 4.0 RESULTS

There were three aquatic features identified within the Project site during the initial October 2017 field survey. The Project site was in the third year of active habitat restoration (as described in Section 1.3), and the features consisted of the Nacimiento River, a permanent marsh, and a shallow depressional area that supported riparian vegetation. As observed during the August 2021 field survey, the features had not changed. However, the Project site was in the sixth year of habitat restoration and exhibited changes in hydrophytic vegetation cover and species composition. As such, Padre updated the delineation based on the 2021 site conditions. Based on physical and functional characteristics, the features were classified according to the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et. Al., 1979). These classifications are those used to define the aquatic features exhibited in the USFWS NWI database. The classifications are included in Table 4-1 – Aquatic Resources Summary Table and described in the subsequent sections. Supporting documentation includes attached Figure 4 - Preliminary Aquatic Resources Delineation Map, Figure 5 – Vegetation Communities, Appendix C – Comprehensive plant list, and Appendix D – Site Photographs.

**Table 4-1. Aquatic Resources Summary Table**

| Wetland and Deepwater Habitats (System; Class)[1] | Area | | Dimensions | | Preliminary Jurisdiction |
|---|---|---|---|---|---|
| | Square Feet ($ft^2$) | Acres (ac) | Length (ft) | Width (ft) | |
| Riverine; Streambed | 44,011 | 1.01 | ~450 | ~105 | ACOE, RWQCB |
| Palustrine; Freshwater Forested/Shrub Wetland | 26,547 | 0.61 | NA | NA | RWQCB |
| Palustrine; Freshwater Emergent Wetland | 3,256 | 0.07 | NA | NA | ACOE, RWQCB |

| Total Preliminary Jurisdictional Area | | |
|---|---|---|
| **Agency** | **Wetland and Deepwater Habitat** | **Ac ($ft^2$)** |
| ACOE | Riverine, Freshwater Emergent Wetland | 1.08 (47,267) |
| RWQCB | Riverine, Freshwater Scrub-Shrub and Forested Wetland, Freshwater Emergent Wetland | 1.69 (73,814) |

Notes:
[1]The Class name is the nomenclature used by the USFWS NWI (USFWS, 2021b) and is based on the on the Wetlands and Deepwater Habitats as described by Cowardin et. al. (1979).
NA - Not applicable

## 4.1 AQUATIC RESOURCES

### 4.1.1 Riverine-Streambed

The Riverine System includes wetlands and deepwater habitats contained within a channel and is bounded on the landward side by upland, by the channel bank (including natural and man-made levees), or by wetlands dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens. Riverine classes include Rock Bottom, Unconsolidated Bottom, Aquatic Bed, Streambed, Rocky Shore, Unconsolidated Shore, and Emergent Wetland (nonpersistent). (Cowardin et. al., 1979).

The Nacimiento River is a perennial river channel that is seasonally moderated by the Nacimiento Dam upstream for the agricultural and human uses. The river flows from south to north through the Project site and flowing water was present at the time of the field survey. Within the Project site, the eastern bank was rocky, steep, and ranged in height from approximately two feet to 10 feet, the western bank consisted of sandy/gravelly soil on a gradual slope. Riparian vegetation on the banks consisted of sand bar willow (*Salix exigua*), arroyo willow (*Salix lasiolepis*) with intermittent occurrences of tall cyperus (*Cyperus eragrostis*). This feature corresponds to the Riverine Streambed classification (Cowardin et. al., 1979).

### 4.1.2 Palustrine-Freshwater Forested/Shrub Wetland

The Palustrine System was developed to group vegetated wetlands traditionally called by such names as marsh, swamp, bog, fen, and prairie, and ponds. Palustrine wetlands may be situated shoreward of lakes, river channels, or estuaries; on river floodplains; in isolated catchments; or on slopes. The Palustrine System includes all nontidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens, and is bounded by upland or by any of the other four Systems (Marine, Estuarine, Riverine, and Lacustrine) (Cowardin et. al., 1979).

Within this Report, Freshwater Forested-Shrub Wetland feature describes the area within the Project site that supports riparian vegetation communities including Sandbar willow thickets, Mulefat thickets, and Cottonwood forest and woodland described in Section 4.2.1. This area corresponds to the Forested Wetland and Scrub-Shrub Wetland classes (Cowardin et. al., 1979) but is more generally referred to as Freshwater Forested/Shrub Wetland in the NWI (USFWS, 2021). No water was present at the time of the delineation survey however, appeared to be subject to flooding and sedimentation caused by high flows of the Nacimiento River. The topography was generally level to gently sloping and supported moderate to dense tree, shrub, and herbaceous vegetation. Emergent to mature vegetation primarily consisted of sandbar willow, mulefat, and cottonwood. The Freshwater Forested-Shrub Wetland area exhibited wetland hydrology and supported hydrophytic vegetation. Padre sampled the soil (TP5) and determined that no hydric soils were present.

### 4.1.3 Palustrine-Freshwater Emergent Wetland

The Freshwater Emergent Wetland feature identified within the Project site was evaluated for presence of hydrophytic vegetation, hydric soils, and hydrology indicators. The three wetland parameters (hydrophytic vegetation, hydric soil, and hydrology) were present within the feature, and as such, a paired upland sample plot was evaluated to determine the extent of the Freshwater Emergent Wetland boundary. This feature corresponds to the Emergent Wetland Persistent class

(Cowardin et. al., 1979) but is referred to as Freshwater Emergent Wetland in the NWI (USFWS, 2021).

#### 4.1.3.1 Hydrophytic Vegetation

The Marsh feature exhibited an assemblage vegetation including spike rush (*Juncus balticus*) and California bulrush (*Schoenoplectus californicus*) in the ponded areas, with intermittent occurrences of curly dock (*Rumex crispus*), common cattail (*Typha latifolia*), and tall cyperus on the ponded edges and saturated soil areas. These species are hydrophytic with an indicator status ranging from facultative wetland species (plants that occur in wetlands and non-wetlands) to obligate (plants that almost always occur in wetlands).

#### 4.1.3.2 Wetland Hydrology

The Marsh feature is subject to periodic flooding from the river and/or storm water flows from surrounding slopes. At the time of the survey, there was water present in the marsh feature. The primary indicators of wetland hydrology included surface water (A1), high water table (A2), water marks (B1) non-riverine, sediment deposits (B2), inundation visible on aerial imagery (B7), water-stained leaves (B9), biotic crust (B12), and presence of aquatic invertebrates (B13).

#### 4.1.3.3 Hydric Soils

Two samples were taken from areas within the lowest elevation of the feature to capture the range of soil saturation and plant assemblages (TP3, TP4). Soils identified within the sample plots were hydric and characterized as loam to loamy sand. The hydric soil indicators were 1 cm Muck (A5), and Thick Dark Surface (A12). The soil layers between zero to two inches and two to 18 inches contained redoximorphic features and the soil was smooth with fine granules. Soils identified within the paired upland sample (TP1) were not hydric and were characterized as loamy. No redox features were identified within the soil profile.

## 4.2 VEGETATION COMMUNITIES

Based on species composition, life form, and community membership rules, the vegetation within the Project site was classified into vegetation types based on treatments described in *A Manual of California Vegetation Second Edition* (MCV2) (Sawyer et al., 2009), and/or site-specific classifications. All identifiable plant species observed were documented. Plant specimens that were not positively identified in the field were further examined using appropriate botanical keys, including *The Jepson Manual Vascular Plants of California* (Baldwin et. al., 2012). A list of all plant species observed during the August 2021 vegetation survey is provided in Appendix C. The six vegetation types observed included Mulefat thickets, Sandbar willow thickets, Coyote brush scrub, Wildoats and annual brome grasslands, Mixed Marsh, and Cottonwood stand. In addition to natural habitats, there was an anthropogenic un-vegetated to sparsely vegetated land cover type referred to as Developed within the Project site. Vegetation communities are described below.

#### 4.2.1.1 Sandbar Willow Thickets

Sandbar willow thickets (*Salix exigua* Shrubland Alliance) occurs in temporarily flooded floodplains, depositions along rivers and streams, and at springs. This alliance is characterized by sandbar willow as dominant or co-dominant in the shrub canopy; canopy is intermittent to

continuous with a variable herbaceous layer (Sawyer et. al., 2009). As observed during the August 2021 survey, Sandbar willow thickets occurred in distinct stands, primarily along the banks of the Nacimiento River within the Project site. The quantitative vegetation assessment identified sandbar willow as the dominant species with component to intermittent species consisting of tall cyperus (*Cyperus eragrostis*), coyote brush (*Baccharis pilularis*), mulefat (*Baccharis salicifolia*), and deergrass (*Muhlenbergia rigens*).

#### 4.2.1.2 Mulefat Thickets

Mulefat thickets (*Baccharis salicifolia Shrubland Alliance*) alliance occurs on canyon bottoms, floodplains, irrigation ditches, lake margins, and stream channels with mixed alluvium soils, and is characterized by presence of mulefat dominant in shrub canopy (Sawyer et. al., 2009). As observed during the August 2021 survey, Mulefat thickets occurred in a shallow depressional area adjacent to the southern side of the bridge. The quantitative vegetation assessment identified mulefat as the dominant species with component and intermittent species consisting of coyote brush, heliotrope (*Heliotropum curassavicum*), California sage (*Artemisia californica*), common lippia (*Phyla nodiflora*), salt grass (*Distichlis spicata*), ripgut brome, and red brome (*Bromus madritensis*).

#### 4.2.1.3 Fremont Cottonwood Forest and Woodland

Fremont cottonwood forest and woodland (Cottonwood stand) (*Populus fremontii-Fraxinus velutina-Salix goodingii* Forest and Woodland Alliance) occurs on floodplains, along low-gradient rivers, perennial or seasonally intermittent streams, springs, in lower canyons and desert mountains, in alluvial fans, and in valleys with a dependable subsurface water supply that varies considerable during the year. This alliance is characterized by Fremont cottonwood as dominant or co-dominant in the tree canopy, cover is continuous to open in the tree layer, shrub layer is intermittent to open, and herbaceous layer is variable (Sawyer et. al., 2009). As observed during the August 2021 survey, Cottonwood stand occurred along the southeastern boundary of the Project site and a small area on the northern side of the bridge. The quantitative vegetation assessment identified Fremont cottonwood as the dominant species with component tree, shrub and herbaceous species including western sycamore (*Platanus racemosa*), blue oak (*Quercus douglasii*), box elder, red willow (*Salix laevigata*), coyote brush, mulefat, ripgut brome (*Bromus diandrus*), and creeping wildrye (*Elymus triticoides*).

#### 4.2.1.4 Mixed Marsh

Mixed Marsh is a site-specific classification consisting of a dense assemblage of hydrophytic and riparian tree, shrub, and herbaceous species that occurred in the Marsh aquatic feature within the Project site. The dominant species was tall cyperus (*Cyperus eragrostis*) with sub-dominant to component species consisting of red willow, small fruited bulrush (*Scirpus microcarpus*), cattail, heliotrope, common lippia, and stinkwort (*Lepidium graveolens*).

#### 4.2.1.5 Coyote Brush Scrub

Coyote Brush Scrub (*Baccharis pilularis* Shrubland Alliance) occurs in river mouths, stream sides, terraces, stabilized dunes of coastal bars, spits along the coastline, coastal bluffs, open slopes, and ridges. Soils are variable, sandy to relatively heavy clay. This alliance is characterized by coyote brush as dominant to co-dominant in the shrub canopy; canopy is variable (Sawyer et. al., 2009). As observed during the August 2021 survey, coyote brush scrub

occurred on an upland area in the central portion of the Project site south of the bridge. The quantitative vegetation assessment identified coyote brush as the dominant species with intermittent shrub and herbaceous species consisting of sandbar willow, jersey cudweed (*Pseudognaphalium luteoalbum*), soft chess (*Bromus hordaceus*), and red brome.

#### 4.2.1.6 Wild oats and annual brome grasslands

Wild oats and annual brome grasslands (*Avena* spp*.* – *Bromus* spp. Semi-Natural Herbaceous Alliance) occur in waste places, rangelands, and openings in woodlands. This alliance is characterized by wild oats or brome species as dominant or co-dominant in the herbaceous layer; cover is open to continuous, and emergent trees and shrubs may be present at low cover (Sawyer et. al., 2009). As observed during the August 2021 survey, this alliance occurred on upland areas in the central portion of the Project site on both the north and south sides of the bridge. The quantitative vegetation assessment identified soft chess as the dominant grass species with component and intermittent species consisting of storksbill (*Erodium* sp.), rat tail fescue (*Festuca myuros*), summer mustard (*Hirschfeldia incana*), bristly goldenaster (*Heterotheca sessiflora* ssp. *echiodes*), coyote brush, tocalote (*Centaurea melitensis*), and purple needlegrass (*Stipa pulchra*).The purple needlegrass (*Stipa pulchra*), and foothill needlegrass (*Stipa lepida*) was observed intermittently, at sparse cover percentages (qualitatively assessed at five percent cover), within the annual grassland vegetation community. The percent cover of needlegrass must meet or exceed the threshold value of ten percent cover to be considered a purple needlegrass grassland (Sawyer et. al., 2009), and a CDFW Sensitive Natural Community (CDFW, 2021).

#### 4.2.1.7 Developed

Within this Report, Developed is a term that describes areas where the land surface has been modified for infrastructure such as paved and unpaved roads, staging areas. Developed lands typically do not support vegetative cover due to the presence of impervious surfaces, however, disturbed areas that are not paved can support sparse vegetative cover. As observed during the August 2021 survey, Developed areas included the highwater bridge span, paved road, and unpaved staging areas.

# 5.0 JURISDICTIONAL DETERMINATION

Activities within the aquatic resources observed and documented during the initial October 2017 field survey and subsequent August 2021 field survey may be regulated by Federal, State, and local agencies. The following sections describe the determination of jurisdiction for each aquatic resource identified within the Project site.

## 5.1 WATERS AND WETLANDS OF THE UNITED STATES

Based on interpretation of "waters of the U.S". consistent with the pre-2015 regulations, the Streambed and Freshwater Emergent Wetland aquatic features identified within the Project site are regulated by ACOE under the CWA (USEPA, 2021).

### 5.1.1 Streambed

The Nacimiento River is Relatively Permanent Water that contains water year-round (or has continuous flow at least seasonally) and is a non-navigable tributary that flows directly into the Salinas River, a TNC that flows directly into the Pacific Ocean. Based on desktop analysis and the delineation field survey, there are 1.01 ac (44,011 square feet) of Streambed that falls under ACOE jurisdiction.

### 5.1.2 Freshwater Emergent Wetland

The Freshwater Emergent Wetland feature met the three parameters for wetland indicators (hydrophytic vegetation, hydric soil, and wetland hydrology), and is adjacent to waters of the U.S. (Nacimiento River); therefore, is regulated by ACOE. Based on desktop analysis and the delineation field survey, there are 0.07 ac (3,256 square feet) of Freshwater Emergent Wetland that fall under ACOE jurisdiction.

## 5.2 WATERS AND WETLANDS OF THE STATE

### 5.2.1 Streambed and Freshwater Emergent Wetland

Under the new Procedures, all Waters of the U.S. are also waters of the State. Therefore, the Streambed and the Freshwater Emergent Wetland features mapped within the Project site are considered waters of the State because they met current or historic definitions of "waters of the U.S." and/or the Federal definition of a wetland (three parameters) as described in the Federal Jurisdiction Section above. Therefore, everything mapped as preliminary ACOE jurisdictional is also considered RWQCB jurisdictional.

### 5.2.2 Freshwater Forested/Shrub Wetland

The Freshwater Forested/Shrub Wetland area did not meet the three parameters for wetland indicators. However, note that a portion of this area was created as compensatory mitigation in accordance with the RWQCB-approved HWB Restoration Plan (Padre, 2016a) prepared as a result of the RWQCB NOV issued in January 2015. The other (non-planted) portions of the Freshwater Forested/Shrub Wetland are adjacent and connected to the restored riparian area. Therefore, there are a total of 0.61 ac (26,547 square feet) Freshwater Forested/Shrub Wetland that fall under RWQCB jurisdiction.

## 5.3 CONCLUSION

On the basis of the field delineation and data analysis, it has been concluded that the proposed Project site supports approximately 1.08 ac of potentially Federal jurisdictional waters of the U.S. (under ACOE jurisdiction), of which 0.07 ac is Federal wetland and 1.01 ac is riverine. Additionally, it has been concluded that the Project site contains approximately 1.69 ac of potentially State jurisdictional aquatic resources (RWQCB) including riverine, wetland, and riparian features. These preliminary jurisdictional findings are subject to the verification and approval of the ACOE and RWQCB.

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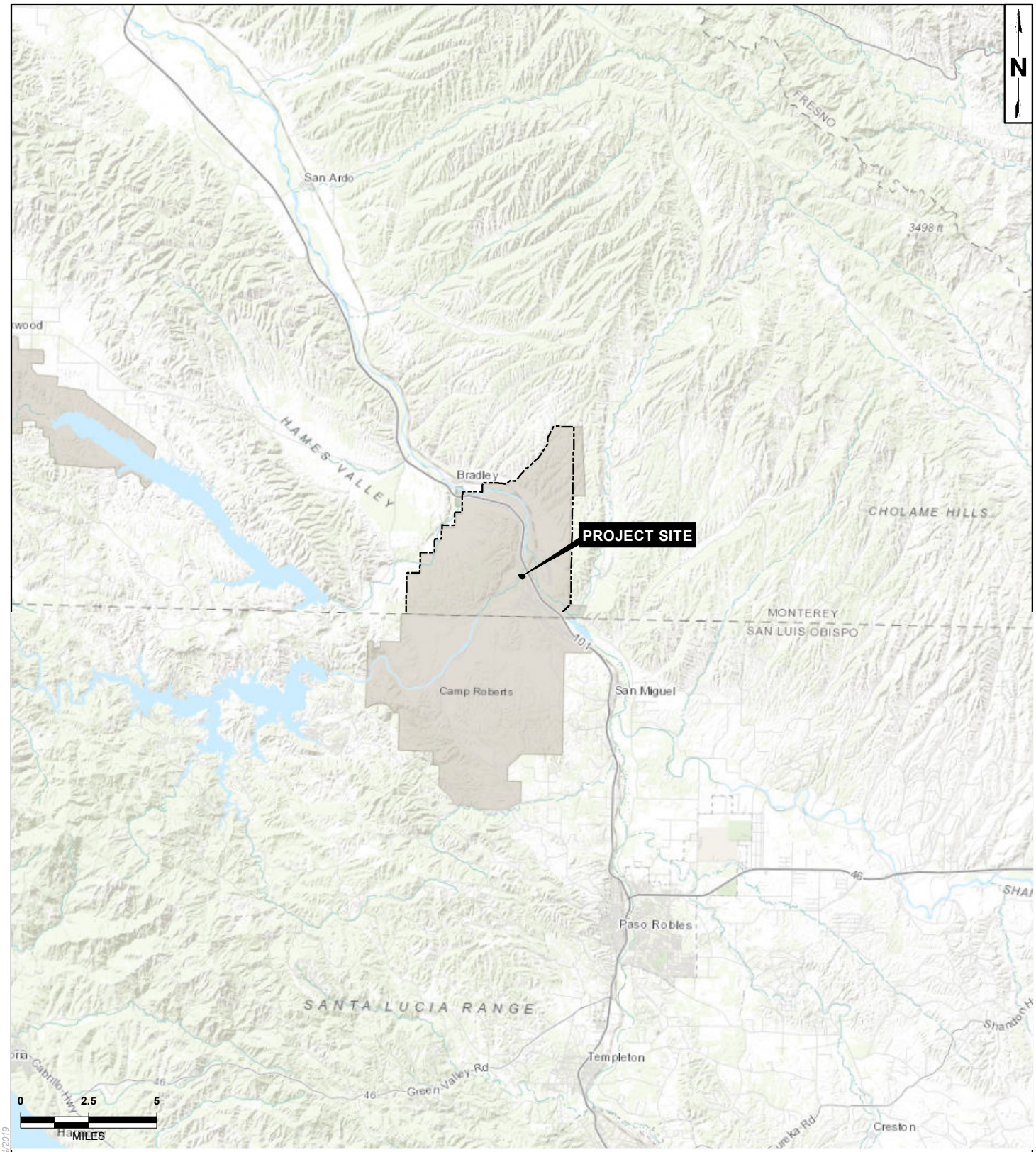
# FIGURES




LEGEND:

Project Footprint  Camp Roberts Boundary

MAP EXTENT:


*Source: Esri Online Basemap, Avocet*
*Coordinate System: NAD 1983 StatePlane California IV FIPS 0404 Feet*
*Notes: This map was created for informational and display purposes only.*

padre associates, inc.
ENGINEERS, GEOLOGISTS & ENVIRONMENTAL SCIENTISTS

PROJECT NAME: CAMP ROBERTS HIGH WATER BRIDGE MONTEREY COUNTY, CA

PROJECT NUMBER: 1802-1931

DATE: November 2020

# PROJECT LOCATION

FIGURE 1

Camp Roberts\Delineation\Project Location.mxd 2/4/2019


Figure 2
Map and map legend information from USDA NRCS Web Soil Survey
Online survey completed on August 25, 2021 by Padre Associates

## MAP LEGEND

**Area of Interest (AOI)**
- Area of Interest (AOI)

**Soils**
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

**Special Point Features**
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

**Water Features**
- Streams and Canals

**Transportation**
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

**Background**
- Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Monterey County, California
Survey Area Data: Version 17, May 29, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 17, 2016—Oct 1, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

# Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| 300 | Corducci and Typic Xerofluvents, 0 to 5 percent slopes, occasionally flooded, MLRA 14 | 2.9 | 68.7% |
| EcA | Elder loam, gravelly substratum, 0 to 2 percent slopes | 0.7 | 16.6% |
| Mg | Metz complex | 0.6 | 14.6% |
| **Totals for Area of Interest** | | **4.2** | **100.0%** |

# Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate

pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

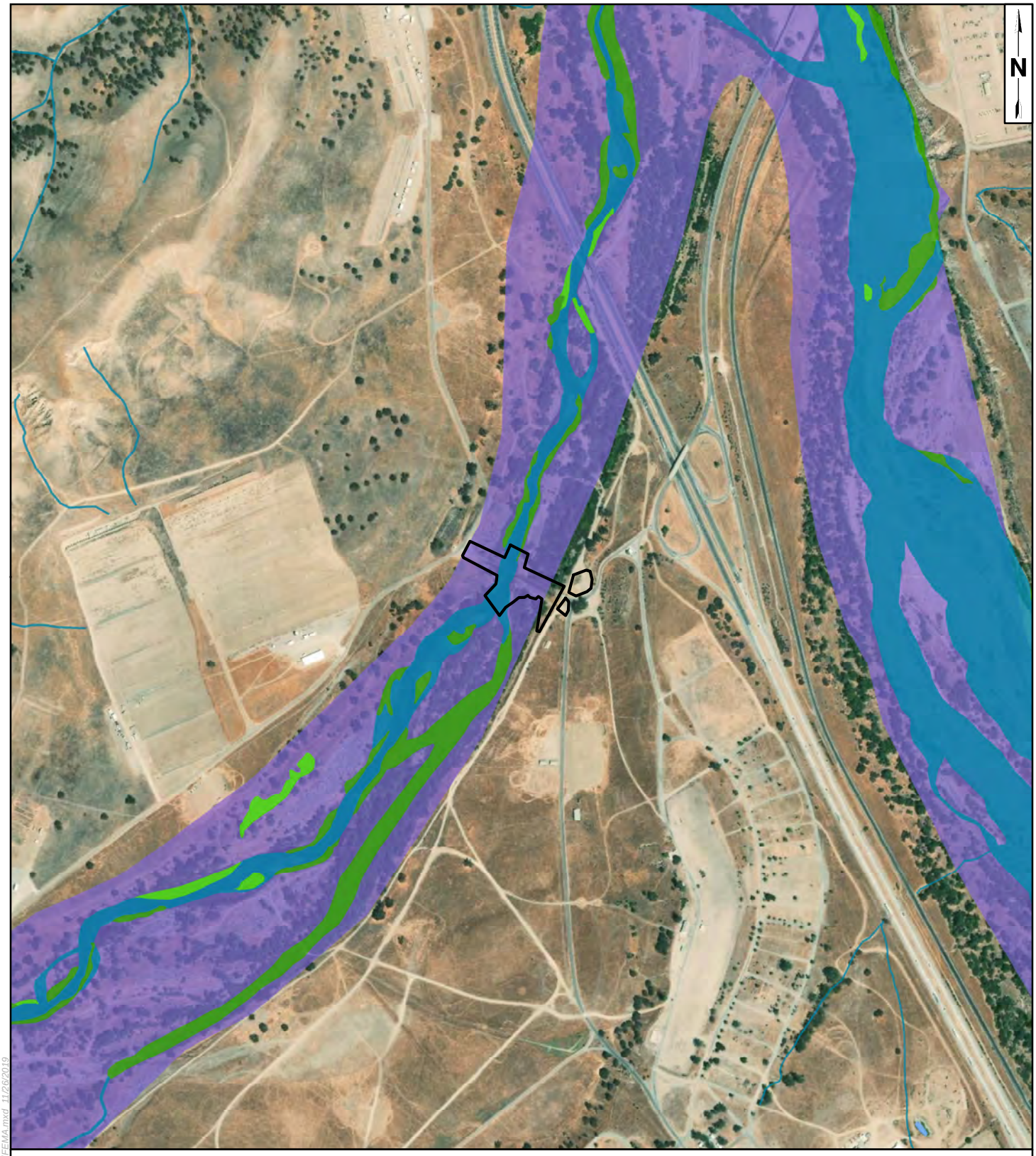
Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.




LEGEND:

- Project Footprint
- 100 Year Flood Area - 1.0% Annual Chance

**NWI Wetland Type**

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine

0 500 1,000
FEET

*Source: Esri Online Basemap, Avocet, NWI, FEMA 2017*
*Abbreviations: FEMA = Federal Emergency Management Agency*
*NWI = National Wetland Inventory*
*Coordinate System: NAD 1983 StatePlane California IV FIPS 0404 Feet*
*Notes: This map was created for informational and display purposes only.*

padre associates, inc.
ENGINEERS, GEOLOGISTS & ENVIRONMENTAL SCIENTISTS

PROJECT NAME:
CAMP ROBERTS HIGH WATER BRIDGE
MONTEREY COUNTY, CA

PROJECT NUMBER: 1802-1931

DATE: November 2021

# NWI WETLAND AND FEMA 100 YEAR FLOODPLAIN MAP

FIGURE 3

| Feature Name | Acres | Square Feet | Linear Feet | Jurisdiction |
|---|---|---|---|---|
| Riverine (Streambed) | 1.01 | 44,010.82 | ≈457 | ACOE, RWQCB Feature |
| Palustrine (Freshwater Forested/Shrub Wetland) | 0.61 | 26,547.19 | N/A | RWQCB Feature |
| Palustrine (Freshwater Emergent Wetland) | 0.07 | 3,255.68 | N/A | ACOE, RWQCB Feature |
| Upland | 1.64 | 71,278.89 | N/A | Non-Jurisdictional Area |
| Developed | 2.56 | 111,318.61 | N/A | Non-Jurisdictional Area |

LEGEND:

- # Sample Point
- Construction Footprint
- Ordinary High Water Mark (OHWM)
- Disturbance Area

**Aquatic Features**

- Palustrine; Freshwater Forested/Shrub Wetland (0.61 ac)
- Palustruine; Freshwater Emergent Wetland (0.07 ac)
- Riverine; Streambed (1.01 ac)

**Upland Non-Jurisdictional Areas**

- Developed (2.56 ac)
- Upland (1.64 ac)

MAP EXTENT:

0 50 100
FEET

*Source: NAIP Imagery 2016, Avocet Feb.2019*
*Coordinate System: NAD 1983 StatePlane California IV FIPS 0404 Feet*
*Notes: This map was created for informational and display purposes only.*

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ENGINEERS, GEOLOGISTS & ENVIRONMENTAL SCIENTISTS

PROJECT NAME: CAMP ROBERTS HIGH WATER BRIDGE MONTEREY COUNTY, CA
PROJECT NUMBER: 1702-1351
DATE: February 2023

# PRELIMINARY AQUATIC RESOURCES DELINEATION MAP

FIGURE 4

Z:\GIS Projects\GIS Maps\Map Project\Camp Roberts\Delineation\Preliminary Aquatic Resources Delineation Map.mxd 2/6/2023

LEGEND:

- Sample Location
- Oak Tree (2-inch dbh)
- Construction Footprint
- Disturbance Area

**Vegetation Communities**

- Channel
- Coyote brush scrub
- Developed
- Fremont cottonwood forest and woodland
- Marsh
- Mulefat Thickets
- Sandbar willow thickets
- Wildoats and Annual brome grassland

MAP EXTENT:

0 50 100

FEET

*Source: NAIP Imagery 2016, Avocet Feb.2019*
*Coordinate System: NAD 1983 StatePlane California IV FIPS 0404 Feet*
*Notes: This map was created for informational and display purposes only.*

padre associates, inc.
ENGINEERS, GEOLOGISTS & ENVIRONMENTAL SCIENTISTS

PROJECT NAME:
CAMP ROBERTS HIGH WATER BRIDGE
MONTEREY COUNTY, CA

PROJECT NUMBER: 1802-1931

DATE: November 2021

# VEGETATION COMMUNITIES

FIGURE 5

Z:\GIS Projects\GIS Maps\Map Project\Camp Roberts\Delineation\Vegetation Communities.mxd 9/15/2021

# APPENDIX A

## WETS Table

WETS Table

| WETS Station: KING CITY, CA | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Requested years: 1945 - 2021 | | | | | | | | |
| Month | Avg Max Temp | Avg Min Temp | Avg Mean Temp | Avg Precip | 30% chance precip less than | 30% chance precip more than | Avg number days precip 0.10 or more | Avg Snowfall |
| Jan | 63.2 | 36.3 | 49.8 | 2.35 | 0.99 | 2.83 | 5 | 0.1 |
| Feb | 66.3 | 38.8 | 52.5 | 2.21 | 0.65 | 2.53 | 4 | 0.0 |
| Mar | 69.5 | 40.4 | 54.9 | 1.87 | 0.68 | 2.20 | 4 | 0.0 |
| Apr | 73.8 | 42.3 | 58.1 | 0.80 | 0.27 | 0.88 | 2 | 0.0 |
| May | 78.2 | 46.1 | 62.1 | 0.26 | 0.00 | 0.21 | 1 | 0.0 |
| Jun | 82.7 | 49.6 | 66.2 | 0.04 | 0.00 | 0.00 | 0 | 0.0 |
| Jul | 84.9 | 52.0 | 68.5 | 0.01 | 0.00 | 0.00 | 0 | 0.0 |
| Aug | 84.9 | 52.0 | 68.4 | 0.03 | 0.00 | 0.00 | 0 | 0.0 |
| Sep | 85.1 | 50.0 | 67.5 | 0.12 | 0.00 | 0.05 | 0 | 0.0 |
| Oct | 79.9 | 45.1 | 62.5 | 0.48 | 0.16 | 0.46 | 1 | 0.0 |
| Nov | 69.9 | 39.5 | 54.7 | 1.14 | 0.42 | 1.30 | 3 | 0.0 |
| Dec | 63.1 | 35.8 | 49.4 | 1.87 | 0.63 | 2.19 | 4 | 0.0 |
| Annual: | | | | | 8.28 | 13.10 | | |
| Average | 75.1 | 44.0 | 59.6 | - | - | - | - | - |
| Total | - | - | - | 11.17 | | | 24 | 0.1 |

| GROWING SEASON DATES | | | |
|---|---|---|---|
| Years with missing data: | 24 deg = 25 | 28 deg = 23 | 32 deg = 21 |
| Years with no occurrence: | 24 deg = 19 | 28 deg = 0 | 32 deg = 0 |
| Data years used: | 24 deg = 52 | 28 deg = 54 | 32 deg = 56 |
| Probability | 24 F or higher | 28 F or higher | 32 F or higher |
| 50 percent * | 1/5 to 1/1: 361 days | 2/12 to 12/4: 295 days | 3/18 to 11/10: 237 days |
| 70 percent * | No occurrence | 2/1 to 12/15: 317 days | 3/7 to 11/21: 259 days |
| * Percent chance of the growing season occurring between the Beginning and Ending dates. | | | |

| STATS TABLE - total precipitation (inches) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Yr | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Annl |
| 1902 | | | | | | | 0.00 | 0.00 | 0.00 | | | 0.59 | 0.59 |
| 1903 | 1.19 | | | 0.67 | T | | | | | | 0.26 | 0.37 | 2.49 |
| 1904 | 0.51 | 2.47 | 2.44 | 1.02 | 0.00 | 0.00 | T | T | | | 0.30 | 1.45 | 8.19 |
| 1905 | 1.68 | 3.77 | 3.10 | 0.42 | 1.33 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | M1.36 | 0.35 | 12.01 |
| 1906 | 1.27 | 2.95 | 4.81 | 0.46 | 1.53 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.13 | 4.05 | 16.20 |
| 1907 | 8.43 | 0.81 | 6.12 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.94 | 0.00 | 2.03 | 20.33 |
| 1908 | 4.95 | 1.68 | 0.48 | 0.54 | 0.30 | 0.00 | 0.00 | T | 0.51 | | 0.65 | 0.92 | 10.03 |
| 1909 | 5.33 | 2.94 | 3.16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.72 | 3.15 | 15.30 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1910 | 2.67 | | 2.54 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.09 | 0.04 | 0.23 | 0.00 | 5.66 |
| 1911 | 5.99 | 2.16 | 8.90 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.40 | 17.50 |
| 1912 | 2.83 | 0.00 | 3.03 | 2.78 | 0.60 | 0.00 | 0.00 | 0.00 | 0.02 | | 0.28 | 0.00 | 9.54 |
| 1913 | 1.54 | 0.85 | 0.68 | T | 0.42 | 0.18 | 0.00 | 0.15 | 0.00 | 0.00 | 2.28 | 0.79 | 6.89 |
| 1914 | 8.14 | 3.07 | 0.88 | 0.09 | | | | | | T | | 2.72 | 14.90 |
| 1915 | 3.16 | 3.79 | 0.57 | 1.57 | 0.06 | | | 0.00 | | 0.00 | | 2.92 | 12.07 |
| 1916 | 6.17 | 0.83 | 1.67 | 0.30 | 0.05 | 0.00 | 0.00 | T | 0.97 | 1.20 | | 2.11 | 13.30 |
| 1917 | M0.78 | M2.18 | 0.10 | MT | 0.49 | 0.00 | T | 0.00 | T | 0.00 | 1.17 | 0.14 | 4.86 |
| 1918 | 0.18 | 4.56 | 4.07 | 0.00 | | | | | 2.01 | MT | 1.04 | 1.79 | 13.65 |
| 1919 | M0.34 | M2.12 | M1.48 | | M0.10 | | | | 0.01 | 0.01 | 0.01 | 1.92 | 5.99 |
| 1920 | M0.03 | 1.03 | 2.13 | 0.15 | | | | 0.00 | | M0.24 | M0.93 | 1.03 | 5.54 |
| 1921 | 3.66 | 0.77 | 1.25 | M0.50 | M0.85 | | | | T | | M0.27 | 5.25 | 12.55 |
| 1922 | 2.98 | 2.64 | 0.93 | | M0.05 | | | 0.00 | 0.00 | M0.57 | 2.16 | 2.85 | 12.18 |
| 1923 | 1.26 | M0.64 | | 1.01 | | MT | | | M0.25 | | 0.32 | 0.30 | 3.78 |
| 1924 | 1.75 | M0.72 | M2.24 | M0.67 | 0.10 | | | | 0.00 | 0.20 | 0.33 | M1.10 | 7.11 |
| 1925 | 0.44 | M1.05 | 1.04 | 1.03 | M1.06 | | | | | | 0.13 | 1.31 | 6.06 |
| 1926 | 1.25 | 2.60 | 0.14 | M2.57 | 0.00 | | 0.00 | 0.00 | 0.00 | | 3.04 | 0.46 | 10.06 |
| 1927 | 1.01 | 3.81 | 0.74 | 0.54 | 0.03 | 0.07 | 0.00 | 0.00 | 0.12 | 0.67 | 0.91 | 1.28 | 9.18 |
| 1928 | 0.10 | 1.77 | 1.18 | 0.26 | 0.40 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.79 | 1.85 | 7.35 |
| 1929 | M0.19 | 1.03 | 1.24 | 1.09 | 0.00 | 0.84 | 0.00 | 0.00 | 0.06 | 0.00 | 0.00 | 0.22 | 4.67 |
| 1930 | 3.36 | 1.46 | 1.65 | 0.51 | 0.30 | 0.00 | 0.00 | 0.00 | 0.48 | 0.00 | 1.17 | T | 8.93 |
| 1931 | M3.73 | 1.43 | 0.33 | 0.46 | 0.35 | 1.00 | 0.00 | 0.02 | 0.00 | 0.00 | 0.98 | 5.42 | 13.72 |
| 1932 | 3.55 | 1.57 | 0.24 | 0.25 | 0.08 | 0.11 | 0.00 | 0.00 | 0.00 | 0.00 | M0.02 | 1.03 | 6.85 |
| 1933 | 3.11 | 0.20 | 0.85 | T | 0.22 | 0.00 | 0.00 | 0.00 | 0.00 | M0.03 | 0.00 | 1.75 | 6.16 |
| 1934 | 0.76 | 1.87 | 0.14 | 0.00 | 0.31 | 0.35 | 0.00 | 0.00 | 0.00 | 0.36 | 1.41 | 1.59 | 6.79 |
| 1935 | 4.37 | 0.58 | 2.80 | 2.27 | 0.00 | 0.00 | 0.00 | 0.22 | 0.00 | 0.10 | 1.12 | 1.04 | 12.50 |
| 1936 | 0.24 | 4.68 | 1.04 | M1.04 | 0.25 | 0.15 | 0.22 | 0.00 | 0.00 | 0.75 | 0.00 | 2.78 | 11.15 |
| 1937 | 1.68 | 2.18 | 4.26 | 0.15 | 0.00 | T | 0.00 | 0.00 | 0.00 | 0.05 | 0.14 | 2.10 | 10.56 |
| 1938 | 2.65 | 6.70 | 3.25 | 1.09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.56 | 0.55 | 0.38 | 1.43 | 16.61 |
| 1939 | 1.71 | M1.49 | 1.82 | 0.13 | 0.06 | T | 0.00 | 0.00 | 0.28 | 0.10 | 0.51 | 0.15 | 6.25 |
| 1940 | 3.80 | 5.65 | 1.58 | 0.41 | 0.03 | 0.00 | 0.00 | M0.00 | T | 0.12 | 0.13 | 6.35 | 18.07 |
| 1941 | 3.12 | 6.07 | 5.66 | 3.62 | 0.15 | 0.00 | M0.00 | T | 0.00 | 0.78 | 0.67 | 3.74 | 23.81 |
| 1942 | 2.20 | 0.77 | 1.62 | 1.85 | 0.31 | 0.00 | 0.00 | 0.00 | 0.00 | M0.15 | 0.04 | 0.72 | 7.66 |
| 1943 | | | | | | | | | | | | | |
| 1944 | | | | | | | | | | | | | |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1945 | | | | | | | | | | | | | |
| 1946 | | | | | | | | | | | | | |
| 1947 | | | | | | | | | | | | | |
| 1948 | | | | | | | 0.00 | 0.00 | 0.00 | 0.30 | 0.04 | 2.43 | 2.77 |
| 1949 | 0.45 | 0.95 | 3.45 | 0.09 | 0.15 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 | 0.31 | 1.65 | 7.07 |
| 1950 | 1.85 | 1.67 | 0.88 | 1.34 | T | 0.00 | 0.05 | 0.00 | 0.04 | 0.74 | 0.73 | 1.69 | 8.99 |
| 1951 | 1.67 | 0.89 | 0.21 | 0.51 | 0.30 | 0.00 | 0.00 | 0.00 | 0.00 | 0.41 | 1.40 | 2.79 | 8.18 |
| 1952 | 4.19 | 0.24 | 3.51 | 0.80 | T | T | 0.00 | 0.00 | 0.00 | 0.00 | 1.65 | 4.36 | 14.75 |
| 1953 | 0.56 | 0.00 | 0.26 | 0.55 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.10 | 1.46 | 0.13 | 3.14 |
| 1954 | 2.56 | 1.72 | 3.37 | 0.20 | T | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.54 | M1.49 | 9.93 |
| 1955 | 3.33 | 1.53 | 0.11 | 1.52 | 1.19 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.31 | 7.69 | 16.68 |
| 1956 | 2.34 | 0.54 | 0.00 | 0.80 | 0.64 | M0.00 | M0.03 | 0.00 | 0.06 | 0.71 | M0.00 | 0.02 | 5.14 |
| 1957 | 3.79 | 1.90 | 0.20 | 1.45 | 0.39 | 0.11 | 0.00 | 0.00 | T | 2.07 | 0.23 | 2.40 | 12.54 |
| 1958 | M1.51 | 5.43 | 5.36 | 4.14 | 1.11 | 0.00 | 0.00 | 0.00 | M1.03 | M0.00 | 0.19 | 0.20 | 18.97 |
| 1959 | 2.07 | 4.78 | 0.03 | 0.28 | 0.05 | 0.00 | 0.00 | 0.00 | 0.10 | 0.00 | 0.00 | 0.40 | 7.71 |
| 1960 | 1.97 | 3.10 | 0.29 | 0.90 | 0.13 | 0.00 | T | 0.00 | 0.15 | 0.08 | 2.16 | M0.04 | 8.82 |
| 1961 | 1.52 | 0.23 | 0.93 | 0.24 | M0.47 | M0.03 | 0.00 | 0.02 | 0.00 | 0.00 | 2.71 | 1.84 | 7.99 |
| 1962 | 0.53 | 5.59 | 1.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.59 | 0.00 | 2.00 | 9.74 |
| 1963 | 5.99 | 1.68 | 2.89 | 1.67 | 0.42 | 0.37 | 0.00 | 0.00 | 0.23 | 0.76 | 1.73 | 0.06 | 15.80 |
| 1964 | 1.39 | 0.02 | M1.01 | M0.00 | 0.22 | 0.00 | 0.00 | 0.13 | 0.00 | 1.50 | 1.53 | 2.29 | 8.09 |
| 1965 | 1.60 | 0.46 | 1.74 | 1.58 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | M2.98 | 1.50 | 9.86 |
| 1966 | 1.04 | 0.30 | 0.15 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.21 | 0.00 | 1.75 | 3.20 | 6.67 |
| 1967 | 3.30 | M0.00 | 2.80 | 3.26 | 0.15 | 0.05 | 0.00 | 0.00 | 0.49 | 0.05 | 0.62 | 0.98 | 11.70 |
| 1968 | 0.88 | 0.88 | 1.43 | 0.71 | T | 0.00 | 0.00 | | 0.00 | 0.13 | 1.46 | 1.91 | 7.40 |
| 1969 | 6.77 | 5.42 | 0.23 | 1.12 | 0.00 | 0.00 | 0.00 | 0.00 | 0.35 | 0.07 | 0.56 | 0.46 | 14.98 |
| 1970 | 2.98 | 1.14 | 2.30 | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.49 | 3.99 | 13.97 |
| 1971 | 0.35 | 0.08 | 0.62 | 0.67 | 0.23 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.42 | 3.34 | 5.74 |
| 1972 | 0.61 | 0.22 | 0.00 | 0.26 | 0.00 | 0.55 | 0.00 | 0.00 | 0.00 | 1.46 | 4.28 | 0.79 | 8.17 |
| 1973 | 4.25 | 6.47 | 1.94 | 0.00 | 0.00 | 0.00 | 0.00 | T | 0.00 | 0.81 | 1.47 | 1.78 | 16.72 |
| 1974 | 5.08 | 0.07 | 2.49 | 0.46 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.91 | 0.36 | 3.05 | 12.42 |
| 1975 | 0.14 | 5.14 | 3.72 | 0.92 | 0.00 | 0.00 | 0.08 | 0.08 | 0.00 | 0.63 | 0.12 | 0.11 | 10.94 |
| 1976 | 0.00 | 2.28 | 0.87 | 0.92 | 0.00 | 0.00 | 0.00 | 1.14 | | 0.82 | 0.52 | 0.88 | 7.43 |
| 1977 | 1.06 | 0.01 | 0.99 | 0.02 | 1.02 | T | 0.00 | 0.00 | | | | | 3.10 |
| 1978 | | 5.42 | 4.51 | 2.59 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.80 | M0.19 | 14.51 |
| 1979 | 4.39 | 2.72 | 2.32 | 0.08 | 0.00 | | 0.03 | 0.00 | 0.00 | 0.77 | 1.00 | 2.52 | 13.83 |
| 1980 | 2.56 | 5.71 | 1.42 | M1.12 | 0.06 | 0.01 | | 0.00 | 0.00 | T | 0.04 | 0.30 | 11.22 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1981 | 2.07 | 0.55 | 3.48 | 1.11 | T | 0.00 | 0.00 | 0.00 | 0.00 | 0.51 | 2.46 | 0.32 | 10.50 |
| 1982 | M2.99 | 0.63 | 4.38 | 2.86 | 0.00 | 0.18 | 0.00 | 0.00 | 1.05 | 0.60 | 2.25 | 2.29 | 17.23 |
| 1983 | 6.26 | 3.03 | 6.96 | 2.48 | 0.08 | 0.00 | 0.00 | 0.10 | 0.35 | 1.09 | 2.42 | 3.64 | 26.41 |
| 1984 | 0.11 | 0.26 | 0.42 | 0.05 | 0.00 | T | 0.00 | T | T | 0.30 | 3.39 | 2.58 | 7.11 |
| 1985 | 0.08 | 0.29 | 2.35 | T | 0.00 | 0.00 | 0.05 | 0.00 | T | 0.65 | 2.78 | 0.96 | 7.16 |
| 1986 | 1.28 | 6.26 | 4.59 | 0.57 | 0.14 | 0.00 | 0.00 | 0.00 | 0.44 | 0.00 | M0.25 | M0.76 | 14.29 |
| 1987 | 1.96 | 1.52 | 2.22 | 0.22 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 1.85 | 0.90 | 3.32 | 12.04 |
| 1988 | 1.63 | 1.61 | 0.50 | 1.04 | 0.59 | 0.18 | 0.00 | 0.00 | 0.00 | 0.00 | 0.62 | M2.83 | 9.00 |
| 1989 | 0.52 | 1.17 | 0.59 | 0.11 | 0.01 | 0.00 | M0.00 | 0.00 | M2.29 | 0.34 |  | M0.00 | 5.03 |
| 1990 | 1.19 | 1.04 | 0.31 | 0.03 | 0.88 | 0.00 | 0.00 | 0.00 | 0.11 | 0.00 | 0.10 | 0.53 | 4.19 |
| 1991 | 0.35 | 1.94 | 8.47 | 0.15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.11 | 0.43 | 0.05 | 1.87 | 13.37 |
| 1992 | M1.02 | 3.81 | 3.20 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.67 | 0.00 | 2.80 | 11.50 |
| 1993 | 5.80 | 4.78 | 2.65 | T | 0.20 | 0.23 | 0.00 | 0.00 | 0.00 | 0.14 | 1.11 | M0.00 | 14.91 |
| 1994 | 1.21 | 3.75 | 0.57 | 0.69 | 0.95 | 0.00 | 0.00 | 0.00 | 0.09 | 0.35 | 1.49 | 1.00 | 10.10 |
| 1995 | 6.12 | 0.72 | 7.65 | 0.28 | 0.46 | 0.35 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 1.30 | 16.93 |
| 1996 | 2.71 | 3.63 | 1.58 | 0.71 | 0.48 | 0.00 | 0.00 | 0.00 | 0.00 | 2.49 | 1.18 | 4.63 | 17.41 |
| 1997 | 4.13 | 0.11 | 0.05 | 0.10 | 0.00 | 0.03 | 0.00 | T | 0.00 | 0.10 | 3.29 | 3.70 | 11.51 |
| 1998 | 2.74 | 10.50 | 1.98 | 1.79 | 2.11 | 0.05 | 0.00 | 0.00 |  | 0.10 | 2.02 | 0.48 | 21.77 |
| 1999 | 0.77 | 0.99 | 2.61 | 1.02 | 0.02 | T | 0.00 |  | 0.47 | 0.00 | 1.29 | 0.08 | 7.25 |
| 2000 | 2.72 | 4.63 | 1.12 | 1.08 | 0.02 | 0.40 | 0.00 | 0.17 | T | 1.36 | T | 0.18 | 11.68 |
| 2001 | 4.25 | 3.78 | 2.49 | 0.68 | 0.00 | 0.00 | T | 0.00 | 0.02 | 0.11 | 1.82 | 2.24 | 15.39 |
| 2002 | 0.55 | 0.60 | 0.58 | 0.47 | 0.30 | 0.00 | 0.00 | 0.00 | T | 0.00 | 1.72 | 5.04 | 9.26 |
| 2003 | 0.40 | 1.63 | 0.32 | 0.86 | 1.19 | 0.00 | 0.10 | 0.12 | 0.00 | M0.26 | 0.17 | 3.73 | 8.78 |
| 2004 | 0.69 | 4.12 | 0.26 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.38 | 0.54 | 5.10 | 14.09 |
| 2005 | 3.14 | 3.92 | 1.42 | 0.77 | 0.60 | 0.05 | 0.02 | 0.01 | 0.01 | T | 0.48 | 2.50 | 12.92 |
| 2006 | 2.91 | 1.78 | 3.12 | 3.21 | 1.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.38 | 0.52 | 1.24 | 14.17 |
| 2007 | 0.64 | 1.43 | 0.39 | 0.65 | T | 0.00 | T | 0.00 | 0.21 | 0.53 | 0.02 | 0.43 | 4.30 |
| 2008 | 6.34 | 1.22 | 0.17 | 0.37 | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 0.57 | 0.59 | 9.39 |
| 2009 | 0.91 | 2.77 | 0.82 | 0.14 | 0.10 | 0.03 | 0.00 | T | 0.09 | 2.46 | 0.09 | 1.39 | 8.80 |
| 2010 | 4.69 | 2.77 | 0.65 | 1.89 | 0.12 | 0.01 | 0.00 | 0.00 | T | 0.69 | 1.32 | 2.93 | 15.07 |
| 2011 | M1.51 | M3.77 | M4.03 | M0.16 | M0.37 | M0.54 | 0.00 | 0.00 | M0.04 | M0.46 | M1.42 | M0.15 | 12.45 |
| 2012 | M1.30 | M0.43 | M2.46 | M2.01 | MT | MT | 0.00 | M0.02 | M0.01 |  | 2.11 | 2.75 | 11.09 |
| 2013 | 0.71 | 0.18 | 0.55 | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.06 | 0.24 | 0.01 | 1.80 |
| 2014 | 0.11 | 2.82 | 1.15 | 1.07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.28 | 1.34 | 4.83 | 11.61 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2015 | 0.06 | 1.30 | 0.10 | 0.75 | 0.30 | 0.02 | 0.16 | 0.00 | 0.03 | 0.19 | 1.62 | 1.01 | 5.54 |
| 2016 | 2.89 | 1.12 | 2.94 | 0.35 | 0.26 | 0.00 | 0.00 | 0.00 | 0.00 | 0.94 | 0.76 | 1.27 | 10.53 |
| 2017 | 7.15 | 4.37 | 1.00 | 0.60 | 0.06 | 0.00 | 0.02 | 0.02 | 0.03 | 0.06 | 0.45 | 0.07 | 13.83 |
| 2018 | 2.66 | 0.13 | 4.00 | 0.34 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.10 | 2.11 | 1.89 | 11.25 |
| 2019 | 4.51 | 4.77 | 1.86 | 0.23 | 1.29 | 0.03 | 0.00 | 0.00 | 0.02 | 0.00 | 1.43 | 6.19 | 20.33 |
| 2020 | 0.61 | 0.03 | 2.99 | 1.80 | 0.20 | 0.00 | M0.00 | 0.02 | 0.01 | 0.00 | 0.08 | 1.02 | 6.76 |
| 2021 | 4.79 | 0.04 | 1.36 | 0.04 | 0.00 | M0.00 | | | | | | | 6.23 |
| Notes: Data missing in any month have an "M" flag. A "T" indicates a trace of precipitation. | | | | | | | | | | | | | |
| Data missing for all days in a month or year is blank. | | | | | | | | | | | | | |
| Creation date: 2021-06-30 | | | | | | | | | | | | | |

# APPENDIX B

## Wetland Delineation Forms

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Camp P Roberts Hist Water Rd City/County: C Roberts/Monterey county Sampling Date: 12/12/17
Applicant/Owner: Camp Roberts /CAARNG/AVOCET State: CA Sampling Point: TP1
Investigator(s): Chris Conkle / Rowan Dimmer Section, Township, Range:
Landform (hillslope, terrace, etc.): toe of slope depression Local relief (concave, convex, none): Concave Slope (%): 0
Subregion (LRR): Lat: Long: Datum:
Soil Map Unit Name: NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes | No X | Is the Sampled Area within a Wetland? Yes No X |
| Hydric Soil Present? | Yes | No X | |
| Wetland Hydrology Present? | Yes X | No | |

Remarks:
Area disturbed and revegetated for restoration purposes

### VEGETATION – Use scientific names of plants.

| Tree Stratum (Plot size: 1.5 ac) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. Populus Fremontii | 1 | Y | – |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| | 1% | = Total Cover | |
| **Sapling/Shrub Stratum** (Plot size: 1.5 ac) | | | |
| 1. Salix lasiolepis | 25 | Y | FACW |
| 2. B. pilularis | 5 | Y | – |
| 3. P. salicifolia | 5 | Y | FAC |
| 4. | | | |
| 5. | | | |
| | 35 | = Total Cover | |
| **Herb Stratum** (Plot size: 1.5) | | | |
| 1. Bithnichia graveolens | 98 | Y | |
| 2. Xanthium strumarium | 3 | | FAC |
| 3. Pseudognaphalium Luteoalbum | 2 | | – |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| | 103 | = Total Cover | |
| **Woody Vine Stratum** (Plot size: ) | | | |
| 1. | | | |
| 2. | | | |
| | | = Total Cover | |

% Bare Ground in Herb Stratum 25% % Cover of Biotic Crust

SD=0.5 TD=0.2 SD=17.5 TD=4 TD=51.5 TD=70.6

**Dominance Test worksheet:**
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 40% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | Multiply by: |
|---|---|
| OBL species | x 1 = |
| FACW species | x 2 = |
| FAC species | x 3 = |
| FACU species | x 4 = |
| UPL species | x 5 = |
| Column Totals: (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0[1]
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes No X

Remarks:
Very dense Bithnichia, early bloom, many volunteer willow saplings, soils dry
planted willow stakes
* Revegetation area

4/8 Value : Chroma

## SOIL

Sampling Point: TP 1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | % | Redox Features Color (moist) | % | Type[1] | Loc[2] | Texture* | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-2 | 7.5YR 3/5 | 100 | | | | | SL | Sandy Loam (Lord Key) |
| 2-12 | 10YR 3/2 | 100 | | | | | SL | Sandy Loam " |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

**Indicators for Problematic Hydric Soils[3]:**

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** Yes ___ No X

Remarks:

Soil difficult to dig, dry, clay;

## HYDROLOGY (1)

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- X Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- X Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- X Water Marks (B1) **(Riverine)**
- X Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): _____

**Wetland Hydrology Present?** Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Disturbed during bridge construction, restoration plantings, flooded

Remarks:

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: C. Roberts Hind Water Bridge City/County: C. Roberts/Crowley County Sampling Date: 10/10/17
Applicant/Owner: C. Roberts State: CO Sampling Point: TP2
Investigator(s): C. Santoro, KW Imer Section, Township, Range:
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Convex Slope (%): 15?
Subregion (LRR): Lat: Long: Datum:
Soil Map Unit Name: NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation X, Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes | No X | Is the Sampled Area within a Wetland? Yes No X |
| Hydric Soil Present? | Yes | No | |
| Wetland Hydrology Present? | Yes | No X | |

Remarks:
upland bank previously disturbed and revegetated as part of restoration

### VEGETATION – Use scientific names of plants.

| Tree Stratum (Plot size: 0.15 acres) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. Populus fremontii | 40 | Y | – |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| | 40 = Total Cover | | |

50 = 20
20 = 8

| Sapling/Shrub Stratum (Plot size: ) | | | |
|---|---|---|---|
| 1. Baccharis pilularis | 50 | Y | – |
| 2. Baccharis salicifolia | 1 | | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 51 = Total Cover | | |

50 = 25.5
20 = 10.2

| Herb Stratum (Plot size: ) | | | |
|---|---|---|---|
| 1. Bromus diandrus | 20 | Y | – |
| 2. Brassica nigra | 10 | | – |
| 3. Dittrichia graveolens | 3 | | – |
| 4. Stipa pulchra | 2 | | – |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| | 35 = Total Cover | | |

50 = 17.5
20 = 7

| Woody Vine Stratum (Plot size: ) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| | = Total Cover | | |

% Bare Ground in Herb Stratum 35 % Cover of Biotic Crust –

**Dominance Test worksheet:**
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | Multiply by: | |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL species | x 5 = | |
| Column Totals: (A) | | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0[1]
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes No X

Remarks:

## SOIL

Sampling Point: TP 2

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | % | Redox Features Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-12" | 4/4 7.5y | 100 | | | | | SL | hard clay - diff. w/ to dig |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

**Indicators for Problematic Hydric Soils[3]:**

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____ N/A

**Hydric Soil Present?** Yes _____ No X

Remarks: Upland bank; planted previously w/ upland species as part of restoration

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

**Wetland Hydrology Present?** Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: close to toe of slope. Bare patch w/ remnant upland grasses/hwys

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: C. Roberts / HWB City/County: C. Roberts / Mendocino Sampling Date: 10/10/16
Applicant/Owner: C Roberts State: CA Sampling Point: TP3
Investigator(s): C. Santora, R. Vimer Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-1%
Subregion (LRR): Lat: Long: Datum:
Soil Map Unit Name: NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ____ (If no, explain in Remarks.)
Are Vegetation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____
**Is the Sampled Area within a Wetland?** Yes X No ____

Remarks:
Area disturbed for bridge construction, then revegetated for restoration

### VEGETATION – Use scientific names of plants.

| Tree Stratum (Plot size: 0.25 acre) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. Populus fremontii | 1 | Y | – |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| | 1 | = Total Cover | |
| **Sapling/Shrub Stratum** (Plot size: 0.25 ac) | | | |
| 1. Salix lasiolepis | 35 | Y | FACW |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 35 | = Total Cover | |
| **Herb Stratum** (Plot size: 0.25 ac) | | | |
| 1. Lemna sp. | 40 | Y | OBL |
| 2. Juncus balticus | 30 | Y | FACW |
| 3. Schoenoplectus californicus | 10 | | OBL |
| 4. Distichlis spicata | 5 | | – |
| 5. Typha latifolia | 5 | | OBL |
| 6. Cyperus eragrostis | 5 | | FACW |
| 7. Rumex crispus | 5 | | FAC |
| 8. Xanthium strumarium | 3 | | FAC |
| | 103 | = Total Cover | |
| **Woody Vine Stratum** (Plot size: ____) | | | |
| 1. | | | |
| 2. | | | |
| | | = Total Cover | |

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust ____

**Dominance Test worksheet:**
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 75 % (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | Multiply by: | |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL species | x 5 = | |
| Column Totals: (A) | | (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**
X Dominance Test is >50%
__ Prevalence Index is ≤3.0[1]
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes X No ____

Remarks: Standing water (approx 75%) adjacent soils saturated
Vegetation is green

50 = .5
20 = .2
70 = 17.5
30 = .7
70 = 51.5
30 = 20.6

## SOIL

Sampling Point: TP3

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | % | Mottling Redox Features Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-2" | 4/2 2.5yr | 98% | 3/4 2.5yr | 2% | C | M | L | |
| 2-18" | 3/1 5yr | 75% | 2.5/1 2.5yr | 25% | C | M | L | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- X 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- X Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

**Indicators for Problematic Hydric Soils[3]:**

- ___ 1 cm Muck (A9) **(LRR C)**
- X 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** Yes X No ___

Remarks: Darker Horizon below, Fine granuals, smooth.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- X Water Marks (B1) **(Nonriverine)**
- X Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- X Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- X Biotic Crust (B12)
- X Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- X Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- X Drainage Patterns (B10)
- X Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes X No ___ Depth (inches): _____

Water Table Present? Yes X No ___ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): _____

**Wetland Hydrology Present?** Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Fish present, bullfrogs

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Camp Roberts HWB City/County: Monterey Sampling Date: 10/10/17
Applicant/Owner: AVOCET / CARRN 6 / Camp Roberts State: CA Sampling Point: TP4
Investigator(s): C. Santala, K. Wimer Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0
Subregion (LRR): Lat: Long: Datum:
Soil Map Unit Name: NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation X, Soil X, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No
Hydric Soil Present? Yes X No
Wetland Hydrology Present? Yes X No
**Is the Sampled Area within a Wetland?** Yes X No

Remarks:

### VEGETATION – Use scientific names of plants.

| Tree Stratum (Plot size: 0.25) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. Populus fremontii | 1 | Y | – |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| | 1 | = Total Cover | |
| **Sapling/Shrub Stratum** (Plot size: 0.25) | | | |
| 1. Salix lasiolepis | 30 | Y | FAC |
| 2. B. salicifolia | 5 | | FAC |
| 3. Toxicodendron diversilobum | 2 | | – |
| 4. | | | |
| 5. | | | |
| | 37 | = Total Cover | |
| **Herb Stratum** (Plot size: 0.25) | | | |
| 1. Cyperus eragrostis | 25 | Y | FACW |
| 2. Distichlia spicata | 5 | | – |
| 3. Kimerenspus | 5 | | FAC |
| 4. Sonchus oleraceous | 1 | | – |
| 5. Lemna sp. | 2 | | OBL |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| | 38 | = Total Cover | |
| **Woody Vine Stratum** (Plot size: ) | | | |
| 1. | | | |
| 2. | | | |
| | | = Total Cover | |

% Bare Ground in Herb Stratum 50 % Cover of Biotic Crust 10

**Dominance Test worksheet:**
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
**Total** Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 67 % (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | Multiply by: |
|---|---|
| OBL species | x 1 = |
| FACW species | x 2 = |
| FAC species | x 3 = |
| FACU species | x 4 = |
| UPL species | x 5 = |
| Column Totals: (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**
X Dominance Test is >50%
__ Prevalence Index is ≤3.0[1]
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes X No

Remarks: Bareground w/ dried mud crust/algae
Conducted the test pit in southern boundary area of marsh area, visible by surface features

SD: 0.5
2D: 0.2
D: 18.5
D: 7.4
D: 19
2D: 7.6

## SOIL

Sampling Point: TP 4

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | % | Redox Features Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-2 | 10YR 6/2 | 100 | | | | | LS | crumbly when dry |
| 2-4 | 10YR 4/2 | 10 | | | | | CL | |
| 4-16 | 2.5 4/1 | 80 | 2.5 6/4 | 20 | RM | M | LS | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

**Indicators for Problematic Hydric Soils[3]:**

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** Yes X No ____

Remarks:
TP saturated then ≠ bottom filled w/ water ; Distinct horizons

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- X Water Marks (B1) (**Nonriverine**)
- X Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- X Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- X Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- X Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- X Water Marks (B1) (**Riverine**)
- X Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes X No ____ Depth (inches): 4"

Water Table Present? Yes ____ No ____ Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes X No ____ Depth (inches): 6"

**Wetland Hydrology Present?** Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Evidence of previously inundated area surrounding TP4 ; Ponded water in vicinity

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: C. Roberts City/County: C. Roberts/Inyo Sampling Date: 10/10/17
Applicant/Owner: C. Roberts State: CA County Sampling Point: TD5
Investigator(s): C. Santala / Kaliman Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0
Subregion (LRR): Lat: Long: Datum:
Soil Map Unit Name: NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation X, Soil X, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ____ | No X | Is the Sampled Area within a Wetland? Yes ____ No ____ |
| Hydric Soil Present? | Yes ____ | No X | |
| Wetland Hydrology Present? | Yes X | No ____ | |

Remarks:
Area previously disturbed and revegetated, Flooded during winter

### VEGETATION – Use scientific names of plants.

| Tree Stratum (Plot size: 1.5 ac) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. Populus fremontii | 1 | Y | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| | = Total Cover | | |
| **Sapling/Shrub Stratum** (Plot size: 15 ac) | | | |
| 1. Salix lasiolepis | 15 | Y | FAC |
| 2. Baccharis pilularis | 2 | | – |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | = Total Cover | | |
| **Herb Stratum** (Plot size: 1.5 ac) | | | |
| 1. Distichlis spicata | 15 | Y | – |
| 2. Xanthium strumarium | 4 | | FAC |
| 3. Melilotus alba | 3 | | FACU |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| | = Total Cover | | |
| **Woody Vine Stratum** (Plot size: ____) | | | |
| 1. | | | |
| 2. | | | |
| | = Total Cover | | |

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust ____

**Dominance Test worksheet:**
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 33 % (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | Multiply by: |
|---|---|
| OBL species ____ | x 1 = ____ |
| FACW species ____ | x 2 = ____ |
| FAC species ____ | x 3 = ____ |
| FACU species ____ | x 4 = ____ |
| UPL species ____ | x 5 = ____ |
| Column Totals: ____ (A) | ____ (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
Dense Distichlis, bare ground visible, area previously disturbed then revegetated for restoration (willow stakes, irrigation)
*Reveg Area
- Area

U=0.5
20=0.2
50=8.5
20=3.4
50=51
20=70.4

## SOIL

Sampling Point: TP 5

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | % | Redox Features Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-2 | 7.5yr 3/5 | 100 | | | | | SL | |
| 2-12 | 10yr 3/2 | 100 | | | | | SL | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

**Indicators for Problematic Hydric Soils[3]:**

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** Yes ___ No X

Remarks:

Dry, compacted. Difficult to dig

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- X Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- X Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- X Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): _____

**Wetland Hydrology Present?** Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Area inundated during winter 2016-2017

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: C. Roberts HWY 3 City/County: Bradley/Monterey County Sampling Date: 10/10

Applicant/Owner: C. Roberts / AUDUBON / MARNG State: CA Sampling Point: TP 6

Investigator(s): CScarda / KWimer Section, Township, Range:

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): CONVEX Slope (%): 10

Subregion (LRR): Lat: Long: Datum:

Soil Map Unit Name: NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation X, Soil X, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ____ | No X | **Is the Sampled Area within a Wetland?** Yes ____ No X |
| Hydric Soil Present? | Yes ____ | No X | |
| Wetland Hydrology Present? | Yes ____ | No X | |

Remarks:
Area previously disturbed and revegetated, upland bank

### VEGETATION – Use scientific names of plants.

| Tree Stratum (Plot size: 6) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| | = Total Cover | | |

| Sapling/Shrub Stratum (Plot size: 0.5 ac) | | | |
|---|---|---|---|
| 1. Baccharis pilularis | 5 | Y | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 5 = Total Cover | | |

FAC = 2.5
FACW = 1

| Herb Stratum (Plot size: 0.5 ac) | | | |
|---|---|---|---|
| 1. Ditrichia graveolens | 60 | Y | |
| 2. Brassica nigra | 15 | | |
| 3. Annual grasses | 10 | | |
| 4. Epilobium canadensis | 2 | | |
| 5. Stipa pulchra (planted) | 1 | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| | 88 = Total Cover | | |

FAC = 44
FACW = 17.6

| Woody Vine Stratum (Plot size: ____) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| | = Total Cover | | |

% Bare Ground in Herb Stratum 30 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | Multiply by: |
|---|---|
| OBL species ____ | x 1 = ____ |
| FACW species ____ | x 2 = ____ |
| FAC species ____ | x 3 = ____ |
| FACU species ____ | x 4 = ____ |
| UPL species ____ | x 5 = ____ |
| Column Totals: ____ (A) | ____ (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
Jute netting / irrigation lines
Remnant grassland
Revegetation area

## SOIL

Sampling Point: AP6

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | % | Redox Features Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-12" | 4/4 7.5yr 10D | | | | | | SL | Hard/Dry |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

**Indicators for Problematic Hydric Soils[3]:**

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** Yes _____ No X

Remarks:

Upland bank

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

**Wetland Hydrology Present?** Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Rocky Surface / JD tomatting

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Camp Roberts, HWB City/County: Monterey Sampling Date: ~~TP7~~ 10/10

Applicant/Owner: C. Roberts/Huocet/CARNG State: CA Sampling Point: TP7

Investigator(s): C. Santala K. Wimer Section, Township, Range:

Landform (hillslope, terrace, etc.): Flat, sandbar Local relief (concave, convex, none): none Slope (%): 0

Subregion (LRR): Lat: Long: Datum:

Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | |
|---|---|---|
| Hydrophytic Vegetation Present? | Yes X No ____ | **Is the Sampled Area within a Wetland?** Yes X No ____ |
| Hydric Soil Present? | Yes ____ No X | |
| Wetland Hydrology Present? | Yes X No ____ | |

Remarks:
Area adjacent to River, within ordinary

### VEGETATION – Use scientific names of plants.

| Tree Stratum (Plot size: ____) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| | = Total Cover | | |
| **Sapling/Shrub Stratum** (Plot size: 0.5 ac) | | | |
| 1. Salix exigua | 90 | Y | FACW |
| 2. Salix lasiolepis | 10 | | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 100 = Total Cover | | |
| **Herb Stratum** (Plot size: 0.5 ac) | | | |
| 1. Baccharis glutinosa | 10 | Y | FAC |
| 2. Carex sp. | 2 | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| | 12 = Total Cover | | |
| **Woody Vine Stratum** (Plot size: ____) | | | |
| 1. | | | |
| 2. | | | |
| | = Total Cover | | |

% Bare Ground in Herb Stratum 45 % Cover of Biotic Crust 0

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 % (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | Multiply by: |
|---|---|
| OBL species ____ | x 1 = ____ |
| FACW species ____ | x 2 = ____ |
| FAC species ____ | x 3 = ____ |
| FACU species ____ | x 4 = ____ |
| UPL species ____ | x 5 = ____ |
| Column Totals: ____ (A) | ____ (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

X Dominance Test is >50%

__ Prevalence Index is ≤3.0[1]

__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes X No ____

Remarks:
Dense stand of S. exigua, healthy, gravelly/rocky/sandy soil w/in the ordinary & River corridor

50=50
20=20
20=6
20=2.4

## SOIL

Sampling Point: TP 7

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | % | Redox Features Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-3 | 7.5 3/1 | 100 | | | | | LS | |
| 3-16" | 2.5Y 2.5/1 | 100 | | | | | LS | live roots |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

**Indicators for Problematic Hydric Soils[3]:**

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: ___

Depth (inches): ___

**Hydric Soil Present?** Yes ___ No X

Remarks:

Appears to be deposited sand

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- X Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- X Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- X Water Marks (B1) **(Riverine)**
- X Sediment Deposits (B2) **(Riverine)**
- X Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes X No ___ Depth (inches): 2"

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 0-16"

**Wetland Hydrology Present?** Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Sandy, w/in willow stand (exigua), soil moist

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Camp Roberts HWB City/County: Monterey Sampling Date: 10/10

Applicant/Owner: C. Roberts / Avocet / CAMENG State: _____ Sampling Point: TP 8

Investigator(s): _____ Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): Convex Slope (%): 0-2%

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | |
|---|---|---|
| Hydrophytic Vegetation Present? | Yes _____ No X | **Is the Sampled Area within a Wetland?** Yes _____ No _____ |
| Hydric Soil Present? | Yes _____ No X | |
| Wetland Hydrology Present? | Yes _____ No X | |

Remarks:
Portion of sample location is previously disturbed and planted/seeded for restoration
Irrigation lines at top of slope

### VEGETATION – Use scientific names of plants.

| Tree Stratum (Plot size: _____) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| | = Total Cover | | |

| Sapling/Shrub Stratum (Plot size: _____) | | | |
|---|---|---|---|
| 50=21 1. Baccharis pilularis | 35 | Y | - |
| 20=8.4 2. Sambucus nigra | 7 | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 42 = Total Cover | | |

| Herb Stratum (Plot size: _____) | | | |
|---|---|---|---|
| 1. Brassica nigra | 25 | Y | |
| 50=31.5 2. Baccharis pilularis | 15 | Y | |
| 3. Xanthium spinosum | 10 | | |
| 20=12.6 4. Elymus triticoides | 5 | | FAC |
| 5. Cirsium vulgare | 3 | | |
| 6. Seriger croton | 3 | | |
| 7. Datura stramonium | 2 | | |
| 8. | | | |
| | 63 = Total Cover | | |

| Woody Vine Stratum (Plot size: _____) | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| | = Total Cover | | |

% Bare Ground in Herb Stratum 20 % Cover of Biotic Crust _____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | Multiply by: |
|---|---|
| OBL species _____ | x 1 = _____ |
| FACW species _____ | x 2 = _____ |
| FAC species _____ | x 3 = _____ |
| FACU species _____ | x 4 = _____ |
| UPL species _____ | x 5 = _____ |
| Column Totals: _____ (A) | _____ (B) |

Prevalence Index = B/A = _____

**Hydrophytic Vegetation Indicators:**

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes _____ No X

Remarks:
Area revegetated as part of previous upland ~~REVEG~~ restoration

## SOIL

Sampling Point: TP 8

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | % | Redox Features Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 16" | 10YR 7/2 | 100 | | | | | S | Dry, Sandy |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

**Indicators for Problematic Hydric Soils[3]:**

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** Yes _____ No X

Remarks:

Duff, sand, w/in restoration planting area

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

**Wetland Hydrology Present?** Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Sandy soil, transitions up to upland in previously disturbed & and revegetated

# APPENDIX C

## Plant List

**Comprehensive List of Species Observed 2017 and 2021**
**Camp Roberts High Water Bridge Maintenance and Repair Project - Camp Roberts, Monterey County, California**

| Scientific Name | Common Name | Habit | Wetland Indicator Status | Native Status | Family | Cal-IPC Rating | Listing Status |
|---|---|---|---|---|---|---|---|
| *Acer negundo* | Box elder | T | FACW | N | Aceraceae | | |
| *Artemisia douglasiana* | Mugwort | PH | FAC | N | Asteraceae | | |
| *Asclepias californica* | California milkweed | PH | - | N | Apocynaceae | | |
| *Avena barbata* | Slender wild oats | AG | - | | Poaceae | Moderate | |
| *Baccharis pilularis* | Coyote brush | S | - | N | Asteraceae | | |
| *Baccharis salicifolia* | Mule fat | S | FAC | N | Asteraceae | | |
| *Brassica nigra* | Black mustard | AH | - | | Brassicaceae | Moderate | |
| *Bromus diandrus* | Ripgut grass | AG | - | | Poaceae | Moderate | |
| *Bromus hordeaceus* | Soft chess | AG | FACU | | Poaceae | Limited | |
| *Bromus madritensis* ssp. *rubens* | Foxtail chess | AG | - | | Poaceae | High | |
| *Carex* sp. | Sedge | PH | FAC | | Cyperaceae | | |
| *Centaurea melitensis* | Tocalote | AH | - | | Asteraceae | Moderate | |
| *Centaurea solstitialis* | Yellow star-thistle | AH | - | | Asteraceae | High | |
| *Chenopodium album* | Common lambsquarters | AH | FACU | | Chenopodiaceae | | |
| *Cirsium vulgare* | Bull thistle | AH | FACU | | Asteraceae | Moderate | |
| *Croton californicus* | California croton | PH | - | N | Euphorbiaceae | | |
| *Cyperus eragrostis* | Tall cyperus | PH | FACW | N | Cyperaceae | | |
| *Datura stramomium* | Jimson weed | AH | | | Solanaceae | | |
| *Datura wrightii* | Jimsonweed | PH | - | N | Solanaceae | | |
| *Deinandra* sp. | Tarplant | AH | | | Asteraceae | | |
| *Distichlis spicata* | Salt grass | PG | FAC | N | Poaceae | | |
| *Elymus triticoides* | Creeping wild-rye | PG | FAC | N | Poaceae | | |
| *Erigeron canadensis* | Horseweed | AH | FACU | N | Asteraceae | | |
| *Erigeron foliosis* | Leafy daisy | AH | | N | Asteraceae | | |
| *Eriogonum fasciculatum* | California buckwheat | S | - | N | Polygonaceae | | |
| *Erodium* sp. | Filaree | AH | - | | Asteraceae | | |
| *Festuca myuros* | Foxtail fescue | AG | FACU | | Poaceae | Moderate | |
| *Heliotropium curassavicum* | Heliotrope | PH | FACU | N | Boraginaceae | | |
| *Heterotheca grandiflora* | Telegraph weed | AH | - | | Asteraceae | | |
| *Heterotheca sessiliflora* var. *echioides* | Sessileflower goldenaster | PH | - | N | Asteraceae | | |
| *Hirschfeldia incana* | Summer mustard | BH | - | | Brassicaceae | Moderate | |
| *Juncus balticus* | Baltic rush | PH | FACW | N | Juncaceae | | |
| *Lemna minor* | Duckweed | PH | OBL | N | Lemnaceae | | |
| *Lepidium latifolium* | Broad-leaved peppergrass | PH | FAC | | Brassicaceae | High | |

**Comprehensive List of Species Observed 2017 and 2021**
**Camp Roberts High Water Bridge Maintenance and Repair Project - Camp Roberts, Monterey County, California**

| | | | | | | |
|---|---|---|---|---|---|---|
| *Marrubium vulgare* | Horehound | PH | FACU | | Lamiaceae | Limited |
| *Melilotus indicus* | Yellow sweetclover | AH | FACU | | Fabaceae | |
| *Muhlenbergia rigens* | Deergrass | PG | FAC | N | Poacaea | |
| *Phyla nodiflora* | Common lippia | AH | FACW | N | Verbenaceae | |
| *Platanus racemosa* | Western sycamore | T | FAC | N | Plantanaceae | |
| *Populus fremontii* | Fremont cottonwood | T | - | N | Salicaceae | |
| *Pseudognaphalium luteoalbum* | Jersey cudweed | AH | FAC | | Asteraceae | |
| *Quercus douglasii* | Blue oak | T | - | N | Fagaceae | |
| *Rosa californica* | California wild rose | S | FAC | N | Rosaceae | |
| *Rumex crispus* | Curly dock | PH | FAC | | Polygonaceae | Limited |
| *Salix exigua* | Sandbar willow | S | FACW | N | Salicaceae | |
| *Salix laevigata* | Red willow | S/T | FACW | N | Salicaceae | |
| *Salix lasiolepis* | Arroyo willow | S/T | FACW | N | Salicaceae | |
| *Sambucus nigra* | Black elderberry | S | FACU | N | Adoxaceae | |
| *Scirpus microcarpus* | Small fruited bulrush | PH | OBL | N | Cyperaceae | |
| *Scrophularia californica* | California bee plant | PH | FAC | N | Scrophulariaceae | |
| *Sonchus oleraceus* | Common sow thistle | AH | - | | Asteraceae | |
| *Stipa pulchra* | Purple needlegrass | PG | - | N | Poaceae | |
| *Toxicodendron diversilobum* | Poison oak | S | FACU | N | Anacardiaceae | |
| *Trichostema lanceolatum* | Vinegarweed | AH | - | N | Lamiaceae | |
| *Typha latifolia* | Broad-leaf cattail | PH | OBL | N | Typhaceae | |
| *Xanthium strumarium* | Cocklebur | AH | FAC | N | Asteraceae | |

Notes:
Scientific nomenclature follows Baldwin (2012).
N - Native species

Habit definitions:
AG - Annual grass.
AH - Annual herb.
F - Fern
PG - Perennial grass.
PH - Perennial herb.
PV - Perennial vine.
S - Shrub
T - Tree

Wetland indicator status (Lichvar and Kartesz, 2016):
OBL (Obligate Wetland Plants) - Almost always occur in wetlands.
FACW (Facultative Wetland Plants) - Usually occur in wetland, but may occur in non-wetlands.
FAC (Facultative Wetland Plants) - Occur in wetlands and non-wetlands.
FACU (Facultative Upland Plants) - Usually occur in non-wetlands, but may occur in wetlands.
UPL (Upland Plants) - Almost always occur in non-wetlands.

Cal-IPC (California Invasive Plant Council) Ratings:
High - These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Most are widely
Moderate - These species have substantial and apparent-but generally not severe-ecological impacts on physical processes, plant and animal
Limited - These species are invasive but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score.

# APPENDIX D

## Site Photographs

Photo 1. Camp Roberts HWB; Freshwater Forested/Shrub Wetland supporting Mulefat thickets (aspect west; 8/12/21).

Photo 2. Freshwater Forested/Shrub Wetland supporting Sand bar willow thickets on banks of Streambed feature (Nacimiento river) (aspect west; 8/12/21).

Photo 3. Freshwater Emergent Wetland supporting Marsh vegetation (aspect west; 8/12/21).

Photo 4. Freshwater Forested/Shrub Wetland supporting Fremont cottonwood forest and woodland (aspect southeast; 8/12/21).

Photo 5. Representative view of Freshwater Forested/Shrub Wetland feature 2017 site conditions (aspect west; 10/10/17).

Photo 6. Representative view of Freshwater Emergent Wetland feature 2017 site conditions (aspect south; 10/10/17).