

# **Old Banks Landfill Cap Project**

## **Initial Study/Proposed Mitigated Negative Declaration**



**California Department of Water Resources  
1416 Ninth Street  
Sacramento, CA 95814**

**October 2019**

## Initial Study

### Old Banks Landfill Cap Project

1. Project Title	Old Banks Landfill Cap Project
2. Lead Agency Name and Address	California Department of Water Resources 1416 Ninth Street Sacramento, California 95814
3. Contact Person and Phone Number	Gerald Snow Environmental Program Manager II (916) 653-7213 Gerald.Snow@water.ca.gov
4. Project Location	Approximately 9 miles northwest of the city of Tracy, Township 1 south, Range 3 east, Section 35, within the Clifton Court Forebay USGS 7.5-minute quadrangle in Contra Costa County.
5. Project Sponsor's Name and Address	California Department of Water Resources Operations and Maintenance 1416 Ninth Street Sixth Floor Sacramento, CA 95814
6. General Plan Designation	N/A – State-owned Water Conveyance System
7. Zoning	N/A - Adjacent Agricultural Zone
8. Description of Project	DWR is proposing to repair and upgrade the existing cap at the Old Banks Landfill to address concerns related to landfill debris exposure raised by the Contra Costa County Health Department (CCCHD). These concerns will be addressed by confining the Landfill materials and preventing the Landfill contents from being exposed by rodent activities, as well as improving surface drainage, and minimizing the need for future maintenance. Project activities include placing fill soil material on the Landfill

	crown to bring the site to grade, placing a commercially available rodent control barrier material, and placing a surface layer on top of the rodent control barrier.
9. Surrounding Land Uses and Setting	The general project area is comprised of agricultural land and the California Aqueduct.
10. Other Public Agencies Whose Approval is Required	East Contra Costa County Habitat Conservancy, Contra Costa County Health Department, and CalRecycle.
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, is there a plan for consultation?	Requests for consultation were sent out to concerned tribes pursuant to AB 52 in 2017. No tribes requested consultation from this mailing. A Sacred Lands file search was also conducted in 2019. Notification letters were sent out in 2019 to notify tribes of the project's continuation. Phone call notifications were also made two weeks after the letters were sent.

# MITIGATED NEGATIVE DECLARATION

**PROJECT:** Old Banks Landfill Cap Project

**LEAD AGENCY:** California Department of Water Resources (DWR)

**PROJECT LOCATION:** The Old Banks Landfill Cap (Landfill) is located in southeastern Contra Costa County, approximately 9 miles northwest of the city of Tracy and 12 miles northeast of the city of Livermore.

**PROJECT DESCRIPTION:** DWR is proposing to conduct the Old Banks Landfill Cap Project (proposed project) to cap the Old Banks Landfill (also known as the Harvey O. Banks Pumping Plant Landfill) in order to address concerns related to Landfill debris exposure raised by the Contra Costa County Health Department (CCCHD). These concerns will be addressed by DWR by confining the Landfill materials and preventing the Landfill contents from being exposed by rodent activities, as well as improving surface drainage, and minimizing future maintenance. Project activities include clearing existing vegetation, removing the upper 2 to 4 inches of topsoil of the Landfill crown, grading the existing Landfill crown by adding fill soil materials in localized areas in order to bring the site to grade, placing a commercially available rodent control barrier material, placing a 1-foot thick surface layer on top of the rodent control fill fabric to protect it, and returning the project site to near pre-project conditions by hydroseeding.

**DETERMINATION:** An Initial Study (IS) was prepared to determine if the proposed project has the potential to cause significant environmental impacts. Based on the analysis conducted in the IS, it has been determined that implementing the proposed project will not have a significant impact on the environment after the adoption and implementation of mitigation measures.

**MITIGATION MEASURES:** The following mitigation measures will be implemented as part of the project to avoid, minimize, rectify, reduce or eliminate, or compensate for potentially significant environmental impacts. Implementation of these mitigation measures would reduce the potentially significant environmental impacts of the proposed project to less than significant levels:

## **Mitigation Measure AQ-1: Reduce emissions from off-road equipment and heavy-duty vehicles**

- a) Tier 4F diesel engine standards will be used during construction.
- b) All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day during construction, or as frequently as needed to minimize fugitive dust.
- c) All materials in haul trucks, including transporting soil, sand, or other loose material being hauled on- or off-site shall be covered.

- d) All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- e) All vehicle speeds on unpaved roads shall be limited to 15 mph.
- f) All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible.
- g) Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- h) All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- i) Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

#### **Mitigation Measure Bio-1: Avoid and minimize potential impacts to wildlife**

To minimize the potential impacts to special-status wildlife that may occur within the project area, the following measures will be implemented:

- a) A qualified wildlife biologist will conduct pre-construction surveys no more than two weeks prior to the start of construction for any special-status wildlife that have the potential to occur within the project area.
- b) Prior to the start of construction, known sensitive areas adjacent to the project site will be marked with high visible flagging for avoidance.
- c) A qualified wildlife biologist will conduct a training session for all construction personnel prior to the start of work. At a minimum, the training shall include a description and discussion of the importance of avoiding impacts to special-status wildlife, the general measures that are being implemented to conserve these species as they relate to the project and project area, and procedures to follow should they encounter wildlife during work.
- d) A biological monitor will be on-site as needed during project construction at the discretion of the Lead Biologist.
- e) Any observations of federally or State-listed species will be reported to the USFWS and CDFW within one (1) working day of the observation.
- f) If federally or State-listed species are observed on site, all work will halt and the animal will be allowed to leave the project area on their own.

- g) Project activities shall be performed during daylight hours.
- h) All trash shall be properly contained, removed from the worksite, and disposed of properly to prevent attracting wildlife.
- i) All fueling and maintenance of vehicles or other equipment shall occur on established roads and at least 50 feet away from any on-site water feature.
- j) Motorized equipment will be kept clean and in good working condition and will not be left idling while not in use for more than 5 minutes.
- k) Absorbent materials will be available on-site. Any accidental leaks or spills will be immediately cleaned up, and the equipment will not be able to return to the project area until it has been repaired sufficiently to prevent further leaks or spills.

#### **Mitigation Measure Bio-2: Avoid and minimize impacts to special-status plants**

To minimize the potential impacts to special-status plants that may occur within the project area, the following measures will be implemented:

- a) A qualified biologist will conduct surveys in the appropriate seasons for any special-status species that are potentially present within the project area. If any are identified, they will be flagged and avoided if feasible.
- b) If special-status plants are identified within the project area and cannot be avoided, the Implementing Entity (ECCHC) will coordinate with USFWS/CDFW, and an attempt will be made to transplant the individuals or collect and disperse seeds.

#### **Mitigation Measure Bio-3: Avoid and minimize impacts to California tiger salamander and California red-legged frog**

To minimize the potential impacts to California tiger salamander and California red-legged frog that may occur within the project area, the following measures will be implemented:

- a) DWR will participate as a Participating Special Entity in the East Contra Costa County Habitat Conservation Plan/Natural Communities Conservation Plan (Jones & Stokes 2006) to mitigate for impacts to upland habitat for these species.
- b) Work will only be conducted during daylight hours and not during rain events.
- c) Any burrows or large cracks in the ground that will be temporarily impacted during construction will be covered with plywood to prevent collapse.

#### **Mitigation Measure Bio-4: Avoid and minimize impacts to Burrowing Owl**

To minimize the potential impacts to Burrowing Owl that may occur within the project area, the following measures will be implemented:

- a) Prior to any ground disturbance related to project activities, a USFWS/CDFW-approved biologist will conduct a preconstruction survey in areas identified in the planning surveys as having potential Burrowing Owl habitat. The surveys will establish the presence or absence of Burrowing Owl and/or habitat features and evaluate use by owls in accordance with CDFW survey guidelines (California Department of Fish and Game 2012).
- b) On the parcel where the activity is proposed, the biologist will survey the proposed disturbance site and a 250-foot radius from the perimeter of the proposed site to identify burrows and owls. Adjacent parcels under different land ownership will not be surveyed. Surveys should take place near sunrise or sunset in accordance with CDFW guidelines. All burrows or Burrowing Owls will be identified and mapped. Surveys will take place no more than 30 days prior to construction. During the breeding season (February 1– August 31), surveys will document whether Burrowing Owls are nesting in or directly adjacent to disturbance areas. During the nonbreeding season (September 1–January 31), surveys will document whether Burrowing Owls are using habitat in or directly adjacent to any disturbance area. Survey results will be valid only for the season (breeding or nonbreeding) during which the survey is conducted.
- c) If Burrowing Owls are found during the breeding season (February 1 – August 31), all nest sites that could be disturbed by project construction during the remainder of the breeding season or while the nest is occupied by adults or young will be avoided. Avoidance will include establishment of a non-disturbance buffer zone (described below). Construction may occur during the breeding season if a qualified biologist monitors the nest and determines that the birds have not begun egg-laying and incubation or that the juveniles from the occupied burrows have fledged. During the nonbreeding season (September 1 – January 31), the project proponent should avoid the owls and the burrows they are using, if possible. Avoidance will include the establishment of a buffer zone (described below).
- d) During the breeding season, buffer zones of at least 250 feet in which no construction activities can occur will be established around each occupied burrow (nest site). Buffer zones of 160 feet will be established around each burrow being used during the nonbreeding season. The buffers will be delineated by highly visible, temporary construction fencing.
- e) If occupied burrows for Burrowing Owls are not avoided, passive relocation will be implemented. Owls should be excluded from burrows in the immediate impact zone and within a 160-foot buffer zone by installing one-way doors in burrow entrances. These doors should be in place for 48 hours prior to excavation. The project area should be monitored daily for 1 week to confirm that the owl has abandoned the burrow. Whenever possible, burrows should be excavated using hand tools and refilled to prevent reoccupation (California Department of Fish and Game 1995). Plastic tubing or a similar structure should be inserted in the tunnels during



excavation to maintain an escape route for any owls inside the burrow.

#### **Mitigation Measure Bio-5: Avoid and minimize impacts to San Joaquin kit fox**

To minimize the potential impacts to San Joaquin kit fox that may occur within the project area, the following measures will be implemented:

- a) Prior to any ground disturbance related to project activities, a USFWS/CDFW– approved biologist will conduct a preconstruction survey in areas identified in the planning surveys as supporting suitable breeding or denning habitat for San Joaquin kit fox. The surveys will establish the presence or absence of San Joaquin kit foxes and/or suitable dens and evaluate use by kit foxes in accordance with USFWS survey guidelines (U.S. Fish and Wildlife Service 1999).
- b) Preconstruction surveys will be conducted within 30 days of ground disturbance. On the parcel where the activity is proposed, the biologist will survey the proposed disturbance site and a 250-foot radius from the perimeter of the proposed site to identify San Joaquin kit foxes and/or suitable dens. Adjacent parcels under different land ownership will not be surveyed. The status of all dens will be determined and mapped. Written results of preconstruction surveys will be submitted to USFWS within 5 working days after survey completion and before the start of ground disturbance. Concurrence is not required prior to initiation of project activities.
- c) If San Joaquin kit foxes and/or suitable dens are identified in the survey area, the measures described below will be implemented:
  - i. If a San Joaquin kit fox den is discovered in the proposed development site, the den will be monitored for 3 days by a USFWS/CDFW– approved biologist using a tracking medium or an infrared beam camera to determine if the den is currently being used.
  - ii. Unoccupied dens within the disturbance site should be destroyed immediately to prevent subsequent use.
  - iii. If a natal or pupping den is found, USFWS and CDFW will be notified immediately. The den will not be destroyed until the pups and adults have vacated and then only after further consultation with USFWS and CDFW.
  - iv. If kit fox activity is observed at the den during the initial monitoring period, the den will be monitored for an additional 5 consecutive days from the time of the first observation to allow any resident animals to move to another den while den use is actively discouraged. For dens other than natal or pupping dens, use of the den can be discouraged by partially plugging the entrance with soil such that any resident animal can easily escape. Once the den is determined to be unoccupied it may be excavated under the direction of the biologist. Alternatively, if the animal is still present after 5 or more consecutive days of plugging and monitoring, the den may have to be



- excavated when, in the judgment of a biologist, it is temporarily vacant (i.e., during the animal's normal foraging activities)
- v. If dens are identified in the survey area outside the proposed disturbance site, exclusion zones around each den entrance or cluster of entrances will be demarcated. The configuration of exclusion zones should be circular, with a radius measured outward from the den entrance(s). No project activities will occur within the exclusion zones. Exclusion zone radii for potential dens will be at least 50 feet and will be demarcated with four to five flagged stakes. Exclusion zone radii for known dens will be at least 100 feet and will be demarcated with staking and flagging that encircles each den or cluster of dens but does not prevent access to the den by kit fox.

**Mitigation Measure Cult-1: Halt ground-disturbing construction activities if cultural materials are discovered**

To avoid or minimize the potential impacts to cultural materials in the project area, the following measures will be implemented:

- a) If historical or unique archaeological resources are discovered during construction, all work would temporarily cease in the immediate area until the findings can be assessed by a qualified archaeologist and an appropriate course of action can be determined. Work may continue on other parts of the proposed project while evaluation and mitigation takes place (CEQA Guidelines §15064.5 [f]). If the find is determined to be a historical or unique archaeological resource, time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation must be available.

**Mitigation Measure Cult-2: Halt construction activities if any human remains are discovered**

To avoid or minimize the potential impacts to human remains in the project area, the following measures will be implemented:

- a) If human remains are found, such remains would be subject to the provisions of California Public Resources Health and Safety Code Section 7050.5. The requirements and procedures would be implemented, including immediately stopping work in the vicinity of the find and notifying the County Coroner. A DWR archaeologist would also need to be contacted immediately. The process for notification of the California Native American Heritage Commission (NAHC) and consultation with the individual(s) identified by the NAHC as the "most likely descendent" is set forth in Section 5097.98 of the California Public Resources Code. Work in the vicinity of the find can restart after the remains have been investigated

and appropriate recommendations have been made for their treatment and disposition.

*Gerald Snow*

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10/14/2019

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Date

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## **1.0 INTRODUCTION AND PROJECT DESCRIPTION**

The California Department of Water Resources (DWR) is proposing to conduct the Old Landfill Cap Project (proposed project) to repair and upgrade the existing cap on the Old Banks Landfill (Landfill), also known as the Harvey O. Banks Pumping Plant Landfill. This document represents DWR's evaluation of the potential environmental impacts of the proposed project under the California Environmental Quality Act (CEQA) and is intended to satisfy the responsibilities of the lead agency under CEQA for a Mitigated Negative Declaration.

### ***1.1 Background***

The Landfill was created in the 1960s and is a closed, unpermitted, solid waste disposal site that ceased operating on December 1, 1981 (CalRecycle 2018).

Rodent burrowing activities, subsidence, and soil erosion have exposed some Landfill debris and may expose more in the future. As it is a closed waste site, the Landfill is subject to periodic inspection and review by the California Department of Resources, Recycling, and Recovery (CalRecycle) and the Local Enforcement Agency - Contra Costa County Health Services Department (CCCHD), Environmental Health Division. Annual routine inspection reports by CCCHD from year 2000 through 2018 identify the Landfill as "Banks Pumping Plant Waste Fill - a closed solid waste disposal site." The reports document animal burrowing activities and daylighting of waste materials on the Landfill crown in 2003, and 2007 through 2018. CCCHD and California landfill closure regulations (27 CCR 20530-21180) require that the Landfill be maintained to prevent exposure of waste, erosion, and ensure site security. However, the Landfill provides potential habitat for State and federal special-status species, requiring the need to obtain permits to conduct maintenance activities, such as filling rodent burrows, due to the potential to impact these species.

To perform Landfill cap repairs and address the persistent rodent burrowing, DWR, with CCCHD and CalRecycle concurrence, proposes to design and construct a new cap on the Landfill site. The proposed project would reduce long-term rodent burrowing into the Landfill, thus reducing exposure of Landfill waste. To obtain take coverage for special-status species due to construction and maintenance activities, DWR will join the East Contra Costa County (ECCC) Habitat Conservation Plan (HCP) and Natural Communities Conservation Plan (NCCP) as a Participating Special Entity (PSE) prior to construction of the Landfill cap and will comply with any applicable HCP/NCCP requirements. Additionally, DWR will analyze potential environmental effects of the proposed project and comply with CEQA requirements.

### **1.1.1 Location**

The proposed project is located approximately 1.5 miles southwest of Clifton Court Forebay and 9 miles northwest of the city of Tracy in Contra Costa County, California (see Figure 1). The proposed project is within Township 1 south, Range 3 east, Section 35, within the Clifton Court Forebay (CCF) United States Geological Survey (USGS) 7.5-minute quadrangle at Latitude 37.8061, Longitude -121.6113.

**Old Banks Landfill Cap Project**  
Figure 1: Project Location



### **1.1.2 Purpose**

DWR is responsible for maintenance of the Landfill. The Landfill site is believed to consist of construction spoil materials from excavation of the Banks Pumping Plant Intake Channel in the mid-1960s. The purpose of the proposed project is to address concerns raised, as described above, by the CCCHD by confining the Landfill materials to prevent the Landfill contents from being exposed by rodent activities and soil erosion, improve surface drainage, and to reduce the need for future maintenance.

### **1.1.3 Regulatory requirements, permits, and approvals**

DWR has the responsibility to ensure that all requirements of CEQA and other applicable regulations are met. Other permitting requirements and approvals for the proposed project include:

- In compliance with the California Endangered Species Act (CESA) and the federal Endangered Species Act (ESA), DWR will join the East Contra Costa County Habitat Conservancy's HCP/NCCP as a Participating Special Entity (PSE) and comply with all applicable requirements.
- Approval from the CCCHD and CalRecycle on the proposed construction plans.
- In compliance with Section 402 of the Clean Water Act, DWR will obtain a State Water Board Construction General Permit.

## ***1.2 PROJECT DESCRIPTION***

### **1.2.1 Project overview**

The proposed project site encompasses approximately 12.39 acres and includes access road improvements, staging and stockpiling locations, and grading and placement of fill and the rodent control barrier material to improve the existing Landfill cap (Figure 2; Table 1). Each of these proposed project components is discussed in further detail below.

**Figure 2: Old Banks Landfill Cap Project Overview**



**Table 1: Summary of Proposed Project Features and Approximate acreage**

<b>Proposed project feature</b>	<b>Approximate area (acres)</b>	<b>Description</b>
Landfill cap	6.70	Placement of fill materials and rodent control barrier material.
Graveled access road improvements	3.42	Existing aggregate base (A/B) roads. Grading and placement of A/B will occur as needed to improve access routes for heavy equipment.
Staging and stockpile locations	0.88	Existing staging/stockpile locations or heavily disturbed site that is covered with A/B. Will be used for placement of heavy equipment, vehicles, and project materials.
Existing paved road	1.39	Existing paved access road from DFD entrance to the graveled access road.
<b>Total proposed project area</b>	<b>12.39</b>	

## **1.2.2 Project Activities**

### **1.2.2.1 Landfill cap construction**

The proposed Landfill cap will confine and protect the Landfill contents from being exposed by rodent activities and soil erosion. The proposed construction will consist of the following:

- 1) Clearing and grubbing existing vegetation, removing the upper 2 to 4 inches of topsoil of the Landfill crown.
- 2) Grading the existing Landfill crown by adding fill soil materials in localized areas to maintain positive drainage (minimum one percent slope) and eliminate local depressions. The fill thickness to grade the site is expected to vary between 0 and 6 feet in localized areas. The fill shall be imported from an approved off-site source with specified requirements. All fill soil will be moisture conditioned and placed and compacted in layers.
- 3) Trenching (approximately 3-feet deep, 15-inches wide) around the perimeter of the Landfill crown, approximately 10 feet from the top of existing slopes, will be required to secure rodent control fabric material and confine the Landfill contents around the



perimeter of the Landfill crown. Trenches will be backfilled with excavated material and compacted.

- 4) Placement of the rodent control barrier material and securing it to the ground with ground anchors, such as sod nails. Rodent barrier will cover approximately 6.7 acres.
- 5) Placement of a 1-foot thick compacted clay liner on top of the rodent control barrier material. The surface clay layer will protect the rodent control barrier material and return the project site to near pre-project conditions by allowing native vegetation growth and providing a habitat for native wildlife. The rodent control barrier material will be covered with a minimum of 4 inches of clay prior to any equipment driving on it.
- 6) Hydroseeding the graded clay cover with a mix of native vegetation seeds.

The new Landfill cap is proposed to cover the Landfill crown only and will not extend beyond the Landfill crown onto the existing Landfill slopes, or along the perimeter of the Landfill.



Photo 3: Landfill crown

### **1.2.2.1.1 Construction Materials**

The Landfill cap will be constructed with approximately 11,000 cubic yards (cy) of clay materials and 13,000 cy of compacted fill, for a total of 24,000 cy of fill. In addition, approximately 300,000 square feet of rodent control barrier material will be used to cover the Landfill cap.

Multiple sources for imported fill have been identified, including commercial facilities and a regional borrow facility. The sources vary in distance, with the closest location approximately 15 miles from the project site and the farthest approximately 97 miles from the project site. Materials will be transported to the project site via dump trucks.

- **Compacted Fill:** Imported soil for use as compacted fill will be from an approved offsite source and will meet the specified soil properties (based on Atterberg limit tests and sieve analysis), along with chemical analysis.
- **Clay Fill:** Imported clay fill for use as the compacted clay layer will be from an approved offsite source, this material will meet the specified soil properties (based on Atterberg limit tests and sieve analysis), along with chemical analyses.
- **Imported fill materials:** Imported soils with specified soil properties (based on Atterberg limit tests and sieve analysis) will be used as fill materials.
- **Rodent control barrier material:** A variety of commercially available rodent control barrier material options are being considered, including XCluder Geo 1800 rodent control fill fabric, which is a stainless-steel fiber bound to a porous geotextile to form an impenetrable barrier against burrowing animals, and PVC-coated galvanized steel wire mesh that serve to decrease burrowing by burrowing animals. Ground anchors will be used to secure the rodent control barrier material.

### **1.2.2.2 Access road improvements**

The Landfill site and the staging and stockpiling areas will be accessed via existing gravel roads off Kelso Road, through the DWR DFD facility main gate. Access routes will be evaluated for heavy equipment traffic and improved if existing conditions will not support anticipated construction traffic. The contractor will maintain the roadways throughout the project to prevent further damage by importing gravel or another approved material to grade the access roads. Upon project completion, the contractor shall at a minimum restore the roadways to their pre-project conditions.



Photo 1 and 2: Gravel access roads at the project site

### **1.2.2.3 Staging and Stockpile Areas**

The proposed project encompasses approximately 12.39 acres and proposed project activities include access road improvements, clearing and grubbing of the Landfill cap, grading and placement of fill, placement of the rodent control barrier material, placement of the clay cover, and hydroseeding. Two staging and stockpile locations have been identified for staging of heavy equipment, staff vehicles, and an employee trailer, as well as for the temporary stockpile of imported soils and the rodent control barrier material:

- The main staging and stockpile area is approximately 200 feet northeast of the Landfill cap boundary, is approximately 400 ft by 150 ft, and has a surface area of 0.73 acres.
- The secondary staging and stockpile area is approximately 900 feet southwest of the Landfill cap boundary, is approximately 140 ft by 60 ft, and has a surface area of 0.15 acres.





Photo 4: Main staging and stockpile area





Photo 5: Main staging and stockpile area



Photo 6: Secondary staging and stockpile area

### 1.2.3 Construction Equipment

The following equipment is expected to be utilized during the construction of the proposed project:

- Backhoes or excavators
- Bulldozers
- Motor Graders
- Sheep-foot Wheel Roller Compactors
- Vibratory Compactors
- Hauling Truck
- Water Trucks
- Skid Steers or Rubber Tired Loaders
- Mower
- Hand Operated Compaction Equipment
- Generators
- Water Pumps
- Miscellaneous Work Pickups
- Fuel Trucks
- Hydroseed Trucks

### 1.2.4 Construction Schedule

#### 1.2.4.1 Main Project Construction

Proposed project activities will occur between late spring and late fall, will take place during daylight hours, and will take approximately 16-18 weeks to complete (Table 2).

**Table 2: Anticipated Start Dates and Duration of Proposed Project Activities**

Proposed project activity	Anticipated duration
Mobilize equipment	1 week
Site clearing and grubbing	3 weeks
Import compacted fill and grade the site	5-6 weeks
Placement of rodent control barrier material and compacted clay cover	5-6 weeks
Hydroseed and demobilize equipment	2 weeks
Project complete	

#### **1.2.4.2 Future maintenance**

Rodent burrowing activity is expected to continue after Landfill cap construction is complete. DWR will conduct future Landfill cap maintenance on an annual basis, as needed, by backfilling rodent burrows, to maintain the integrity of the Landfill cap in compliance with closure and post-closure requirements and conditions set forth in California Public Resources Code - Title 14, Title 27 of the California Code of Regulations, and 40 CFR Part 258. In addition, DWR may mow any surface vegetation and conduct minor grading and/or erosion maintenance, as needed, on the Landfill cap.

## 2.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would potentially be affected by the proposed project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Aesthetics                      | <input type="checkbox"/> Agriculture/Forestry Resources | <input checked="" type="checkbox"/> Air Quality            |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources  | <input type="checkbox"/> Energy                            |
| <input type="checkbox"/> Geology/Soils                   | <input type="checkbox"/> Greenhouse Gas Emissions       | <input type="checkbox"/> Hazards and Hazardous Materials   |
| <input type="checkbox"/> Hydrology/Water Quality         | <input type="checkbox"/> Land Use/Planning              | <input type="checkbox"/> Mineral Resources                 |
| <input type="checkbox"/> Noise                           | <input type="checkbox"/> Population/Housing             | <input type="checkbox"/> Public Services                   |
| <input type="checkbox"/> Recreation                      | <input type="checkbox"/> Transportation                 | <input type="checkbox"/> Tribal Cultural Resources         |
| <input type="checkbox"/> Utilities/Service Systems       | <input type="checkbox"/> Wildfire                       | <input type="checkbox"/> Mandatory Finding of Significance |

### Determination:

On the basis of this initial evaluation:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the 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, nothing further is required.

Gerald Snow  
Signature

10/14/2019

Date

## 2.1 EVALUATION OF ENVIRONMENTAL IMPACTS

### 2.1.1 AESTHETICS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

#### 2.1.1.1 Environmental Setting

The proposed project is located in a rural area within unincorporated Contra Costa County, in the most northern part of the San Joaquin Valley.

Several state and locally designated scenic routes are located in the general vicinity of the proposed project. Interstate 580 (I-580) is located approximately 4 miles south of the site and is an officially designated state scenic highway from Interstate 205 (I-205) in Alameda County to the San Joaquin County border and is also a County-designated scenic corridor (Caltrans 2010). Byron-Bethany Highway and Mountain House Road, both of which are designated by Alameda County as scenic rural recreational routes, are located within approximately 2 miles of the proposed project.

The existing visual character of the Landfill consists of annual grassland and ruderal plant species upon an earthen mound immediately surrounded by annual grassland, gravel roads, and a creek, with State Water Project (SWP) facilities nearby. The general surrounding areas also include DWR office facilities, paved roads, residential communities, creeks, and agricultural land.

### **2.1.1.2 Discussion**

#### **a) Would the project have a substantial adverse effect on a scenic vista?**

*No impact.* The proposed project is not located in an area that is considered a scenic vista. The site is not visible from a designated state scenic highway, as the site is too far away from I-580 to be visible. Neither Byron-Bethany Highway nor Mountain House Road provide public views of the Landfill site and the proposed project would not substantially change, damage, eliminate, or block any scenic resources within view of these roadways. Therefore, no impact is anticipated as a result of the proposed project.

#### **b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?**

*No impact.* The closest roadway to the proposed project is Bruns Road, which is not designated as a scenic road. Byron-Bethany Highway and Mountain House Road, located 2 miles away from the proposed project, are both designated by Alameda County as scenic rural recreational routes, but because of the distance from the proposed project site, no damage will occur. Therefore, no impact is anticipated as a result of the proposed project.

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

*No impact.* The proposed project is located at facilities that are not open to the public, and the project site is not visible from main roads or highways. Therefore, no impact is anticipated as a result of the proposed project.

#### **d) Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?**

*No impact.* Existing sources of lighting in the vicinity include headlights from vehicles and utility

development in the area. The proposed project will not create additional lighting to the project site aside from temporary construction equipment. The site is surrounded by levees, canals, and mostly open space, and there are no residences or other uses that would be affected by the lighting. Additionally, construction activities will take place during daylight hours when no supplemental lighting is needed. Therefore, no impact is anticipated as a result of the proposed project.

## 2.1.2 AGRICULTURE AND FORESTRY RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<p>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, as updated) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:</p>				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| d) Result in the loss of forest land or conversion of forest land to non-forest use?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
- 

### 2.1.2.1 Environmental Setting

The proposed project is surrounded by ruderal undeveloped grasslands, agricultural land, and SWP infrastructure and facilities. Land within the proposed project is identified by the California Department of Conservation as Farmland of Local Importance. This designation is determined by the Board of Supervisors of each county and means the land holds significance to the local economy. Contra Costa County included this area as a Farmland of Local Importance for its potential to graze livestock or produce dryland grain. California Department of Conservation designates the surrounding land of the proposed project as Urban or Built-up Land, Prime Farmland, Grazing Land, or Farmland of Local Importance.

### 2.1.2.2 Discussion

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

*No impact.* The proposed project is located entirely within DWR property associated with SWP facilities and infrastructure. The proposed project is not in or within a half-mile of Prime, Unique, or Statewide Importance Farmland and no conversion of Farmland would occur as a result of project activities (California Department of Conservation 2016). Therefore, no impact is anticipated as a result of the proposed project.

- b) Would the project conflict with existing zoning for agricultural use or a Williamson Act contract?**

*No impact.* The proposed project is located entirely within DWR property associated with SWP facilities and infrastructure. While the surrounding area near the proposed project site is zoned as Non-Enrolled Land in the Williamson Act Contract, the proposed project will not affect existing zoning (California Department of Conservation 2016). Therefore, no impact is anticipated as a result of the proposed project.

- c) **Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?**

*No impact.* No forest land or timberland exists on the proposed project. Therefore, no impact is anticipated as a result of the proposed project.

- d) **Would the project result in the loss of forest land or conversion of forest land to non-forest use?**

*No impact.* No forest land exists on the proposed project. Therefore, no impact is anticipated as a result of the proposed project.

- e) **Would the project 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?**

*No impact.* The proposed project would not alter the existing land use and no impacts to Farmland or forest land would occur. Therefore, no impact is anticipated as a result of the proposed project.

### 2.1.3 AIR QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

non-attainment under an applicable federal or state ambient air quality standard?

- |  |                          |                          |                                     |                          |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| c) Expose sensitive receptors to substantial pollutant concentrations?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
- 

### 2.1.3.1 Environmental Setting

The proposed project is located in Contra Costa County, which is within the San Francisco Bay Area Air Basin (SFBAAB) and is under jurisdiction of the Bay Area Air Quality Management District (BAAQMD). The SFBAAB comprises all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties, the southern portion of Sonoma County, and the southwestern portion of Solano County.

The SFBAAB is characterized by complex terrain consisting of coastal mountain ranges, inland valleys, and bays that distort normal wind flow patterns. The Coast Range mountains trending northwest along the western side of the SFBAAB have two major open areas at the Golden Gate and the Carquinez Strait that allow air to flow in and out of the SFBAAB and the Central Valley. During the summertime, temperature inversions can cause pollutant concentrations to build to unhealthy levels because of the lack of dispersion. During the summer, winds flowing from the northwest are drawn inland through the Golden Gate and over the lower portions of the San Francisco Peninsula. In the winter, the Pacific high-pressure cell weakens and shifts southward resulting in wind flow offshore, the absence of upwelling, and the occurrence of storms. Weak inversions coupled with moderate winds result in a low air pollution potential. The Pacific high-pressure cell periodically becomes dominant, bringing strong inversions, light winds, and high pollution potential (BAAQMD 2017).

National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) have been established for the following criteria pollutants: carbon monoxide (CO), ozone, sulfur dioxide (SO<sub>2</sub>), nitrogen dioxide (NO<sub>2</sub>), particulate matter (PM) less than 10 microns (PM<sub>10</sub>), particulate matter less than 2.5 microns (PM<sub>2.5</sub>), and lead. These standards have been established with a margin of safety to protect the public's health. Both the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB)

designate areas of the state as attainment, nonattainment, maintenance, or unclassified for the various pollutant standards according to the federal Clean Air Act (CAA) and the California Clean Air Act (CCAA), respectively.

An “attainment” designation for an area signifies that pollutant concentrations did not violate the NAAQS or CAAQS for that pollutant in that area. A “nonattainment” designation indicates that a pollutant concentration violated the standard at least once, excluding those occasions when a violation was caused by an exceptional event, as identified in the criteria. A “maintenance” designation indicates that the area was previously non-attainment and is currently attainment for the applicable pollutant; the area must demonstrate continued attainment for a specified number of years prior to redesignation as an “attainment” area. An “unclassified” designation signifies that data do not support either an attainment or nonattainment status.

The SFBAAB is designated as a nonattainment area for the State and federal 8-hour ozone standards, the state PM<sub>10</sub> standard, and the state and national PM<sub>2.5</sub> standards. The SFBAAB is considered an attainment area or unclassified for the other criteria pollutants.

The BAAQMD has published guidelines for CEQA compliance, which include recommended threshold criteria for determining the significance of impacts on air quality from construction and operational activities. Screening criteria for potential significance as written in the guidance are as follows: the project is below the applicable screening level size; all Basic Construction Mitigation Measures would be included in the project design and implemented during construction; and construction-related activities would not include demolition, simultaneous occurrence of more than two construction phases, simultaneous construction of more than one land use type, extensive site preparation for grading, cut/fill, or earth movement, or extensive material transport (e.g., greater than 10,000 cubic yards of soil import/export) requiring a considerable amount of haul truck activity. As the proposed project involves the transport of more than 10,000 cubic yards of clay and fill, these screening criteria are not met. Subsequent screening criteria as established by BAAQMD are summarized CEQA Air Quality Guidelines. If emissions are below the construction or operational threshold criteria, the impact would be considered less than significant. If emissions exceed the applicable thresholds, the impact would be considered significant.

### **2.1.3.2 Discussion**

#### **a) Would the project conflict with or obstruct implementation of the applicable air quality plan?**

*Less than significant impact with mitigation incorporated.* The air plan applicable to the proposed project is the BAAQMD Bay Area 2017 Clean Air Plan (BAAQMD 2017). The Clean Air Plan defines control strategies to reduce emissions and ambient concentrations of air pollutants; safeguard public health by reducing exposure to air pollutants that pose the greatest health risk, with an emphasis on protecting the communities most heavily affected by air pollution; and reduce greenhouse gas emissions to protect the climate.

Two criteria are applicable to determine if the proposed project would conflict with or obstruct implementation of the air quality plan. The first criterion is whether the proposed project would exceed the estimated air basin emissions used as the basis of the air quality plans, which are based on expected population changes and vehicle miles traveled (VMT). While the air quality plan includes mobile sources, minor changes in the assumptions relative to these sources would not obstruct the successful implementation of the strategies for improvement of the SFBAAB's air quality. The proposed project would not result in significant increases to VMT as a result of construction equipment on the project site.

The second criterion is whether the proposed project would increase the frequency or severity of violation of existing air quality standards, contribute to new violations, or delay the timely attainment of air quality standards. Operation of the proposed project is not projected to result in emissions, as the site will be seeded and left as undisturbed grassland. Construction of the proposed project would result in new, short-term exhaust emissions from construction equipment and vehicles, as well as fugitive dust emissions.

The air quality analysis focuses on the construction activities associated with the proposed project, which would result in short-term exhaust emissions from construction equipment and vehicles as well as fugitive dust emissions. Construction impacts were estimated for the following sources: construction equipment, transport vehicles, and fugitive dust from earth moving and grading. Exhaust emissions from operation of construction were calculated using California Emissions Estimator Model (CalEEMod) (BREEZE software 2017). See Appendix C: Greenhouse Gas Emissions for construction assumptions used. Long-term the proposed project will have no net air quality impacts as the site will be seeded and be allowed to return to the grassland cover that currently exists.

The BAAQMD provides screening criteria to determine if a project's impact to air quality is likely to be significant. Due to material transport of over 10,000 cy, the proposed project does not meet screening criteria for "less than significant" without mitigation. Analysis of potential air quality impacts from construction of the proposed project, which was conducted with CalEEMod, indicates that construction activities would result in the daily average emission of more than 54 pounds of NO<sub>x</sub> (oxides of nitrogen) gases, resulting in a project that would, without mitigation, exceed the thresholds of significance for that pollutant.

Construction, freight, and farming equipment contribute approximately 15% of the regional NOx emissions. The CARB and EPA adopted standards for heavy-duty off-road compression ignition engines 175 horsepower and above to significantly reduce production of ozone precursor pollutants, including NOx. To mitigate NOx daily emissions, certified construction equipment that satisfies Tier 4 Final (Tier 4F) diesel engine standards will be used, so that the total daily emissions from off-road equipment and heavy-duty vehicles does not exceed the threshold of significance for NOx. Based on CalEEMod calculations, implementation of Tier 4F diesel engine standards will significantly reduce construction-related NOx levels to below the threshold of significance (Table 3). Use of Tier 4F equipment provides a buffer between the anticipated daily NOx emissions and the threshold of significance. Therefore, the minimal use of equipment that satisfies less than Tier 4F diesel engine standards will not exceed the daily emissions threshold. If it is determined that the proposed project will have an exceedance, DWR will implement Additional Construction Mitigation Measures recommended by the BAAQMD (BAAQMD 2017).

Implementation of the measures in Mitigation Measures AQ-1 will ensure the proposed project's construction activities will not violate any air quality standard or contribute substantially to an existing or projected air quality violation. Implementation of Mitigation Measure AQ-1 will reduce this impact to less than significant.

**Table 3: Pollutant Threshold of Significance and Calculated Daily Emissions**

<b>Pollutant</b>	<b>Threshold of Significance for Average Daily Emissions (pounds)</b>	<b>Calculated Average Daily Construction Emissions without mitigation (pounds)</b>	<b>Calculated Average Daily Construction Emissions with mitigation measure implementation (pounds)</b>
NOx	54	82.45	16.94
PM 2.5	54	0.707	0.206
PM 10	82	3.334	0.201
NOx = oxides of nitrogen; PM2.5 = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM10 = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less			

**Mitigation Measure AQ-1: Reduce construction-related emissions from off-road equipment and heavy-duty vehicles**

- a) Tier 4F diesel engine standards will be used during construction
- b) All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day during construction, or as frequently as needed to minimize fugitive dust.
- c) All materials in haul trucks, including transporting soil, sand, or other loose material being hauled on- or off-site shall be covered.
- d) All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- e) All vehicle speeds on unpaved roads shall be limited to 15 mph.
- f) All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible.
- g) Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- h) All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- i) Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

**b) Would the project 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 with mitigation.* The SFBAAB is designated as a nonattainment area for the state and federal 8-hour ozone standards, the state PM<sub>10</sub> standard, and the state and federal PM<sub>2.5</sub> standards. The SFBAAB is considered an attainment area or unclassified for the other criteria pollutants.

Air pollutant emissions associated with the proposed project would occur in the short-term during construction activities. The proposed project would not generate long-term air pollutant emissions during operation, because the site will be seeded and allowed to become undisturbed grassland. Although the construction phase of the proposed project would result in



a net increase in criteria pollutants, the emission of these pollutants would be temporary in nature and would cease when construction is completed. Due to the short duration in construction (16-18 weeks) and limited construction area (6.7 acres) emissions associated with the proposed project would not be expected to exceed the BAAQMD daily emission thresholds for ozone, PM<sub>2.5</sub>, and PM<sub>10</sub> standards. Calculations of potential construction impacts using CalEEMod confirm this.

The BAAQMD requires the implementation of BMPs to reduce criteria pollutant production during construction, as specified in Mitigation Measure AQ-1. Fugitive dust emissions are associated with excavation, land clearing, exposure, and cut-and-fill operations. Dust generated daily during construction would vary substantially, depending on the level of activity, the specific operations, and weather conditions. On a limited basis, surrounding land uses and on-site construction workers may be exposed to blowing dust, depending on the prevailing wind. BAAQMD specifies mitigation measures for dust control related to construction projects. These mitigation measures are intended to reduce suspended particulate matter including PM<sub>10</sub> and PM<sub>2.5</sub> emissions to less than significant levels during the construction period. Implementation of the Mitigation Measures in AQ-1 would reduce diesel PM exhaust and ROG emissions as well as construct dust PM<sub>2.5</sub> and PM<sub>10</sub> impacts during construction, therefore reducing this impact to less than significant.

**c) Would the project expose sensitive receptors to substantial pollutant concentrations?**

*Less than significant impact.* Pollutants that could be generated by the proposed project, and that could result in adverse health effects on sensitive receptors, include CO, NO<sub>x</sub>, particulate matter (i.e., PM<sub>10</sub> and PM<sub>2.5</sub>), and toxic air contaminants (TACs). No significant changes in pollutant emissions are expected from operation as the site will be seeded and returned to grassland. Calculations for temporary emissions from construction show that impacts will not exceed thresholds of significance.

Members of the population that are considered particularly sensitive to the effects of air pollutants include children, the elderly, and people with illnesses. Therefore, examples of sensitive receptors include schools, hospitals, and residential areas. The nearest sensitive receptors would be at Mountain House Elementary School, which is approximately 2.24 miles northeast of the nearest project component. Other land surrounding the project site is primarily agricultural, although the town of Mountain House is approximately 3.15 miles away.

Haul trucks and off-road equipment would not operate in the immediate proximity of any sensitive receptor or for an extended period of time. As the nearest potential sensitive receptors are over 2 miles from the expected impacts, and as emissions are not presumed to be significant or permanent, construction-related emissions would not be anticipated to expose

sensitive receptors to substantial concentrations of pollutants. Therefore, impacts would be less than significant due to proposed project activities.

**d) Would the project create objectionable odors affecting a substantial number of people?**

*Less than significant impact.* Human response to odors is subjective, and sensitivity to odors varies greatly. Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, headaches).

The project site is a solid waste disposal landfill. Currently, there are no existing complaints about the odor impacts from the project site. The Landfill contents are construction and landscaping waste from the operational period of the Landfill, which ceased operation in 1981. During construction, the site will be graded, a clay and soil cap will be placed, along with a rodent exclusion barrier, on top of the Landfill. Additional fill to a depth of at least one foot will be placed, and then the site will be hydroseeded with grassland species. After construction, the Landfill will be equally or less likely to cause potential odor impacts than it is currently.

A potential source of odor during maintenance activities is equipment exhaust. However, equipment exhaust would be localized and generally confined to the immediate area surrounding the proposed project site. The proposed project would use typical construction techniques, and the odors would be temporary and typical of most construction sites. Operation of the proposed project would not have any significant odor sources. The project would not create objectionable odors that would affect a substantial number of people. Therefore, impacts would be less than significant due to proposed project activities.

## 2.1.4 BIOLOGICAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game, the U.S. Fish and Wildlife Service, or the National Marine Fisheries Service	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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### 2.1.4.1 Environmental Setting

The proposed project is located in the southeastern part of Contra Costa County adjacent to the Alameda County border, within the San Joaquin Valley Subregion of the Great Central Valley Geographic region of California (Baldwin, ed. 2012). The regional climate is generally

Mediterranean in nature with warm, dry summers and rainy winters. The San Joaquin Valley Subregion is typically dryer and hotter than other areas of the central valley due to the lack of coastal weather influences associated with the Sacramento-San Joaquin River Delta. Average annual temperatures in this area range from approximately 38 degrees Fahrenheit in January to approximately 93 degrees Fahrenheit in July. The average annual precipitation is approximately 12.03 inches per year (WRCC 2016).

The proposed project falls within the San Ysidro loam, 0 to 5 percent slopes, dry, MLRA 17 soil map unit (NRCS 2019). This soil type is very deep and moderately well-drained and formed in alluvium from sedimentary rocks. (NRCS 2019).

#### **2.1.4.2 Methodology**

Prior to conducting field surveys, DWR biologists compiled a list of special-status species and plant communities that may be in the project area (Appendix A). The list was developed from a review of the following sources:

- California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) for the following nine USGS 7.5 minute Quadrangle maps: Brentwood, Woodward Island, Holt, Byron Hot Springs, Clifton Court Forebay, Union Island, Altamont, Midway, and Tracy (CNDDB 2019);
- U.S. Fish and Wildlife Service website (USFWS) Information for Planning and Consultation (iPaC) system (USFWS 2019); and
- California Native Plant Society (CNPS) on-line Inventory of Rare and Endangered Plants for the following nine USGS 7.5 minute Quadrangle maps: Brentwood, Woodward Island, Holt, Byron Hot Springs, Clifton Court Forebay, Union Island, Altamont, Midway, and Tracy (CNPS 2019).

The complete list includes information on species status, habitat description, whether potential habitat occurs in the project area, and whether impacts to the species are expected due to the project. Expected species impacts were determined through a review of CNDDB Geographic Information System (GIS) records (Figure 3), analysis of aerial imagery, and information collected during DWR site surveys. Multiple site visits for this project were conducted by DWR Environmental Scientists between 2014 and 2019.

##### **2.1.4.2.1 Habitat Types**

The dominant habitat within and surrounding the proposed project is non-native grassland with patches of northern coastal scrub habitat, alkali scald, and multiple areas that support seasonal ponding. The grassland habitats within and surrounding the proposed project are dominated by

nonnative ruderal species such as hairy vetch (*Vicia villosa*), slim oat (*Avena barbata*), and ripgut brome (*Bromus diandrus*). A list of all plant species observed on site is included in Appendix B.

This site meets the mapping standards for the semi-natural herbaceous stands for *Avena* spp. and *Bromus diandrus*: habitats dominated by non-native grasses with a significant thatch layer that prevents the establishment of native forbs. These grasses are most dominant in years with significant rainfall: prolonged drought can reveal dormant native forb species in the seed bank. *Avena* spp. and *Bromus diandrus* germinate after the first spring rains, set seed by late spring, and die in early summer. Stands on sites with a history of deep tillage or other recurring soil disturbance usually lack native plants.

The proposed project access roads and staging and stockpile areas consist of paved roads or dirt and A/B and are classified as urban. The proposed project includes approximately 5.90 acres of existing access roads and staging and stockpile areas. There is little or no extant vegetation on this land cover type; staging areas and roads are graded annually.

### **2.1.4.3 Special-Status Species**

For the purposes of this analysis, special-status has been defined to include those species that meet the definitions of rare or endangered plants or animals under CEQA including species that are:

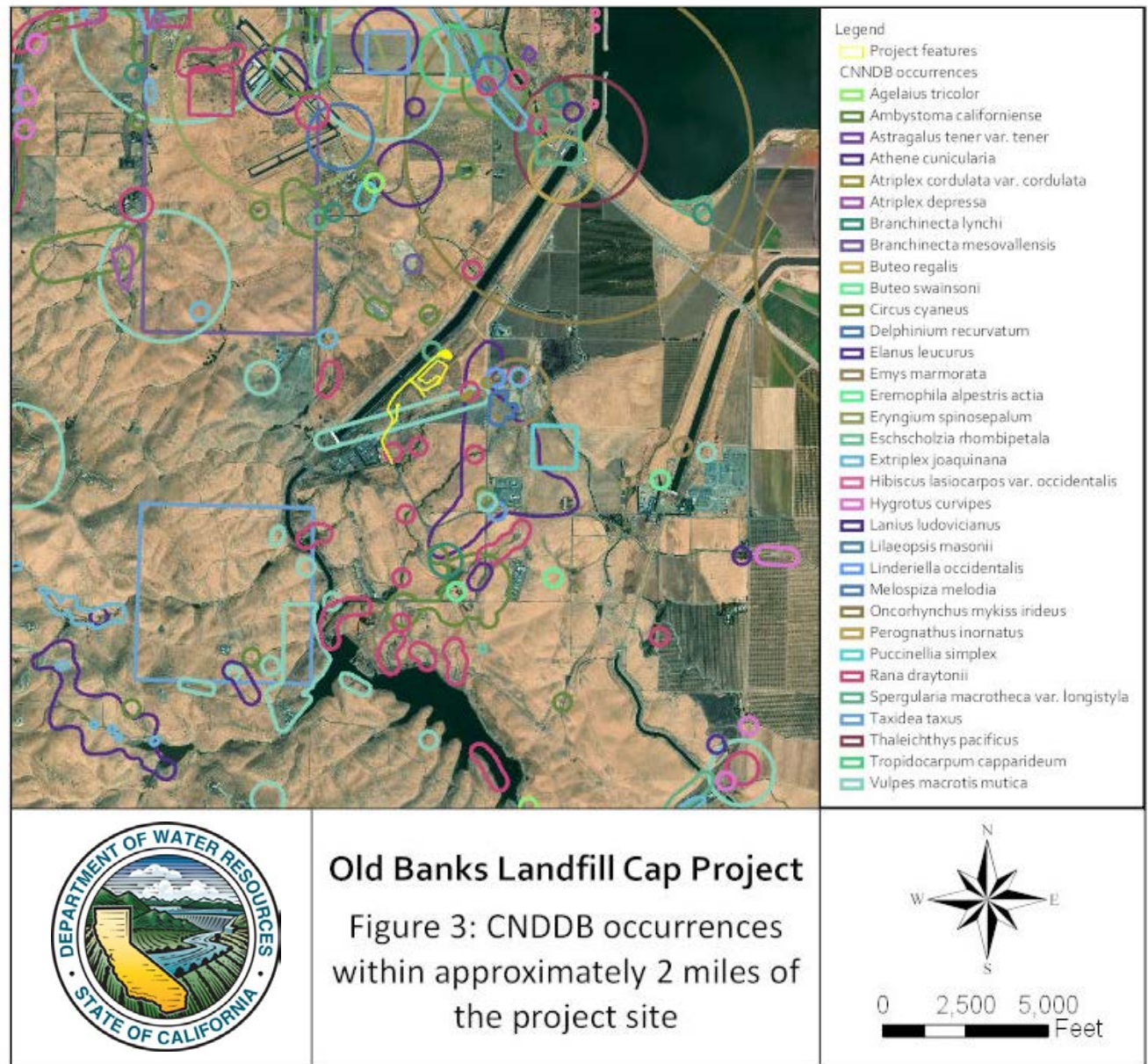
- Listed as endangered or threatened under the FESA (or formally proposed for, or candidates for, listing);
- Listed as endangered or threatened under CESA (or proposed for listing);
- Designated as endangered or rare, pursuant to California Fish and Game Code Section 1901;
- Designated as fully protected, pursuant to California Fish and Game code Sections 3511, 4700, or 5050;
- Designated as a species of special concern by CDFW; or
- Included in California Native Plant Society's Inventory of Rare Plants (Rare Plant Rank 1 through 4).

The table located in Appendix A provides a summary of regionally occurring special-status species based on queries of the CDFW CNDDb, USFWS iPaC, and the CNPS database. The presence of each species or its habitat during the biological surveys was used as the rationale to determine if the species has the potential to occur in the proposed project area. Special-status species without potential to occur within the proposed project area are not discussed further.

Based on the availability of suitable habitat and nearby occurrences, 29 special-status plant species and 28 special-status wildlife species are considered to have a potential to occur in the proposed project area and are discussed further below.



**Figure 3: CNDDDB Occurrences within approximately 2 miles of the Project Site**



#### **2.1.4.3.1 Special-Status Plants**

There are 29 special-status plant species with “not likely to adversely affect” determinations: large-flowered fiddleneck (*Amsinckia grandiflora*), California androsace (*Androsace elongate* ssp. *acuta*), alkali milk-vetch (*Astragalus tener* var. *tener*), heartscale (*Atriplex cordulata*), crownscale (*Atriplex coronate*), brittlescale (*Atriplex depressa*), lesser saltscale (*Atriplex minuscula*), big-scale balsamroot (*Balsamorhiza macrolepis*), big tarplant (*Blepharizonia plumose* ssp. *plumose*), Congdon’s tarplant (*Centromadia parryi* ssp. *congdonii*), Parry’s rough tarplant (*Centromadia parryi* ssp. *rudis*), hispid bird’s-beak (*Chloropyron mole* ssp. *hispidium*), palmate-bracted salty bird’s-beak (*Chloropyron palmatum*), small flowered morning glory (*Convolvulus simulans*), recurved larkspur (*Delphinium recurvatum*), spiny-sealed button-celery (*Eryngium spinosepalum*), diamond-petaled California poppy (*Eschscholzia rhombipetala*), San Joaquin spearscale (*Extriplex joaquinana*), stinkbells (*Fritillaria agrestis*), hogwallow starfish (*Hesperovax caulescens*), Brewer’s western flax (*Hesperolinon breweri*), Contra Costa goldfields (*Lasthenia conjugens*), Ferris’ goldfields (*Lasthenia ferrisiae*), adobe navarettia (*Navarretia nigelliformis* ssp. *nigelliformis*), shining navarettia (*Navarretia nigelliformis* ssp. *radians*), California alkali grass (*Puccinellia simplex*), long-styled sand-spurrey (*Spergularia macrotheca* var. *longistyla*), saline clover (*Trifolium hydrophilum*), and caper-fruited tropidocarpum (*Tropidocarpum capparideum*). This section includes species accounts for each of these plant species and further discusses the effects determinations made in the species table found in Appendix A.

Implementation of Mitigation Measure Bio-2 will reduce impacts to special-status plants.

#### **Large-flowered fiddleneck (*Amsinckia grandiflora*)**

Large-flowered fiddleneck is listed as Endangered under the federal Endangered Species Act (FESA) and California Endangered Species Act (CESA) and has a California Rare Plant Ranking (CRPR) of 1B.1. It is an annual herb in the forget-me-not family and is endemic to California. It blooms from April through May. This species is currently found in northwestern San Joaquin Valley with one occurrence in Napa. The species is presumed extinct in Contra Costa County (Baldwin et al. 2012). It typically grows in cismontane woodland and valley and foothill grassland. The microhabitat for large-flowered fiddleneck includes annual grassland in various soils (Calflora 2019; CNPS 2019). The closest recorded CNDDDB occurrence is 10 miles south of the proposed project.

The proposed project is not likely to adversely affect large-flowered fiddleneck, because the species is not known or likely to occur in the proposed project area. While the proposed project site has Valley and foothill grassland habitat, this species is usually found in relatively undisturbed sites, and the proposed project area is dominated by dense ruderal vegetation.

**California androsace (*Androsace elongata* ssp. *acuta*)**

California androsace has a CRPR of 4.2 and is an annual herb in the primrose family. It is native to California and blooms from March through June. This species is currently found in the Inner North Coast Ranges, Cascade Ranges, southern Sierra Nevada Foothills, Great Central Valley, San Francisco Bay Area, Inner, South Coast Ranges, South Coast, Western Transverse Ranges, San Bernardino Mountains, Peninsular Ranges, Oregon, Nevada, and Baja California. It typically grows in chaparral, foothill woodland, northern scrub and coastal sage scrub (Calflora 2019; CNPS 2019). The closest occurrence is 4.4 miles southwest of the proposed project.

The proposed project is not likely to adversely affect California androsace, because the species is not known or likely to occur in the proposed project area. While the proposed project site has Valley and foothill grassland habitat, this species is found in relatively undisturbed grassland, and the proposed project site is dominated by non-native ruderal grasses and forbs.

**Alkali milk-vetch (*Astragalus tener* var. *tener*)**

Alkali milk-vetch has a CRPR of 1B.2 and is an annual herb in the pea family. It is endemic to California and blooms from March through June. This species is currently found in the northern San Joaquin Valley, southern Sacramento Valley, and land around east San Francisco Bay. Historically this species grew throughout the Central Coast, but now most of the remaining populations occur in the Solano-Colusa Vernal Pool Region. It typically grows on alkali playas, valley and foothill grasslands, and vernal pools, often on adobe clay soils. The microhabitat for alkali milk-vetch includes low ground, alkali flats, and flooded lands (Calflora 2019; CNPS 2019). The closest recorded CNDDDB occurrence is 2.3 miles northwest of the proposed project.

The proposed project is not likely to adversely affect alkali milk-vetch, because the species is not known or likely to occur in the proposed project area. While the proposed project site has Valley and foothill grassland habitat, there are no alkaline soils or flooded lands in the proposed project site.

**Heartscale (*Atriplex cordulata* var. *cordulata*)**

Heartscale has a CRPR of 1B.2 and is an annual herb in the goosefoot family that blooms from April through October. This species is currently found in the Central Valley. It typically grows on saline or alkaline soils in chenopod scrub, meadows and seeps, and sandy, valley, and foothill grassland habitats. The microhabitat for heartscale includes sandy soils in alkaline flats and scalds in the Central Valley (Calflora 2019; CNPS 2019). The closest recorded CNDDDB occurrence is 0.5 miles west of the proposed project.

The proposed project is not likely to adversely affect heartscale, because the species is not known or likely to occur in the proposed project area. While the proposed project site has Valley and foothill grassland habitat, there are no appropriate soils for this species in the proposed project site.

**Crownscale (*Atriplex coronata* var. *coronata*)**

Crownscale has a CRPR of 4.2 and is an annual herb in the goosefoot family. It is endemic to California and blooms from March through October. This species is currently found in southern Sacramento Valley and San Joaquin Valley. It typically grows on fine, alkaline soils and clay soils in chenopod scrub, valley and foothill grassland, and vernal pool habitats (Calflora 2019; CNPS 2019). The closest recorded CNDDDB occurrence is 2.9 miles northwest of the proposed project.

The proposed project is not likely to adversely affect crownscale, because the species is not known or likely to occur in the proposed project area. While the proposed project site has Valley and foothill grassland habitat, there are no alkaline soils in the proposed project site.

**Brittlescale (*Atriplex depressa*)**

Brittlescale has a CRPR of 1B.2 and is an annual herb in the goosefoot family. It is endemic to California and blooms from April through October. This species is currently found in the Sacramento and San Joaquin Valleys. It typically grows on barren areas with alkaline clay soils in chenopod scrubs, meadows and seeps, playas, valley and foothill grasslands, and vernal pools. The microhabitat for brittlescale is rarely associated with riparian, marshes, or vernal pools (Calflora 2019; CNPS 2019). The closest recorded CNDDDB occurrence is 2 miles northwest of the proposed project.

The proposed project is not likely to adversely affect brittlescale, because the species is not known or likely to occur in the proposed project area. While the proposed project site has Valley and foothill grassland habitat, there are no alkaline soils in the proposed project site.

**Lesser saltscale (*Atriplex miniscula*)**

Lesser saltscale has a CRPR of 1B.1 and is an annual herb in the goosefoot family. It is endemic to California and blooms from May through October. This species is currently found in the San Joaquin Valley. It typically grows in chenopod scrub, playas, and valley and foothill grassland. The microhabitat for lesser saltscale includes alkali sink and grassland in sandy, alkaline soils (Calflora, 2019; CNPS 2019). The closest recorded CNDDDB occurrence is 6.5 miles southwest of the proposed project.



The proposed project is not likely to adversely affect lesser saltscare, because the species is not known or likely to occur in the proposed project area. While the proposed project site has Valley and foothill grassland habitat, there are no alkaline soils within the proposed project site.

**Big-scale balsamroot (*Balsamorhiza macrolepis* var. *macrolepis*)**

Big-scale balsamroot has a CRPR of 1B.2 and is a perennial herb in the sunflower family. It is also found outside of California but is confined to western North America. It blooms from March through June. This species is currently found in the Sierra Nevada foothills, High Sierra Nevada, Sacramento Valley, and the San Francisco Bay Area (Jepson 2018). It typically grows in chaparral, valley and foothill grassland, and cismontane woodland. The microhabitat of big-scale balsamroot includes habitat with serpentine soils (Calflora 2019; CNPS 2019). The closest recorded CNDDDB occurrence is 14 miles south of the proposed project.

The proposed project is not likely to adversely affect big-scale balsamroot, because the species is not known or likely to occur in the proposed project area. While the proposed project site has Valley and foothill grassland habitat, this species is found in relatively undisturbed grassland, and the proposed project area is dominated by non-native ruderal grasses and forbs.

**Big tarplant (*Blepharizonia plumose*)**

Big tarplant has a CRPR of 1B.1 and is an annual herb in the sunflower family. It is endemic to California and blooms from July through October. This species is currently found in the San Joaquin Valley and San Francisco Bay Area. It typically grows in valley and foothill grassland. The microhabitat for big tarplant includes dry hills and plains in annual grassland. It grows in clay to clay-loam soils, usually on slopes and often in burned areas (Calflora 2019; CNPS 2019). The closest recorded CNDDDB occurrence is 2.7 miles west of the proposed project.

The proposed project is not likely to adversely affect big tarplant, because the species is not known or likely to occur in the proposed project area. While the proposed project site has Valley and foothill grassland habitat, this species is found in relatively undisturbed grassland, and the proposed project site is dominated by non-native ruderal grasses and forbs.

**Congdon's tarplant (*Centromadia parryi* ssp. *congdonii*)**

Congdon's tarplant has a CRPR of 1B.1 and is an annual herb in the sunflower family. It is endemic to California and blooms from May through October. This species is currently found in the Central Coast, San Francisco Bay Area, and inner and outer South Coast Ranges. It typically grows on alkaline soils in valley and foothill grasslands (Calflora 2019; CNPS 2019). The closest recorded CNDDDB occurrence is 7 miles southwest of the proposed project.

The proposed project is not likely to adversely affect Congdon's tarplant, because the species is not known or likely to occur in the proposed project area. While the proposed project site has Valley and foothill grassland habitat, there are no appropriate soils for this species in the proposed project site.

**Parry's rough tarplant (*Centromadia parryi* ssp. *rudis*)**

Parry's rough tarplant has a CRPR of 4.2 and is an annual herb in the sunflower family. It is endemic to California and blooms from March through October. This species is currently found in the inner North Coast Ranges, Sacramento Valley, and San Joaquin Valley. It typically grows on alkaline soils in mesic areas in coastal prairie, meadows, vernal pools, and valley and foothill grassland habitats. The microhabitat for Parry's rough tarplant includes alkaline, vernal mesic seeps and sometimes roadsides (Calflora 2019; CNPS 2019). The closest recorded CNDDDB occurrence is 7 miles southwest of the proposed project.

The proposed project is not likely to adversely affect Parry's rough tarplant, because the species is not known or likely to occur in the proposed project area. While the proposed project site has Valley and foothill grassland habitat, there are no appropriate soils within the proposed project site.

**Hispid bird's beak (*Chloropyron molle* ssp. *hispidum*)**

Hispid salty bird's beak has a CRPR of 1B.1 and is a hemiparasitic annual herb in the broomrape family. It is endemic to California and blooms from June through September. This species is currently found in the Sacramento Valley and San Joaquin Valley. It typically grows in meadows and seeps, playas, and valley and foothill grassland. The microhabitat for hispid salty bird's beak includes damp alkaline soils, especially in alkaline meadows and alkali sinks with *Distichlis* (Calflora 2019; CNPS 2019). The closest recorded CNDDDB occurrence is 10 miles southwest of the proposed project.

The proposed project is not likely to adversely affect hispid bird's beak, because the species is not known or likely to occur in the proposed project area. While the proposed project site has Valley and foothill grassland habitat, there are no appropriate soils for this species in the proposed project site.

**Palmate-bracted salty bird's-beak (*Chloropyron palmatum*)**

Palmate-bracted salty bird's beak has a CRPR of 1B.1. It is an annual herb in the broomrape family and is endemic to California. It blooms from May through October. This species is currently found in the Sacramento Valley and San Joaquin Valley. It typically grows on alkaline



soils, usually Pescadero silty clay, with *Distichlis*, *Frankenia*, and other species in chenopod scrub and valley and foothill grassland (Calflora 2019; CNPS 2019). The closest recorded CNDDDB occurrence is 10 miles southwest of the proposed project.

The proposed project is not likely to adversely affect palmate-bracted salty bird's-beak, because the species is not known or likely to occur in the proposed project area. While the proposed project site has Valley and foothill grassland habitat, there are no appropriate soils within the proposed project site.

#### **Small flowered morning glory (*Convolvulus simulans*)**

Small flowered morning glory has a CRPR of 4.2 and is an annual herb in the family of flowering plants. It is native to California and blooms in March through July. This species is currently found in the San Joaquin Valley and the Southern Coastal Ranges. It typically grows in Valley grassland, northern coastal scrub and coastal sage scrub (Calflora 2019; CNPS 2019). The closest recorded CNDDDB occurrence is 3.6 miles northwest of the proposed project.

The proposed project is not likely to adversely affect small flowered morning glory, because the species is not known or likely to occur in the proposed project area. While the proposed project site has Valley and foothill grassland habitat, this species is usually found in relatively undisturbed sites, and the proposed project area is dominated by dense ruderal vegetation. Additionally, the proposed project area doesn't contain wet clay or serpentine ridges.

#### **Livermore tarplant (*Deinandra bacigalupii*)**

Livermore tarplant has a CRPR of 1B.1 and is an annual herb in the sunflower family. It blooms from June to October. It is found in the eastern central Coast Range and is endemic to Alameda County. This plant grows on the edges of alkali barrens and sinks (Calflora 2019; Jepson 2018). The closest recorded CNDDDB occurrence is 10 miles southwest of the proposed project.

The proposed project is not likely to adversely affect Livermore tarplant, because the species is not known or likely to occur in the proposed project area. While the proposed project site has Valley and foothill grassland habitat, there are no appropriate alkaline soils in the proposed project site.

#### **Recurved larkspur (*Delphinium recurvatum*)**

Recurved larkspur has a CRPR of 1B.2 and is a perennial herb in the buttercup family. It is endemic to California and blooms from March through June. This species is currently found in the Sacramento Valley, San Joaquin Valley, inner South Coast Ranges, and the Mojave Desert (Jepson, 2018). It typically grows in valley and foothill grassland, chenopod scrub, and

cismontane woodland. The microhabitat for recurved larkspur includes habitat with poorly drained alkaline soils, valley saltbush and valley chenopod scrub (Calflora 2019; CNPS 2019). The closest recorded CNDDDB occurrence is 0.5 miles east of the proposed project.

The proposed project is not likely to adversely affect recurved larkspur, because the species is not known or likely to occur in the proposed project area. While the proposed project site has Valley and foothill grassland habitat, there are no alkaline soils in the proposed project site.

### **Spiny-sepaed button-celery (*Eryngium spinosepalum*)**

Spiny-sepaed button-celery has a CRPR of 1B.2 and is an annual or perennial herb in the parsley family. It is endemic to California and blooms from April through May. This species is currently found in the San Joaquin Valley and San Francisco Bay Area. It is found in vernal pool and Valley and foothill grassland habitats. The microhabitat of spiny-sepaed button-celery includes some sites on clay soils of granitic origin (Calflora 2019; CNPS 2019). The closest recorded CNDDDB occurrence is 2 miles north of the proposed project.

The proposed project may adversely affect spiny-sepaed button-celery, because the species is not known or likely to occur in the proposed project area. While the proposed project site has Valley and foothill grassland habitat, the proposed project site has no clay soils of granitic origin.

### **Diamond-petaled California poppy (*Eschscholzia rhombipetala*)**

Diamond-petaled California poppy has a CRPR of 1B.1 and is an annual herb in the poppy family. It was believed to be extinct but rediscovered again in 1992 (CNPS 2018). It blooms from March through April. This species is known to occur in the western San Joaquin Valley and San Francisco Bay Area and is formerly known from the inner Coast Ranges, eastern outer South Coast Ranges, and inner South Coast Ranges (Baldwin et al. 2012) at elevations of less than 3,200 feet (CNPS 2019). It typically grows in valley and foothill grassland. The microhabitat for diamond-petaled California poppy includes alkaline, clay slopes and flats (Calflora 2019; CNPS 2019). The closest recorded CNDDDB occurrence is 2.4 miles northwest of the proposed project.

The proposed project is not likely to adversely affect diamond-petaled California poppy, because the species is not known or likely to occur in the proposed project area. While the proposed project site has Valley and foothill grassland habitat, there are no appropriate soils for this species in the proposed project site.

### **San Joaquin spearscale (*Extriplex joaquinana*)**

San Joaquin spearscale has a CRPR of 1B.2 and is an annual herb in the goosefoot family. It is endemic to California and blooms from April through September. This species is currently found in the Sacramento Valley, San Joaquin Valley, San Francisco Bay area, inner North and South Coast Ranges, and the Central Coast (Jepson 2018). Historically this species was found throughout central valley grasslands. It typically grows in seasonal alkali wetlands and alkali sinks in chenopod scrub, meadows, playas, and valley and foothill grasslands. The microhabitat for San Joaquin spearscale includes seasonal alkali wetlands or alkali sink scrub with *Distichlis spicata*, *Frankenia* spp., and other species (Calflora 2019; CNPS 2019). The closest recorded CNDDDB occurrence is 0.4 miles east of the proposed project.

The proposed project is not likely to adversely affect San Joaquin spearscale, because the species is not likely to occur in the proposed project area. While the proposed project site has Valley and foothill grassland habitat, there are no alkaline soils in the proposed project site.

### **Stinkbells (*Fritillaria agrestis*)**

Stinkbells has a CRPR of 4.2 and is a perennial, bulbiferous herb in the lily family. It is endemic to California and blooms from March through June. This species is currently found throughout much of central and coastal California, in the Sacramento Valley, northern San Joaquin Valley, and areas around the Sierra Nevada foothills (Jepson 2018). It typically grows on heavy clay soils (occasionally serpentinite) in various habitats including chaparral, cismontane woodland, pinyon and juniper woodland, and valley and foothill grassland. The microhabitat of stinkbells sometimes includes areas with serpentine soils, nonnative grassland, and grassy openings in clay soils (Calflora 2019; CNPS 2019). The closest recorded CNDDDB occurrence is 5 miles north of the proposed project.

The proposed project is not likely to adversely affect stinkbells, because the species is not known or likely to occur in the proposed project area. While the proposed project site has Valley and foothill grassland habitat, this species is usually found in relatively undisturbed sites, and the proposed project area is dominated by dense ruderal vegetation.

### **Hogwallow starfish (*Hesperervax caulescens*)**

Hogwallow starfish has a CRPR of 4.2. It is a native annual herb in the sunflower family. It is native to California and blooms from March through June. This species is found throughout the Central Valley and surrounding foothills (Calflora 2019). It typically grows in valley grassland, foothill woodland, and wetland-riparian habitats (Calflora 2019; CNPS 2019). The closest recorded CNDDDB occurrence is 7 miles northwest of the proposed project.

The proposed project is not likely to adversely affect hogwallow starfish, because the species is not known or likely to occur in the proposed project area. While the proposed project site has Valley and foothill grassland habitat, there are no appropriate soils for this species in the proposed project site.

#### **Brewer's western flax (*Hesperolinon breweri*)**

Brewer's western flax has a CRPR of 1B.2 and is an annual herb in the flax family. It is endemic to California and blooms from May through July. It is currently known to occur in the southern Inner North Coast Ranges (Napa and Solano Counties) and northeastern San Francisco Bay Area. It typically grows in serpentine chaparral, cismontane woodland, and Valley and foothill grassland (Calflora 2019; CNPS 2019). The closest recorded CNDDDB occurrence is 8 miles northwest of the proposed project.

The proposed project is not likely to adversely affect Brewer's western flax, because the species is not known or likely to occur in the proposed project area. While the proposed project site has Valley and foothill grassland habitat, this species is found in relatively undisturbed grassland, and the proposed project is dominated by non-native ruderal grasses and forbs. Additionally, the proposed project area lacks serpentine soils.

#### **Contra Costa goldfields (*Lasthenia conjugens*)**

Contra Costa goldfields is listed as Endangered under the federal Endangered Species Act and has a CRPR of 1B.1. It is an annual herb in the sunflower family and blooms from March through June. This species is currently found in several counties primarily centered on the San Francisco Bay Area, with the largest concentration and number of populations in the Fairfield-Suisun area in Solano County (CNPS 2012). It typically grows in alkaline soils in vernal pools, swales, and other depressions in open grassland and woodland habitats (Calflora 2019; CNPS 2019). The closest recorded CNDDDB occurrence is 20 miles northwest of the proposed project.

The proposed project is not likely to adversely affect Contra Costa goldfields, because the species is not known or likely to occur in the proposed project area. While the proposed project site has Valley and foothill grassland habitat, there are no appropriate soils for this species in the proposed project site.

#### **Ferris' goldfields (*Lasthenia ferrisiae*)**

Ferris' goldfields has a CRPR of 4.2. It is an annual herb in the sunflower family and blooms from February through May. This species is found in the southern Sacramento Valley and the southern San Joaquin Valley but was historically found throughout both the Sacramento and

San Joaquin valleys. It grows in vernal pools, often on alkaline clay soils (Calflora 2019; CNPS 2019). The closest recorded CNDDDB occurrence is 3 miles northeast of the proposed project.

The proposed project is not likely to adversely affect Ferris' goldfields, because the species is not known or likely to occur in the proposed project area. While the proposed project site has Valley and foothill grassland habitat, there are no appropriate soils for this species in the proposed project site.

**Adobe navarretia (*Navarretia nigelliformis* ssp. *nigelliformis*)**

Adobe navarretia has a CRPR of 4.2. It is an annual herb in the phlox family that blooms from April to June. It is found in the Sacramento and San Joaquin Valleys and the eastern side of the Coast Range. It is found in vernal pools and valley and foothill grassland. It grows on clay soils and is sometimes found on serpentine (Calflora 2019; CNPS 2019). The closest recorded CNDDDB occurrence is 9 miles north of the proposed project.

The proposed project is not likely to adversely affect adobe navarretia, because the species is not known or likely to occur in the proposed project area. While the proposed project site has Valley and foothill grassland habitat, there are no clay soils that are vernal mesic in the proposed project site.

**Shining navarretia (*Navarretia nigelliformis* ssp. *radians*)**

Shining navarretia has a CRPR of 1B.2. It is an annual herb in the phlox family that blooms from April to July. It is found in the Sacramento and San Joaquin Valleys and the eastern side of the southern Coast Range in vernal pools and valley and foothill grassland. It is found in both vernal pools and uplands (Calflora 2019; CNPS 2019). The closest recorded CNDDDB occurrence is 11 miles south of the proposed project.

The proposed project is not likely to adversely affect shining navarretia, because the species is not known or likely to occur in the proposed project area. While the proposed project site has Valley and foothill grassland habitat, there are no appropriate soils in the proposed project site.

**California alkali grass (*Puccinellia simplex*)**

California alkali grass has a CRPR of 1B.2. It is an annual grass in the grass family and blooms from March to May. This species is found in the Sacramento and San Joaquin Valleys and the interior central and southern Coast Range. It grows in meadows and seeps, chenopod scrub, valley and foothill grasslands, and vernal pools, in spots that are alkaline and vernal mesic

(Calflora 2019; CNPS 2019). The closest recorded CNDDDB occurrence is 1 mile east of the proposed project.

The proposed project is not likely to adversely affect California alkali grass, because the species is not likely to occur in the proposed project area. While the proposed project site has Valley and foothill grassland habitat, there are no alkaline soils in the proposed project site.

**Long-styled sand-spurrey (*Spergularia macrotheca* var. *longistyla*)**

Long-styled sand-spurrey has a CRPR of 1B.2. It is an annual herb in the pink family that blooms from February to May. It is found in the Sacramento and San Joaquin Valleys and the central Coast Range. It grows in alkali vernal pools and wetlands (Calflora 2019; CNPS 2019). The closest recorded CNDDDB occurrence is 0.25 miles northwest of the proposed project.

The proposed project is not likely to adversely affect long-styled sand-spurrey, because the species is not likely to occur in the proposed project area. While the proposed project site has Valley and foothill grassland habitat, there are no appropriate alkaline soils in the proposed project site.

**Saline clover (*Trifolium hydrophilum*)**

Saline clover has a CRPR of 1B.2. It is an annual herb in the pea family and blooms from April to June. It is found in the central Coast Range and the Sacramento Valley. It grows in marshes, swamps, valley and foothill grassland, and vernal pools. It is found in mesic, alkaline sites (Calflora 2019; CNPS 2019). The closest recorded CNDDDB occurrence is 3 miles northeast of the proposed project.

The proposed project is not likely to adversely affect saline clover, because the species is not known or likely to occur in the project area. While the proposed project site has Valley and foothill grassland habitat, the proposed project site does not contain mesic, alkaline soils.

**Caper-fruited tropidocarpum (*Tropidocarpum capparideum*)**

Caper-fruited tropidocarpum has a CRPR of 1B.1. It is an annual herb in the mustard family. It blooms from March to April. It is found in the Sacramento and San Joaquin Valleys and the central and southern Coast Range. It grows on valley and foothill grassland, on alkaline soils (Calflora 2019; CNPS 2019). The closest recorded CNDDDB occurrence is 10 miles southwest of the proposed project.

The proposed project is not likely to adversely affect caper-fruited tropidocarpum, because the species is not known or likely to occur in the proposed project area. While the proposed



project site has Valley and foothill grassland habitat, there are no appropriate soils for this species in the proposed project site.

#### **2.1.4.4 Special-Status Wildlife**

There are 9 wildlife species with “may adversely affect” determinations: California tiger salamander, California red-legged frog, western pond turtle, California glossy snake, San Joaquin coachwhip, Burrowing Owl, California Horned Lark, American badger, and San Joaquin kit fox. There are 19 wildlife species with “not likely to adversely affect” determinations: longhorn fairy shrimp, vernal pool fairy shrimp, western spadefoot, northern California legless lizard, Blainville’s horned lizard, Tricolored Blackbird, Grasshopper Sparrow, Golden Eagle, Short-eared Owl, Ferruginous Hawk, Swainson’s Hawk, Northern Harrier, White-tailed Kite, Prairie Falcon, Loggerhead Shrike, pallid bat, Townsend’s big-eared bat, and western mastiff bat. This section includes species accounts for each of these wildlife species and further discusses the effects determinations made in the species table found in Appendix A.

##### **Longhorn fairy shrimp (*Branchinecta longiantenna*)**

The longhorn fairy shrimp is listed as Endangered under FESA (ECOS 2019) and has a NatureServe global and state rarity and imperilment ranking of G1 and S1S2 (NatureServe 2019). Five isolated populations of this vernal pool invertebrate are known to occur within California: near Carrizo Plain National Monument in San Luis Obispo County, within the San Luis National Wildlife Refuge Complex in Merced County, areas within the Brushy Peak Preserve in Alameda County, Vasco Caves Preserve near the town of Byron in Contra Costa County, and areas within the proposed Alkali Sink Conservation Bank east of Mendota in Fresno County; however, even in areas of previously known populations, detection of this species has been highly variable and populations trends are not well known. The species has been found in both large and small alkaline sink and grassland vernal pools, but at the localities closest to the project area, Vasco Caves and Brushy Peak, it is usually found in sandstone outcrop pools. Longhorn fairy shrimp require an average of 43 days to reach maturity and are known to survive in temperatures ranging from 50 to 82 degrees Fahrenheit. The closest recorded CNDDDB occurrence and designated Critical Habitat is 4 miles east and southeast of the proposed project.

The proposed project is not likely to adversely affect this longhorn fairy shrimp. While there is potential vernal pool habitat near the proposed project site, this species was not observed during surveys. In addition, implementation of Mitigation Measure Bio-1 will further reduce potential impacts to longhorn fairy shrimp.

### **Vernal pool fairy shrimp (*Branchinecta lynchi*)**

Vernal pool fairy shrimp is listed as Threatened under FESA (ECOS 2019) and has a NatureServe global and state rarity and imperilment ranking of G3S3 (NatureServe 2019). Vernal pool fairy shrimp is widely distributed in vernal pools within Central Valley grasslands and along the Coast Ranges; however, it is hardly ever abundant in one particular area. This species is typically found in smaller and shallower vernal pools that have short periods of inundation. Individuals hatch in water temperatures of 50 degrees Fahrenheit or lower and reach maturity approximately 40 days later depending on temperature. The upper temperature tolerance for this species is approximately 75 degrees Fahrenheit. The closest recorded CNDDDB occurrence is 0.85 miles south of the proposed project.

The proposed project is not likely to adversely affect vernal pool fairy shrimp. While there is potential vernal pool habitat near the proposed project site, this species was not observed during surveys. In addition, implementation of Mitigation Measure Bio-1 will further reduce potential impacts to vernal pool fairy shrimp.

### **California tiger salamander (*Ambystoma californiense*)**

California tiger salamander (Central California distinct population segment) is listed as Threatened under FESA (ECOS 2019) and is listed as Threatened under the CESA (CNDDDB 2019). Critical habitat was finalized for the Central California DPS in 2005. It is a terrestrial mole salamander ranging from three to five inches, snout to vent (SVL), with a broad, rounded snout, stocky body, and is black with large yellow oval or bar-shaped spots (Stebbins 2003). The species historically occurred throughout the Central Valley and surrounding foothills, from Yolo county south to Tulare County, and in the south coast ranges from north of Monterey Bay to San Luis Obispo County, although many of the populations in the Central Valley are now extirpated. There are also isolated populations in Sonoma and Santa Barbara counties (Nafis 2019), which are listed as Endangered under FESA. California tiger salamander inhabits annual grasslands, open mixed woodlands and oak savanna, spending most of its life underground in small mammal burrows. It has been shown to migrate from 1 to 1.3 miles between breeding ponds and upland habitat, depending upon the availability of suitable upland refugia (Jennings and Hayes 1994). Breeding occurs in vernal pools, seasonal ponds, and constructed stock ponds that are generally free of fish and hold water during winter, often drying out by summer. Adult California tiger salamanders move from subterranean refuge sites to breeding pools during relatively warm late winter and spring rains (Jennings and Hayes 1994), usually from November through April. Breeding occurs following rains from December to March (Stebbins 2003). Eggs are laid individually or in clumps on submerged vegetation and debris in shallow water and generally hatch in 10 to 28 days (USFWS 2017). Larvae are aquatic, taking from three to six months to metamorphose. Post-metamorphic juveniles disperse from breeding sites at

night during the late spring or early summer to upland burrows or soil crevices. The closest recorded CNDDDB occurrence is 0.25 miles north of the proposed project.

The proposed project may affect California tiger salamander. No aquatic habitat will be affected by the proposed project; however, potential aquatic habitat occurs nearby and upland habitat occurs within the proposed project site. Implementation of Mitigation Measures Bio-1 and Bio-3 will reduce potential impacts to California tiger salamander to less than significant.

### **California red-legged frog (*Rana draytonii*)**

California red-legged frog is listed as Threatened under FESA (ECOS 2019) and is identified as a CDFW Priority 1 Species of Special Concern (CNDDDB 2019, Thompson et. al. 2016). It is the largest California native frog, measuring 1.75 to 5.25 inches SVL, with smooth skin and prominent dorsolateral folds. Its coloration can vary from reddish-brown to gray or olive, often with a red lower belly and hindlegs (Nafis 2019). California red-legged frog is endemic to central California, with a range historically extending from southern Mendocino County southward along the interior Coast Ranges to northern Baja California, Mexico, and inland from the vicinity of Redding, Shasta County, California, along Sierra Nevada foothills south to Fresno County at elevations from sea level to approximately 5,000 feet (Nafis 2019, Thompson et al 2016). The species is found in a variety of aquatic habitats including permanent and ephemeral ponds, perennial and intermittent streams, seasonal wetlands, springs, seeps, marshes, dune ponds, lagoons, coastal dune drainages, and human-made aquatic features (Thompson et al 2016, Halstead and Kleeman 2017), and has been known to migrate as much as a 1.7 miles into the upland. Upland habitat used includes woodlands, grasslands, and coastal scrub. Breeding occurs from late November through late April, with earlier breeding generally occurring in southern localities. Females lay eggs in clusters up to 10 inches across, attached to vegetation two to six inches below the surface. Eggs hatch in 6-14 days, depending on water temperature (Thompson et al 2016), with tadpoles undergoing metamorphosis in four to seven months, although in some locations they have been known to overwinter (Nafis 2019) completing metamorphosis the following spring. The closest recorded CNDDDB occurrence is 0.15 miles southeast of the proposed project. In addition, California red-legged frogs were observed in the pond adjacent to the project area in March 2019

The proposed project may adversely affect California red-legged frog. No aquatic habitat will be affected by the proposed project; however, potential aquatic habitat occurs nearby, and upland habitat occurs within the proposed project site. Implementation of Mitigation Measures Bio-1 and Bio-3 will reduce potential impacts to California red-legged frog less than significant.

### **Western spadefoot (*Spea hammondi*)**

The western spadefoot is identified as a CDFW Priority 1 Species of Special Concern (CNDDDB 2019, Thompson et al 2016). It is an olive toad, ranging from 1.5 to 2.5 inches SVL, with orange tipped skin tubercles, vertical pupils, and a single black spade on each hind foot (Stebbins and McGinnis 2012, Thompson et al 2016). The western spadefoot is found throughout the Central Valley and coastal lowlands from the Shasta County in Northern California to Baja California in Mexico, at elevations ranging from sea level to 4,500 feet (Jennings and Hayes 1994, Stebbins and McGinnis 2012). This species occurs in grasslands, mixed woodland, open chaparral, and pine oak woodlands, with shallow temporary pools or washes. Breeding coincides with the rainy season and usually occurs from January to May, peaking in February and March, in temporary pools and drainages, although breeding can also occur in man-made water sources such as cattle ponds (Thomson et al 2016). Adults remain in underground burrows for most of the year and will travel up to several meters on rainy nights (CDFW 2000a). Eggs are laid in cylindrical clusters and usually hatch in three to four days, with tadpoles metamorphosing in four to 11 weeks (Nafis 2019). Juveniles will leave the pool a few days after metamorphosis. On land movement is generally thought to be nocturnal, with juveniles and adults able to dig burrows up to eight inches deep (Thompson et al 2016). Western spadefoot will also make use of existing mammal burrows. The closest recorded CNDDDB occurrence is 10 miles southwest of the proposed project.

The proposed project is not likely to adversely affect western spadefoot, because the species is not known or likely to occur in the proposed project area, and habitat in the proposed project area is low quality due to being comprised of tall thick ruderal vegetation. In addition, implementation of Mitigation Measure Bio-1 will further reduce potential impacts to western spadefoot.

### **Northern silvery legless lizard (*Anniella pulchra*)**

Northern silvery legless lizard is identified as a CDFW Priority 2 Species of Special Concern (CNDDDB 2019, Thompson et al 2016). It is the only species of legless lizard found in California and ranges from Contra Costa County south to Baja California, at elevations from sea level to 5,900 feet (Thompson et al 2016, Stebbins 2003). Northern legless lizard is a medium sized lizard, ranging from four to seven inches SVL. It is metallic light silver, beige, olive brown or black with a yellow ventral surface, a shovel shaped snout, blunt tail and no external ear openings. This species is found in oak woodland, chaparral, riparian woodland, oak-pine forest and desert scrub with loose soil or leaf litter for burrowing, and adequate moisture and surface cover. Northern legless lizard is primarily diurnal and crepuscular, and are rarely active on the surface. They spend most of their time just beneath the surface but can be found in depths of up to 2 feet. Breeding occurs between early spring and mid-summer, with an average gestation

of four months (Thompson et al 2016). The species bears one to four live young from September to November (Stebbins and McGinnis 2012). Sexual maturity is reached in males at 2 and females at 3 years of age (Thompson et al 2016). The closest recorded CNDDDB occurrence is over 10 miles south and north of the proposed project.

The proposed project is not likely to adversely affect northern silvery legless lizard, because it is not known or likely to occur in the proposed project area, and suitable habitat is very limited within the proposed project area. In addition, implementation of Mitigation Measure Bio-1 will further reduce potential impacts to northern silvery legless lizard.

### **California glossy snake (*Arizona elegans occidentalis*)**

California glossy snake is identified as a CDFW Priority 1 Species of Special Concern (CNDDDB 2019, Thompson et al 2016). California glossy snake is a medium sized, from 25 to 39 inches SVL, tan or brown colubrid with dark brown blotches down the back. It has unkeeled scales giving them a glossy appearance, and a single pair of prefrontals. The species occurs from Contra Costa County south to San Quintin, Baja California, including the central San Joaquin Valley and along the base of the Southern Coastal Range, at elevations ranging from sea level to 5,900 feet (Thompson et al 2016). It does not occur along the coast of California north of Ventura County. California glossy snake is found in grasslands, coastal sage scrub and chaparral in areas where soil is loose. It is primarily nocturnal, active between late February and November with activity peaking in May. Little is known about its reproduction in the wild, but young of year are generally found in September. During the day, California glossy snake will use existing mammal burrows and burrows under rocks or will dig its own burrows. The closest recorded CNDDDB occurrence is 6.5 miles south of the proposed project.

The proposed project may adversely affect California glossy snake. Suitable grassland habitat with burrows is present in the proposed project site. Implementation of Mitigation Measure Bio-1 will reduce potential impacts to California glossy snake to less than significant.

### **Western pond turtle (*Emys marmorata*)**

Western pond turtle is under review for listing under FESA (ECOS 2019) and is identified as a CDFW Priority 1 Species of Special Concern (CNDDDB 2019, Thompson et al 2016). Western pond turtle is a small to medium-sized aquatic turtle, measuring 6.5 to seven inches straight carapace length. It is brown, tan, olive with a low, unkeeled carapace with a non-serrated rim (Nafis 2019, Stebbins 2003). Western pond turtle is found from the Pacific Coast inland to the Sierra Nevada foothills to elevations as high as 6,700 ft above sea level. The species is highly aquatic species and can be found in a variety of habitat types including streams, rivers, sloughs, lakes, ponds, reservoirs, marshes, seasonal ponds, and other wetland habitats (Thompson et al 2016).

It requires basking sites such as partially submerged logs, rocks, mats of floating vegetation, or open mud banks for thermoregulation, and access to suitable upland habitat with loose soils for nesting, dispersal and overwintering (Thompson et al 2016). Western pond turtle is active year-round in warmer locations but will spend winter months in colder climates in a state of dormancy often burrowing into loose soil or leaf litter on land, or using undercut banks, snags, rocks or bottom mud in ponds (Thompson et al 2016). Its diet consists of aquatic invertebrates, algae and other vegetation, small vertebrates and carrion. Breeding occurs from spring through fall, with nesting taking place from spring to early summer. Nest sites are usually within 100 m of water, although nests have been reported as far away as 500 m. Females lay from one to 13 eggs, which will hatch in the fall, although the young will remain in the nest until the following spring. The closest recorded CNDDDB occurrence is 0.25 miles east of the proposed project.

The proposed project may adversely affect western pond turtle. The species is known to occur in the proposed project area and suitable upland habitat is present within the proposed project site. Implementation of Mitigation Measure Bio-1 will reduce potential impacts to western pond turtle to less than significant.

#### **San Joaquin (whipsnake) coachwhip (*Masticophis flagellum ruddocki*)**

San Joaquin (whipsnake) coachwhip is identified as a CDFW Priority 2 Species of Special Concern (CNDDDB 2019, Thompson et al 2016). San Joaquin coachwhip is a large colubrid, measuring at 35 to 102 inches SVL. It is a tan, olive, or yellow-brown colubrid with a yellow ventral surface and pink or orange cast to the tail. It is distinguished from other subspecies of coachwhip by its lack of the dark head and neck bands found in the other sub-species (Thompson et al 2016). It is endemic to California and is usually found from Arbuckle in the Sacramento Valley southward to the Grapevine section of I-5 in Kern County, and westward to the inner South Coast Ranges (Stebbins and McGinnis 2012). This diurnal snake generally occurs in open, dry, treeless areas, including grassland and saltbush scrub. It often will climb into vegetation to scan for prey or for shade and refuge and overwinters in mammal burrows. San Joaquin coachwhip is active from March through October, with breeding occurring in May, and oviposition occurring in June or July. The closest recorded CNDDDB occurrence is 6 miles southeast of the project site.

The proposed project may adversely affect San Joaquin whipsnake. Suitable grassland habitat with burrows is present in the proposed project site. Implementation of Mitigation Measure Bio-1 will reduce potential impacts to San Joaquin whipsnake to less than significant.



### **Blainville's (coast) horned lizard (*Phrynosoma blainvillii*)**

Blainville's (coast) horned lizard is identified as a CDFW Priority 2 Species of Special Concern (CNDDDB 2019, Thompson et al 2016). Blainville's horned lizard is a compressed oval bodied lizard, reaching a maximum length of 4.5 inches SVL, with a row of large horns behind its head, two of which are longer and separated at the base, and two rows of fringed scales running down each side of its body. It can be tan, yellow, red, brown, or grey with dark splotches down the back, with a lightly spotted yellow, cream or beige ventral surface. The species is found from Shasta County in the North to Baja California in the South and along the California coast inland to the Sierra Nevada and west of the Mojave Desert (Sherbrooke 2003, Thompson et al 2016). Blainville's horned lizard is found in a wide variety of habitat types including sage scrub, dunes, annual grassland, chaparral, oak woodland, riparian woodland, coniferous forest, Joshua tree woodland, and saltbush scrub, however they require loose fine soils for burrowing, open areas for thermoregulation and an adequate prey base of native ants and other insects. It is active from February through November, peaking in April and July. Breeding occurs from March to June, with average clutch sizes of 11 eggs laid likely beginning in May, with an incubation period of approximately 60 days. Hatchlings are active from late July through November. The closest recorded CNDDDB occurrence is 3.5 miles northwest of the proposed project.

The proposed project is not likely to adversely affect Blainville's (coast) horned lizard, because while burrows occur within the project boundaries, as well as multiple ant colonies which could provide a food source are present, habitat for this species in the proposed project area is low quality, and it is not known or likely to occur in the proposed project area. In addition, implementation of Mitigation Measure Bio-1 will further reduce potential impacts to Blainville's (coast) horned lizard.

### **Tricolored Blackbird (*Agelaius tricolor*)**

Tricolored Blackbird is listed as Threatened under CESA (CNDDDB 2019) and is currently under review for listing under FESA (ECOS 2019). Tricolored Blackbird is a medium-sized blackbird; males are larger than females with striking black plumage with red and white markings on the wings and females are dark brown with a whitish chin and throat (Beedy et al. 2017). Tricolored Blackbird is largely endemic to California, common locally throughout the Central Valley and along the coast. Preferred foraging habitats include crops such as rice, alfalfa, irrigated pastures, and ripening or cut grain fields, as well as annual grasslands and cattle feedlots. These blackbirds also forage in remnant native habitats, including wet and dry vernal pools and other seasonal wetlands, riparian scrub habitats, and open marsh borders. Wintering Tricolored Blackbirds often congregate in large, mixed-species blackbird flocks that forage in grasslands and agricultural fields with low-growing vegetation. Breeding habitats include wetland and silage fields with tall, dense cover near open water. Nesting colonies range in size from 50 nests

to over 20,000 in an area of 10 acres or less (CDFW 2018). Breeding usually occurs from mid-April into late July (CDFW 2018). The closest recorded CNDDDB occurrence is 1 mile north of the proposed project.

The proposed project is not likely to adversely affect Tricolored Blackbird, because there is no suitable nesting habitat in the proposed project area. However, this species may use the area for foraging. In addition, implementation of Mitigation Measure Bio-1 will further reduce potential impacts to Tricolor Blackbird.

### **Grasshopper Sparrow (*Ammodramus savannarum*)**

Grasshopper Sparrow is identified as a CDFW Species of Special Concern (CNNDDB 2019). The Grasshopper Sparrow is a small sparrow lacking distinct markings (Vickery 1996). The bird is an uncommon and local summer resident and breeder in the foothills and lowlands west of the Cascade-Sierra Nevada crest from Mendocino and Trinity counties south to San Diego County. It occurs in dry, dense grasslands, especially those with a variety of grasses and tall forbs and scattered shrubs for singing perches. The species may form semi-colonial breeding groups but does not form flocks in winter (CDFW 2018). Breeding occurs from early April to mid-July, with a peak activity in May and June.

The proposed project is not likely to adversely affect Grasshopper Sparrow, because habitat is marginal in the proposed project area. In addition, implementation of Mitigation Measure Bio-1 will further reduce potential impacts to Grasshopper Sparrow.

### **Golden Eagle (*Aquila chrysaetos*)**

Golden Eagle is designated as Fully Protected under California Fish and Game Code and protected by the federal Bald and Golden Eagle Protection Act (CNDDDB 2019). Golden Eagle is a large eagle that is uniformly dark with golden neck (Kochert et al. 2002). The species is found throughout North America but are more common in western North America. The bird is an uncommon permanent resident and migrant throughout California that lives in open and semi-open country featuring native vegetation where they forage in grasslands, rolling foothills, mountain areas, and desert. Golden Eagle nests on cliffs and steep escarpments in grassland, chaparral, shrubland, forest, and other vegetated areas. Breeding occurs from late January through August (CDFW 2018). The closest recorded CNDDDB occurrence is 2.3 miles west of the proposed project site.

The proposed project is not likely to adversely affect Golden Eagle, because the species has not been observed during surveys, and is unlikely to occur, within ¼ mile of the project site. In addition, implementation of Mitigation Measure Bio-1 will further reduce potential impacts to Golden Eagle.

### **Short-eared Owl (*Asio flammeus*)**

Short-eared Owl is identified as a CDFW Species of Special Concern (CNDDDB 2019). Short-eared Owl is a medium-sized owl with brown and cream streaked plumage and yellow eyes (Wiggins et al. 2006). The species is found primarily in the Central Valley, western Sierra Nevada, and coastal California in open habitats with few trees, such as grasslands, prairies, dunes, meadows, irrigated lands, and emergent wetlands. Nests on dry ground in a depression concealed by vegetation. Breeding occurs from early March through July (CDFW 2018). The closest recorded CNDDDB occurrence is 25 miles southwest of the proposed project. The species has also been observed approximately 3 miles east at Clifton Court Forebay.

The proposed project is not likely to adversely affect Short-eared Owl, because there is no suitable nesting habitat in the proposed project area. However, this species may use the area for foraging. In addition, implementation of Mitigation Measure Bio-1 will further reduce potential impacts to Short-eared Owl.

### **Burrowing Owl (*Athene cunicularia*)**

Burrowing Owl is identified as a CDFW Species of Special Concern (CNDDDB 2019). Burrowing Owl is a small, ground-dwelling owl, with brown and cream plumage and yellow eyes. The species' range extends from Canada to Mexico and is found throughout California except for high elevations (Poulin et al. 2011). It primarily inhabits grasslands but also occurs in desert and open shrub habitats. Burrowing Owl uses burrows in areas with relatively short vegetation with sparse shrubs or taller vegetation for roosting and nesting and can persist in human-altered landscapes. Individuals in agricultural environments nest along roadsides and water conveyance structures. Breeding occurs from February through September (CDFW 2018). The closest recorded CNDDDB occurrence is 0.15 miles east of the proposed project. The species has also been observed in the immediate vicinity in spring 2019.

The proposed project may adversely affect Burrowing Owl. This species is known to occur nearby, and suitable nesting and foraging habitat is present. Implementation of Mitigation Measures Bio-1 and Bio-4 will reduce potential impacts to Burrowing Owl to less than significant.

### **Ferruginous Hawk (*Buteo regalis*)**

Ferruginous Hawk is identified as a Bird of Conservation Concern by USFWS (ECOS 2019) and is protected under the Migratory Bird Treaty Act and California Fish and Game Code. The species is a large, broad-winged hawk with a large head and pale underparts with rusty legs that form a V when soaring. Ferruginous hawks range from breeding grounds in southern Canada to wintering grounds in Mexico. They overwinter in California in grasslands and agricultural areas,

including sagebrush flats, desert scrub, low foothills surrounding valleys, and fringes of pinyon-juniper habitats. Nesting has not been recorded in California (CDFW 2018). The closest recorded CNDDDB occurrence is 1.3 miles southeast of the proposed project.

The proposed project is not likely to adversely affect Ferruginous Hawk. While the proposed project area may provide suitable winter habitat, the species but is not present in the area during the nesting season. In addition, implementation of Mitigation Measure Bio-1 will further reduce potential impacts to Ferruginous Hawk.

### **Swainson's Hawk (*Buteo swainsoni*)**

Swainson's Hawk is listed as Threatened under the CESA (CNDDDB 2019). Swainson's Hawk is a medium sized hawk with tapered wings that have contrasting light wing lining and dark flight feathers (Bechard et al. 2010). It is a migrant and breeding resident of California and travels from as far south as Argentina to breed in the California Central Valley. Currently the species is most common in California in the Central Valley and Great Basin. The species favors open habitats, such as hay and alfalfa fields, pastures, grain crops, and row crops, or perched atop adjacent fence posts and overhead sprinkler systems for foraging. Nesting habitat includes mature trees in or near riparian habitat; trees in urban or rural neighborhoods are also used. Breeding occurs from late March to late August, with peak activity from late May through July (CDFW 2018). There are several occurrences within 1.5 miles of the project site, with the closest recorded CNDDDB occurrence is 1 mile south of the proposed project.

The proposed project is not likely to adversely affect Swainson's Hawk, because the species has not been observed during surveys, and is unlikely to occur, within 1,000 ft of the project site. In addition, implementation of Mitigation Measure Bio-1 will further reduce potential impacts to Swainson's Hawk.

### **Northern Harrier (*Circus hudsonius*)**

Northern Harrier is identified as a CDFW Species of Special Concern (CNDDDB 2019). Northern Harrier is a medium-sized, slender low-flying raptor with a white rump; males have grey and females have brown plumage (Smith et al. 2011). The species occurs throughout North America. Within California, it ranges from sea level on the coast and Central Valley up to alpine meadow habitats in the Sierra Nevada. It uses meadows, grasslands, open rangelands, desert sinks, and fresh and saltwater emergent wetlands for foraging and nesting. Nests are built on the ground in dense vegetation. Breeding occurs from April to September (CDFW 2018). There are several occurrences within 3.5 miles of the project site, with the closest recorded CNDDDB occurrence 13 miles east of the project site. The species has also been observed flying over the proposed project site.

The proposed project is not likely to adversely affect Northern Harrier, because there is no suitable nesting habitat in the proposed project area. However, this species may use the area for foraging. In addition, implementation of Mitigation Measure Bio-1 will further reduce potential impacts to Northern Harrier.

#### **White-tailed Kite (*Elanus leucurus*)**

White-tailed Kite is designated as Fully Protected under California Fish and Game Code (CNDDDB 2019). This medium sized raptor has long wings and tail and gray and white plumage with black wing patches (Dunk 1995). Although this species is widely distributed in North America, the majority occur in California. It forages for mainly small mammals in savannas, open woodlands, marshes, desert grassland, partially cleared lands, and agricultural fields, and it nests in trees with dense canopies. Breeding occurs from February to October (CDFW 2018). The closest recorded CNDDDB occurrence is 2.6 miles southeast of the proposed project.

The proposed project is not likely to adversely affect White-tailed Kite, because there is no suitable nesting habitat in the proposed project area. However, this species may use the area for foraging. In addition, implementation of Mitigation Measure Bio-1 will further reduce potential impacts to White-tailed Kite.

#### **California Horned Lark (*Eremophila alpestris actia*)**

California Horned Lark is a CDFW Watch List species (CNDDDB 2019). This songbird has a pale, yellow face and throat, a black bib, pale breast and belly, a broad black stripe under the eye, a black tail with white outer feathers, and black tufts on top of its head resembling horns (Beason 1995). California Horned Lark is a resident in northern Baja California through California, in the Coast Range north to Humboldt County, and in the Central Valley. The species inhabits open areas dominated by sparse, low herbaceous vegetation or widely scattered low shrubs where it can forage on seeds and insects and nest in hollows on the ground. Breeding occurs from March through July, with peak activity in May (CDFW 2018). The closest recorded CNDDDB occurrence is 1.3 miles southeast of the proposed project site.

The proposed project may adversely affect this species, because there is potential nesting and foraging habitat in the proposed project area. Implementation of Mitigation Measure Bio-1 will reduce potential impacts to California Horned Lark to less than significant.

#### **Prairie Falcon (*Falco mexicanus*)**

Prairie Falcon is a CDFW Watch List species (CNDDDB 2019) and a USFWS Bird of Conservation Concern (ECOS 2019). Prairie Falcon is a large, pale brown falcon with dark under wing and a dark “mustache” stripe on its face (Steenhof 2013). The species is found throughout the

western United States as well as parts of Mexico and Canada, but it predominantly winters in the Central Valley. Prairie Falcon prefers open arid desert and grassland habitats for foraging and areas containing cliffs and bluffs for nesting. Breeding occurs from mid-February through mid-September, with peak activity from April to early August (CDFW 2018). The closest recorded CNDDDB occurrence is 26 miles south of the proposed project.

The proposed project is not likely to adversely affect Prairie Falcon, because it is not known or likely to occur in the proposed project area. In addition, implementation of Mitigation Measure Bio-1 will further reduce potential impacts to Prairie Falcon.

### **Loggerhead Shrike (*Lanius ludovicianus*)**

Loggerhead Shrike is identified as a CDFW Species of Special Concern (CNDDDB 2019). Loggerhead Shrike is a medium-sized passerine with gray plumage and a black mask around the eyes and forehead (Yosef 1996). This species is found throughout North America and is a common resident and winter visitor in lowlands and foothills in California. The species prefers open habitats with scattered shrubs, trees, posts, fences, or other perches for foraging and dense shrubs and trees for nesting. Breeding occurs from March through July (CDFW 2018). The closest recorded CNDDDB occurrence is 9 miles southwest of the proposed project.

The proposed project is not likely to adversely affect Loggerhead Shrike, because it is not known or likely to occur in the proposed project area. However, it could use the proposed project area for foraging. In addition, implementation of Mitigation Measure Bio-1 will further reduce potential impacts to Loggerhead Shrike.

### **Pallid bat (*Antrozous pallidus*)**

Pallid bat is identified as a USFWS Sensitive Species and as a CDFW Species of Special Concern (CNDDDB 2019). Pallid bat is a large buff-colored bat with large prominent ears that are clearly separated at the base, a blunt nose, and pinkish-brown or grey membranes on its wings and tail. The closest recorded CNDDDB occurrence is 12.5 miles southwest of the proposed project.

The proposed project is not likely to adversely affect pallid bat, because there is no suitable roosting habitat in the proposed project area. However, this species may use the area for foraging. In addition, implementation of Mitigation Measure Bio-1 will further reduce potential impacts to Pallid bat.

### **Townsend's big-eared Bat (*Corynorhinus townsendii*)**

Townsend's big-eared bat is identified as a USFWS Sensitive Species and as a CDFW Species of Special Concern (CNDDDB 2019). Townsend's big-eared bat is a medium sized bat, with a two-



pronged, horseshoe-shaped lump on the muzzle and large, long ears. Townsend's big-eared bat is widely distributed throughout the west with isolated populations in the central and eastern US, but the details of its distribution are not well known. This species is found in all but subalpine and alpine habitats but is most abundant in mesic habitats. It may be found in any season throughout its range. Once considered common, Townsend's big-eared bat is now uncommon in California. This species requires caves, mines, tunnels, buildings, or other human-made structures for roosting, and may use separate sites for night, day, hibernation, or maternity roosts. This species is extremely sensitive to disturbance of roosting sites. A single disturbance event may result in abandonment of the roost. Most mating occurs from November to February, but many females are inseminated before hibernation begins. Births occur in May and June, peaking in late May. The closest recorded CNDDDB occurrence is 12.3 miles south of the proposed project.

The proposed project is not likely to adversely affect Townsend's big-eared bat, because there is no suitable roosting habitat in the proposed project area. However, this species may use the area for foraging. In addition, implementation of Mitigation Measure Bio-1 will further reduce potential impacts to Townsend's big-eared bat.

#### **Western mastiff bat (*Eumops perotis californicus*)**

Western mastiff bat is identified as a CDFW Species of Special Concern (CNDDDB 2019). Western mastiff bat is the largest bat in North America and has a free tail, broad square tragus, and an audible call. It is found through most of California from south of the Oregon border into Mexico. Western mastiff bat is a cliff-dwelling species roosting beneath exfoliating rock slabs, crevices in boulders or buildings. The species is known to forage long distances from the roost, over open landscapes including dry desert washes, flood plains, chaparral, grassland, oak woodland, and agricultural fields. Western mastiff bat is active year-round and do not seasonally migrate long distances. Mating occurs in late winter or early spring, with a single young born in early to mid-summer. The closest recorded CNDDDB occurrence is 12.3 miles southeast of the proposed project.

The proposed project is not likely to adversely affect western mastiff bat, because there is no suitable roosting habitat in the proposed project area. However, this species may use the area for foraging. In addition, implementation of Mitigation Measure Bio-1 will further reduce potential impacts to western mastiff bat.

#### **American badger (*Taxidea taxus*)**

The American badger is identified as a CDFW Species of Special Concern (CNDDDB 2019). American badger is a somewhat large, stout, flat, and shaggy-bodied mammal with powerful, short legs for digging, a slightly upturned snout, and a relatively short tail that is moderately

furred. American badger is an uncommon solitary species that is widely distributed throughout the state except in the North Coast, from below sea level to over 12,000 feet. The home range of the American badger usually varies in size between 5 and 1,800 acres, but can become much larger while the male tries to locate receptive females in the area. This species inhabits a variety of open, arid habitats but is most abundant in drier open stages of most shrub, forest, and herbaceous habitats with friable soils for burrowing. Natal dens are constructed in dry, sandy soil with sparse overstory. Young are born in March and April and disperse after three to four months. The closest recorded CNDDDB occurrence is 0.8 miles south of the proposed project.

The proposed project may adversely affect American badger. Suitable foraging and burrowing habitat is present within the proposed project site. Implementation of Mitigation Measure Bio-1 and Bio-5 will reduce potential impacts to American badger to less than significant.

### **San Joaquin Kit Fox (*Vulpes macrotis mutica*)**

San Joaquin kit fox is listed as Endangered under the federal Endangered Species Act (ECOS 2019). The species is identified as Threatened by the California Department of Fish and Wildlife. This fox resembles a small lanky dog, approximately 32 inches in total length, with disproportionately large ears and a black-tipped tail. San Joaquin kit fox is endemic to the Central Valley and currently inhabit suitable habitat in the San Joaquin Valley and in surrounding foothills of the Coast Ranges, Sierra Nevada, and Tehachapi Mountains, from southern Kern County north to Contra Costa County. In the northern part of its range (including San Joaquin, Alameda, and Contra Costa counties) where most habitat on the valley floor has been eliminated, it now occurs primarily in foothill grassland, valley oak savanna, and alkali grasslands. Dens, which are used for temperature regulation, shelter and protect them from adverse weather and predators. The dens are either dug by the foxes, are constructed by other animals, or consist of human-made structures (culverts, abandoned pipelines, or banks in sumps or roadbeds). Many dens may be used throughout the year, and individuals may change dens often. During September and October, females begin to clean and enlarge natal dens. Mating occurs between December and March, and adult pairs stay together all year. Pups are born in February or March and generally disperse after four or five months. There are multiple recorded occurrences of San Joaquin kit fox in the immediate vicinity of the proposed project area, with the most recent observation occurring in 1998.

The proposed project may adversely affect San Joaquin kit fox. Suitable foraging and burrowing habitat is present within the proposed project site. Implementation of Mitigation Measures Bio-1 and Bio-5 will reduce potential impacts to San Joaquin kit fox to less than significant.

#### 2.1.4.5 Discussion

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

*Less than significant with mitigation incorporated.* As discussed above, the proposed project could affect the following special-status species: California tiger salamander, California red-legged frog, western pond turtle, California glossy snake, San Joaquin coachwhip, Burrowing Owl, California Horned Lark, American badger, and San Joaquin kit fox.

#### **Mitigation Measure Bio-1: Avoid and minimize potential impacts to wildlife**

To minimize the potential impacts to special-status wildlife that may occur within the proposed project area, the following general measures will be implemented:

- a) A qualified wildlife biologist will conduct pre-construction surveys no more than two weeks prior to the start of construction for any special-status wildlife that have the potential to occur within the proposed project area.
- b) Prior to the start of construction, known sensitive areas adjacent to the project site will be marked with high visible flagging for avoidance.
- c) A qualified wildlife biologist will conduct a training session for all construction personnel prior to the start of work. At a minimum, the training shall include a description and discussion of the importance of avoiding impacts to special-status wildlife, the general measures that are being implemented to conserve these species as they relate to the proposed project and proposed project area, and procedures to follow should they encounter wildlife during work.
- d) A biological monitor will be on-site as needed during project construction at the discretion of the Lead Biologist.
- e) Any observations of federally or State-listed species will be reported to the USFWS and CDFW within one (1) working day of the observation.
- f) If federally or State-listed species are observed on site, all work will halt and the animal will be allowed to leave the project area on their own.
- g) Project activities shall be performed during daylight hours.
- h) All trash shall be properly contained, removed from the worksite, and disposed of properly to prevent attracting wildlife.
- i) All fueling and maintenance of vehicles or other equipment shall occur on established roads and at least 50 feet away from any on-site water feature.

- j) Motorized equipment will be kept clean and in good working condition and will not be left idling while not in use for more than 5 minutes.
- k) Absorbent materials will be available on-site. Any accidental leaks or spills will be immediately cleaned up, and the equipment will not be able to return to the project area until it has been repaired sufficiently to prevent further leaks or spills.

#### ***2.1.4.5.1 Special-Status Plants***

Special-status plants are not likely to be affected by the proposed project, because the proposed project area does not provide suitable habitat for special-status plant species and no special-status plants have been observed during surveys. Implementation of Mitigation measure Bio-2 will further reduce the likelihood of impacting special-status plants.

#### **Mitigation Measure Bio-2: Avoid and minimize impacts to special-status plants**

To minimize the potential impacts to special-status plants that may occur within the proposed project area, the following measures will be implemented:

- a) A qualified biologist will conduct surveys in the appropriate seasons for any special-status species that are potentially present within the project area. If any are identified, they will be flagged and avoided if feasible.
- b) If special-status plants are identified within the proposed project area and cannot be avoided, the Implementing Entity (ECCHC) will coordinate with USFWS/CDFW, and an attempt will be made to transplant the individuals or collect and disperse seeds.

#### ***2.1.4.5.2 Special-Status Wildlife***

The proposed project could have potentially adverse effects on special-status wildlife species. Implementation of Mitigation Measure Bio-1 and Mitigation Measures Bio-3 through Bio-5 will reduce impacts to special-status wildlife to less than significant.

#### ***Amphibians***

The following measures will be implemented to reduce impacts to California red-legged frog and California tiger salamander to less than significant. In addition, implementation of Mitigation Measure Bio-1 will serve to further minimize potential impacts to any special-status amphibian species that may occur in the proposed project area.

### **Mitigation Measure Bio-3: Avoid and minimize impacts to California tiger salamander and California red-legged frog**

- a) DWR will participate as a Participating Special Entity in the East Contra Costa County Habitat Conservation Plan/Natural Communities Conservation Plan (Jones and Stokes 2006) to mitigate for impacts to upland habitat for these species.
- b) Work will only be conducted during daylight hours and not during rain events.
- c) Any burrows or large cracks in the ground that will be temporarily impacted during construction will be covered with plywood to prevent collapse.

### ***Reptiles***

Implementation of Mitigation Measure Bio-1 will serve to reduce impacts to western pond turtle, San Joaquin whipsnake, and California glossy snake to less than significant. In addition, implementation of Mitigation Measure Bio-1 will serve to further minimize potential impacts to any special-status reptile species that may occur in the proposed project area.

### ***Birds***

The following measures will be implemented to reduce impacts to Burrowing Owl to less than significant. In addition, implementation of Mitigation Measure Bio-1 will serve to further minimize potential impacts to any special-status bird species that may occur in the proposed project area.

### **Mitigation Measure Bio-4: Avoid and minimize impacts to Burrowing Owl**

- a) Prior to any ground disturbance related to project activities, a USFWS/CDFW- approved biologist will conduct a preconstruction survey in areas identified in the planning surveys as having potential Burrowing Owl habitat. The surveys will establish the presence or absence of Burrowing Owl and/or habitat features and evaluate use by owls in accordance with CDFW survey guidelines (California Department of Fish and Game 2012).
- b) A qualified biologist will survey the proposed disturbance site and a 250-foot radius from the perimeter of the proposed site to identify burrows and owls. Adjacent parcels under different land ownership will not be surveyed. Surveys should take place near sunrise or sunset in accordance with CDFW guidelines. All burrows or Burrowing Owls will be identified and mapped. Surveys will take place no more than 30 days prior to construction. During the breeding season (February 1– August 31), surveys will document whether Burrowing Owls are nesting in or directly adjacent to disturbance areas. During the nonbreeding season (September 1–January 31), surveys will document

whether Burrowing Owls are using habitat in or directly adjacent to any disturbance area. Survey results will be valid only for the season (breeding or nonbreeding) during which the survey is conducted.

- c) If Burrowing Owls are found during the breeding season (February 1 – August 31), all nest sites that could be disturbed by project construction during the remainder of the breeding season or while the nest is occupied by adults or young will be avoided. Avoidance will include establishment of a non-disturbance buffer zone (described below). Construction may occur during the breeding season if a qualified biologist monitors the nest and determines that the birds have not begun egg-laying and incubation or that the juveniles from the occupied burrows have fledged. During the nonbreeding season (September 1 – January 31), the project proponent should avoid the owls and the burrows they are using, if possible. Avoidance will include the establishment of a buffer zone (described below).
- d) During the breeding season, buffer zones of at least 250 feet in which no construction activities can occur will be established around each occupied burrow (nest site). Buffer zones of 160 feet will be established around each burrow being used during the nonbreeding season. The buffers will be delineated by highly visible, temporary construction fencing.
- e) If occupied burrows for Burrowing Owls are not avoided, passive relocation will be implemented. Owls should be excluded from burrows in the immediate impact zone and within a 160-foot buffer zone by installing one-way doors in burrow entrances. These doors should be in place for 48 hours prior to excavation. The proposed project area should be monitored daily for 1 week to confirm that the owl has abandoned the burrow. Whenever possible, burrows should be excavated using hand tools and refilled to prevent reoccupation (California Department of Fish and Game 1995). Plastic tubing or a similar structure should be inserted in the tunnels during excavation to maintain an escape route for any owls inside the burrow.

## ***Mammals***

The following measures will be implemented to reduce impacts to San Joaquin kit fox to less than significant. This measure will also serve to reduce impacts to American badger to less than significant. In addition, implementation of Mitigation Measure Bio-1 will serve to further minimize potential impacts to any special-status mammal species that may occur in the proposed project area.

### **Mitigation Measure Bio-5: Avoid and minimize impacts to San Joaquin kit fox**

- a) Prior to any ground disturbance related to project activities, a USFWS/CDFW– approved biologist will conduct a pre-construction survey in areas identified in the planning



surveys as supporting suitable breeding or denning habitat for San Joaquin kit fox. The surveys will establish the presence or absence of San Joaquin kit foxes and/or suitable dens and evaluate use by kit foxes in accordance with USFWS survey guidelines (U.S. Fish and Wildlife Service 1999).

- b) Preconstruction surveys will be conducted within 30 days of ground disturbance. On the parcel where the activity is proposed, the biologist will survey the proposed disturbance site and a 250-foot radius from the perimeter of the proposed site to identify San Joaquin kit foxes and/or suitable dens. Adjacent parcels under different land ownership will not be surveyed. The status of all dens will be determined and mapped. Written results of preconstruction surveys will be submitted to USFWS within 5 working days after survey completion and before the start of ground disturbance. Concurrence is not required prior to initiation of project activities.
- c) If San Joaquin kit foxes and/or suitable dens are identified in the survey area, the measures described below will be implemented:
  - i. If a San Joaquin kit fox den is discovered in the proposed development site, the den will be monitored for 3 days by a USFWS/CDFW– approved biologist using a tracking medium or an infrared beam camera to determine if the den is currently being used.
  - ii. Unoccupied dens within the disturbance site should be destroyed immediately to prevent subsequent use.
  - iii. If a natal or pupping den is found, USFWS and CDFW will be notified immediately. The den will not be destroyed until the pups and adults have vacated and then only after further consultation with USFWS and CDFW.
  - iv. If kit fox activity is observed at the den during the initial monitoring period, the den will be monitored for an additional 5 consecutive days from the time of the first observation to allow any resident animals to move to another den while den use is actively discouraged. For dens other than natal or pupping dens, use of the den can be discouraged by partially plugging the entrance with soil such that any resident animal can easily escape. Once the den is determined to be unoccupied it may be excavated under the direction of the biologist. Alternatively, if the animal is still present after 5 or more consecutive days of plugging and monitoring, the den may have to be excavated when, in the judgment of a biologist, it is temporarily vacant (i.e., during the animal’s normal foraging activities
  - v. If dens are identified in the survey area outside the proposed disturbance site, exclusion zones around each den entrance or cluster of entrances will be demarcated. The configuration of exclusion zones should be circular, with a radius measured outward from the den entrance(s). No project activities will occur within the exclusion zones. Exclusion zone radii for potential dens will be at least 50 feet and will be demarcated with four to five flagged stakes. Exclusion zone radii for known dens will be at least 100 feet and will be demarcated with staking and

flagging that encircles each den or cluster of dens but does not prevent access to the den by kit fox.

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

*No impact.* The proposed project does not occur within any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service and does not contain any critical habitat for special-status species. Therefore, no impact is anticipated as a result of the proposed project.

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

*No impact.* No State or federally protected wetlands are located within the proposed project site. Therefore, no impact is anticipated as a result of the proposed project.

- d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?**

*Less than significant impact.* No fish migration corridors are present within the proposed project area. Proposed project activities will not interfere substantially with the movement of wildlife species. Proposed project activities will be temporary and will impact a relatively small and discrete area of upland habitat. While potential breeding habitat for California red-legged frog and California tiger salamander is located near the proposed project, no project activities will occur in aquatic habitat. Therefore, impacts would be less than significant as a result of the proposed project.

- e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?**

*No impact.* The proposed project does not conflict with the Contra Costa County General Plan. The goal of the Conservation Element section is to protect ecologically significant lands, wetlands, plant, and wildlife habitat; to protect rare, threatened and endangered species of fish, wildlife and plants, significant plant communities, and other resources which

stand out as unique because of their scarcity, scientific value, aesthetic quality or cultural significance; and to encourage the preservation and restoration of the natural characteristics of the San Francisco Bay/Delta estuary and adjacent lands, and recognize the role of Bay vegetation and water area in maintaining favorable climate, air and water quality, and fisheries and migratory waterfowl. The proposed project will be in compliance with the goals and objectives of the Contra Costa County General Plan.

Contra Costa County regulates tree removal within the County right-of-way; however, no trees will be removed during the proposed project, and project activities will only occur on state-owned land and not within the County right-of-way. The proposed project will not conflict with any local policies or ordinances protecting biological resources. Therefore, no impact is anticipated as a result of the proposed project.

**f) Would the project 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.* DWR will be participating in the East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan (ECCCHCP) as a Participating Special Entity (PSE). As a PSE, DWR will be required to follow all provisions within the ECCCHCP. Therefore, no impact is anticipated as a result of the proposed project

## 2.1.5 CULTURAL RESOURCES

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than significant Impact	No Impact
	Would the project:				
a)	Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- c) Disturb any human remains, including those interred outside of formal cemeteries? ☐ ☒ ☐ ☐

### 2.1.5.1 Environmental Setting

The Harvey O. Banks Pumping Plant overlooks the start of the California Aqueduct. The Landfill, which serviced the Pumping Plant until 1980, is located northeast of the current DFD Headquarters. Originally, the Landfill serviced the Plant as a construction waste disposal site until it was capped in 1980. Today the Landfill is a flattened hilltop at an elevation of approximately 100 feet above mean sea level (AMSL) among rolling grassy hills used primarily as rangeland for cattle. Soil surveys find that this part of Contra Costa County consists of approximately 85% San Ysidro soil, which is described as very deep, comparatively well-drained loam or clay loam that forms in alluvium from sedimentary rocks (United States Department of Agriculture [USDA], Natural Resources Conservation Service [NRCS] 2017). The remaining 15% is described in soil reports as minor components. Previous archaeological investigations of the area have found no archaeological deposits.

#### ***Prehistoric Context***

Attempts to create a chronology of the region's archaeological context have varied over the years of study. A popular one divides the Pre-Contact archaeological context into five phases, the Paleo-Indian (11, 5550 – 8,550 BCE, Lower Archaic (8,550-5,550 BCE), Middle Archaic (5,550-550 BCE), Upper Archaic (550 BCE-1,100 CE) and Emergent (1,100 CE to Contact and post-Contact). Each of these phases can be observed as cultural reactions in response to shifting environments (Rosenthal and Sutton 2007). By the time Spanish colonists arrived in the area, the region was at its most populous, with a diversity of subsistence strategies (hunting, fishing, reliance on acorns and so on), an intricate trade network and a varied material culture of worked stone, including obsidian, bone and basketry.

#### ***Historic Context***

The first recorded European exploration of the San Joaquin Valley was that of Gabriel Moraga, an officer of the Viceroy of New Spain, in 1805. The Spanish also supplied the name for the county—it translates to “opposite coast.” The city of Martinez has been the county seat since it was first formed and remains so to this day. Contra Costa County, and the rest of California, was annexed into the United States in 1848 following the Mexican-American War. The closest city to the proposed project area is Byron, which was first a station on the Southern Pacific Railroad in 1868. The proposed project site is adjacent to the Banks Pumping Plant, which the Landfill serviced until it was capped.

### 2.1.5.2 Regulatory Setting

CEQA provides a broad definition of what constitutes a cultural-historical resource. Cultural resources can include traces of prehistoric habitation and activities, historic-era sites and materials, and places used for traditional Native American observances or places with special cultural significance. In general, it is required to treat any trace of human activity more than 50 years in age as a potential cultural resource.

CEQA states that if a project would have significant impacts on important cultural resources, then alternative plans or mitigation measures must be considered. However, only significant cultural resources (termed “historical resource”) need to be addressed. According to Public Resources Code Section 5024.1, a resource is eligible for historical status if it is eligible for listing or listed on the California Register of Historical Resources (CRHR). A resource’s eligibility is judged by four criteria:

1. Association with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage.
2. Is associated with the lives of persons important in our past.
3. Embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
4. Has yielded or is likely to yield, information important in prehistory or history.

Under Section 15064.5, the CEQA Guidelines also require consideration of unique archaeological resources. Public Resource Code Section 21083.2, unique archaeological resources are defined as an archaeological artifact, object or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of three criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

In addition to meeting one or more of the above criteria, resources eligible for listing in the CRHR must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling and association.

## Methods

A field survey, consultation with both Native American tribes and a local historical society and a records search were conducted in support of the proposed project. An Archaeological Survey Report (ASR) was prepared by DWR using the information provided by these sources.

A previous records search from the California Historical Resources Information System (CHRIS) was reviewed for the production of the ASR. The Northwest Information Center (NWIC) was first consulted on June 15, 2015 (File # 15-0619) and found no cultural resources in the proposed project area or within a quarter-mile buffer. One historic-era built environment resource, the California Aqueduct, was found to be located approximately 350 feet northwest of the proposed project area. The California Aqueduct has been previously evaluated as eligible for the National Register of Historic Places (NRHP) and the California Register of Historic Places (CRHP).

The proposed project area was surveyed on February 11, 2019, by DWR archaeologist Daniel Jackson. The Landfill crown was covered with a pedestrian survey with ten-meter transects. No cultural resources were found during the field investigation.

A confidential Archaeological Survey Report (ASR) was prepared for the proposed project by a DWR archaeologist on April 9, 2019. As outlined in the report, no cultural resources were found within the proposed project site during the field survey or the records search. The proposed project would not have any direct, indirect, or cumulative impacts to the California Aqueduct. The proposed project would not have a significant effect on any known cultural resources and due to it being on top of a modern landfill is not likely to impact any unknown archaeological sites.

### 2.1.5.3 DISCUSSION

#### **a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?**

*No Impact.* The Landfill serviced the Pumping Plant until the 1960's until 1980 and does not meet any of the requirements listed under 15064.5 to be considered a historic resource. Consultation with the California Historical Resources Information System (CHRIS) and the field survey found only one resource near the proposed project area, the California Aqueduct itself, recorded in Merced, San Joaquin, and Stanislaus counties. Due to the location and low intensity of the proposed project, the Aqueduct will be in no way impacted by the proposed project. Therefore, no impact is anticipated as a result of the proposed project.



**b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?**

*Less than significant with mitigation incorporated.* According to the records search and field survey, there are no recorded archaeological resources within the proposed project area or the immediate vicinity. Due to the low ground disruption and location of the proposed project on top of a modern landfill, the probability of impacting unknown subsurface archaeological material is very low.

**Mitigation Measure Cult-1 Halt ground-disturbing construction activities if cultural materials are discovered:** If historical or unique archaeological resources are discovered during construction, all work would temporarily cease in the immediate area until the findings can be assessed by a qualified archaeologist and an appropriate course of action can be determined. Work may continue on other parts of the proposed project while evaluation and mitigation take place (CEQA Guidelines §15064.5 [f]). If the find is determined to be a historical or unique archaeological resource, time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation must be available.

**c) Would the project disturb any human remains, including those interred outside of formal cemeteries?**

*Less than significant with mitigation incorporated.* It is not anticipated that proposed project implementation would disturb any human remains, including those interred outside of formal cemeteries. The presence of human remains is unlikely due to the location of the proposed project and the finding of no archaeological sites within the proposed project area or a quarter-mile buffer surrounding it.

**Mitigation Measure Cult-2 Halt construction activities if any human remains are discovered:** If human remains are found, such remains would be subject to the provisions of California Public Resources Health and Safety Code Section 7050.5. The requirements and procedures would be implemented, including immediately stopping work in the vicinity of the find and notifying the County Coroner. A DWR archaeologist would also need to be contacted immediately. The process for notification of the California Native American Heritage Commission (NAHC) and consultation with the individual(s) identified by the NAHC as the “most likely descendant” is set forth in Section 5097.98 of the California Public Resources Code. Work in the vicinity of the find can restart after the remains have been investigated and appropriate recommendations have been made for their treatment and disposition.

## 2.1.6 ENERGY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### 2.1.6.1 Environmental Setting

There are two notable energy centralized facilities in vicinity to Old Banks Landfill. The closest, Harvey O. Banks Pumping Plant, which is about half a mile southwest of the proposed project site, consumes energy to pump water from Clifton Court Forebay into Bethany Reservoir. Windmills can be found 2 miles southwest of the proposed project site. Both facilities can be observed from the proposed project area.

### 2.1.6.2 Discussion

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

*No impact.* The proposed project will only be consuming energy via fuel (gasoline) due to construction equipment usage and vehicles traveling. No other energy sources will be consumed or wasted during the construction and maintenance of the proposed project. The proposed project will not result in a facility that needs operation. Therefore, no impact is anticipated as a result of the proposed project.

**b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?**

*No Impact.* The proposed project has had no historical or present purpose to provide renewable energy or energy efficiency by a state or local plan. The proposed plan to construct the proposed project will also not obstruct or conflict with state or local plans regarding other renewable energy or energy efficiency. Therefore, no impact is anticipated as a result of the proposed project.

## 2.1.7 GEOLOGY AND SOILS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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, as updated), creating substantial direct or indirect risks to life or property?      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
- 

### 2.1.7.1 Environmental Setting

The proposed project is located in the central part of the Coast Ranges Geomorphic Province of California, which is characterized by mountain ranges and valleys. Within the province, basement rocks consist of Jurassic and Cretaceous age (66-200 million years ago) igneous, metamorphic, and marine sedimentary rocks. These basement rocks are overlain by Cenozoic (less than 66 million years ago) sedimentary rocks that accumulated in deep to shallow and eventually continental environments.

Based on available geologic maps and borings performed near the proposed project site (DWR, 2019), the site and vicinity are generally underlain by native alluvial soils consisting of alternating layers of clays and sand with some gravels which are underlain by sedimentary rock (claystone). Surface soils consist of San Ysidro loam and anthropogenic fill soil (USDA, 2019). The proposed project site is believed to consist of construction spoil materials from excavation of the Banks Pumping Plant Intake Channel in the mid-1960s.

Groundwater level is approximately 6-20 feet (DWR 2019) and is anticipated to vary due to seasonal groundwater fluctuations, variations in yearly rainfall, surface and subsurface flows, ground surface runoff, and other environmental factors.

An “active” fault is one that shows displacement within the last 11,000 years and, therefore, is considered more likely to generate a future earthquake than a fault that shows no sign of recent rupture. The California Geologic Survey has mapped various active and inactive faults in the region. Five active faults are located within Contra Costa County: the San Andreas, Hayward, Concord, Greenville-Marsh Creek, and Antioch faults. However, no known active faults run directly through the proposed project area, and the Marsh Creek fault is located 6 miles southwest of the proposed project area and was recently active in 1980 (CGS 2019). There is a generally moderate to low liquefaction potential at and around the proposed project site.

### 2.1.7.2 Discussion

a) **Would the project 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 California Geological Survey Special Publication 42.)***

*No impact.* As with the entire San Francisco Bay Area, the proposed project area is subject to strong ground motion resulting from earthquakes on nearby faults. However, the proposed project site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone (CGS 2019). The nearest Alquist-Priolo Earthquake Fault Zone is the Hayward Fault, located approximately 7 miles to the southwest of the proposed project site in the Altamont quadrangle. Therefore, no impact is anticipated as a result of the proposed project.

ii) **Strong seismic ground shaking?**

*Less than significant impact.* The proposed project site is located in a seismically active region that has historically been affected by strong seismic ground shaking. Ground shaking is a general term referring to all aspects of motion of the earth’s surface resulting from an earthquake and is normally the major cause of damage in seismic events. The extent of ground shaking associated with an earthquake depends on the magnitude and intensity of the earthquake, distance from the epicenter, and local geologic conditions. Major active faults in the region that could cause ground shaking at the proposed project site (listed from closest) include the Greenville-Marsh Creek, the Mount Diablo Thrust, Pleasanton Fault, the Calaveras Fault, and the Hayward Fault (ABAG, 2018; CDC 2019). The closest active fault is the Greenville-Marsh Creek Fault,

which is located 6 miles to the southwest of the proposed project site. The most recent seismic event occurred in January of 1980 when two earthquakes of Richter magnitude 5.5 and 5.8 occurred along this fault (McJunkin and Ragsdale 1980). The proposed project is a remediation of existing structure and therefore, strong seismic ground shaking is unlikely at the proposed project. Therefore, impacts would be less than significant due to the proposed project.

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

*Less than significant impact.* Liquefaction is the transformation of saturated, loose, fine-grained sediment to a fluid-like state because of earthquake shaking or other rapid loading. Soils most susceptible to liquefaction are loose to medium dense, saturated sands, silty sands, sandy silts, non-plastic silts and gravels with poor drainage, or those capped by or containing seams of impermeable sediment. According to the USGS Susceptibility Map of the San Francisco Bay Area, the proposed activities are located in a region designated as a low to moderate risk of liquefaction (ABAG 2018; CDC 2019). Compaction at the proposed project is unknown. However, due to recent earthquake activity in 1980 on the Greenville-Marsh Creek Fault with no resulting liquefaction and that the proposed project is a remediation of existing structure at the proposed project area. Therefore, impacts would be less than significant due to proposed project.

**iv) Landslides?**

*No impact.* Seismically induced landslides and other slope failures are common occurrences during or soon after earthquakes in areas with significant ground slopes. Geotechnical investigation record information did not identify landslides as a potential hazard at the proposed project site. The proposed project is located in an area designated by the Contra Costa County Department of Conservation and Development to be “least susceptible” to landslide risk and there are no mapped areas of landslide deposits larger than 200 feet (CCCD 2005). The criteria used to delineate the relative hazard areas included the nature of the geologic materials underlying the surface, the steepness of slopes, the presence or absence of visible slope failures, and the presence or absence of active forces that could cause failures. While there are some slopes along the sides of the Landfill, the area around the proposed project site is located in a relatively flat area and consists primarily of impervious surface (i.e., existing roadway and landfill structure). Therefore, no impact is anticipated as a result of the proposed project.



**b) Would the project result in substantial soil erosion or the loss of topsoil?**

*Less than significant impact.* The proposed project consists of grading and compaction of an area of 6.7 acres and existing unpaved roads. During construction activities, soil would be exposed and there would be an increased potential for soil erosion compared to the existing conditions and during a storm event, soil erosion could occur at an accelerated rate. Construction BMPs, including not working during rain events, will minimize impact due to soil erosion. In addition, impacts would be temporary and hydroseeding would occur at the end of project construction to return the site to pre-project conditions. As part of the Construction General Permit, a Stormwater Pollution Prevention Plan (SWPPP) will include all stormwater erosion control BMPs. Therefore, impacts would be less than significant as a result of the proposed project.

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

*No Impact.* Future maintenance at the proposed project site includes prevention and repairing of erosion areas and animal burrows. Therefore, no impact is anticipated as a result of the proposed project.

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

*No impact.* Expansion and contraction of volume can occur when expansive soils undergo alternating cycles of wetting (swelling) and drying (shrinking). During these cycles, the volume of the soil changes markedly. Expansive soils are common throughout California and can cause damage to foundations and slabs unless properly treated during construction. The soils that underlay the majority of the proposed project site consist of San Ysidro loam (USDA 2019). San Ysidro loam is classified as a Hydrologic Group C, having low infiltration rates when thoroughly wetted and consists chiefly of soils with a layer that impedes downward movement of water and soils with moderately fine to fine structure. San Ysidro loam has a very low to low expansion potential. Therefore, no impact is anticipated as a result of the proposed project.

**e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?**

*No impact.* Septic tanks and alternative wastewater disposal systems would not be installed on the proposed project site. Therefore, no impact is anticipated as a result of the proposed project.

**d) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

*No impact.* There are no unique paleontological resources or site or unique geologic features within the area that will be directly or indirectly destroyed during work or from work completed. Therefore, no impact is anticipated as a result of the proposed project.

## 2.1.8 GREENHOUSE GAS EMISSIONS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### 2.1.8.1 Environmental Setting

In May 2012, DWR adopted the DWR Climate Action Plan-Phase I: Greenhouse Gas Emissions Reduction Plan (GGERP), which details DWR's efforts to reduce its greenhouse gas (GHG) emissions consistent with Executive Order S-3-05 and the Global Warming Solutions Act of 2006 (Assembly Bill (AB) 32). DWR also adopted the Initial Study/Negative Declaration prepared for the GGERP in accordance with the CEQA Guidelines review and public process. The GGERP incorporated herein by reference and are available: [Climate Action Plan](#). The GGERP provides estimates of historical (back to 1990), current, and future GHG emissions related to operations, construction, maintenance, and business practices (e.g. building-related energy use). The

GGERP specifies aggressive 2020 and 2050 emission reduction goals and identifies a list of GHG emissions reduction measures to achieve these goals.

DWR specifically prepared its GGERP as a “Plan for the Reduction of Greenhouse Gas Emissions” for purposes of CEQA Guidelines section 15183.5. That section provides that such a document, which must meet certain specified requirements, “may be used in the cumulative impacts analysis of later projects.” Because global climate change, by its very nature, is a global cumulative impact, an individual project’s compliance with a qualifying GHG Reduction Plan may suffice to mitigate the project’s incremental contribution to that cumulative impact to a level that is not “cumulatively considerable.” (See CEQA Guidelines, § 15064, subd. (h)(3).) More specifically, “later project-specific environmental documents may tier from and/or incorporate by reference” the “programmatic review” conducted for the GHG emissions reduction plan. “An environmental document that relies on a greenhouse gas reduction plan for a cumulative impacts analysis must identify those requirements specified in the plan that apply to the project, and, if those requirements are not otherwise binding and enforceable, 3-60 incorporate those requirements as mitigation measures applicable to the project.” (CEQA Guidelines § 15183.5, subd. (b)(2).)

Section 12 of the GGERP outlines the steps that each DWR project will take to demonstrate consistency with the GGERP. These steps include: 1) analysis of GHG emissions from construction of the proposed project, 2) determination that the construction emissions from the proposed project does not exceed the levels of construction emissions analyzed in the GGERP, 3) incorporation into the design of the proposed project DWR’s project-level GHG emissions reduction strategies, 4) determination that the proposed project does not conflict with DWR’s ability to implement any of the “Specific Action” GHG emissions reduction measures identified in the GGERP, and 5) determination that the proposed project would not add electricity demands to the State Water Project (SWP) system that could alter DWR’s emissions reduction trajectory in such a way as to impede its ability to meet its emissions reduction goals.

Consistent with these requirements, a Greenhouse Gas Emissions Reduction Plan Consistency Determination and is attached as Appendix C, documenting that the proposed project has met each of the required elements.

### **2.1.8.2 Discussion**

**a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**

*Less than significant impact.* Based on the analysis provided in the GGERP and the

demonstration that the proposed project is consistent with the GGERP (as shown in the attached Consistency Determination Checklist), DWR as the lead agency has determined that the proposed project's incremental contribution to the cumulative impact of increasing atmospheric levels of GHGs is less than cumulatively considerable. Therefore, impacts will be less than significant due to the proposed project.

**b) Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?**

*Less than significant impact.* The State CEQA Guidelines require environmental analyses to evaluate both the level of GHG emissions associated with construction and operation of a project and the proposed project's consistency with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions.

DWR has developed a "Climate Action Plan Phase 1: Greenhouse Gas Emissions Reduction Plan" (GGERP) to guide its efforts in reducing GHG emissions (DWR 2012). The GHG emissions reduction measures proposed in the Plan were developed for the purpose of reducing emissions of GHGs in California as directed by Executive Order (EO) S-3-05 and AB 32. DWR has established the following GHG Emissions Reduction Goals:

- Reduce GHG emissions from DWR activities by 50% below 1990 levels by 2020; and
- Reduce GHG emissions from DWR activities by 80% below 1990 levels by 2050.

Pre-construction and Final Design BMPs from the GGERP are designed to ensure that individual projects are evaluated, and their unique characteristics are taken into consideration when determining if specific equipment, procedures, or material requirements are feasible and efficacious for reducing GHG emissions from the proposed project. Some of the BMPs listed in the GGERP (BMPs 3, 4, 5, 11, 12, and 13) were not included in this document since they were not applicable to the proposed project or were determined to not be feasible (BMP 6). All variances from the GGERP were approved by the DWR CEQA Climate Change Committee (see GGERP Consistency Determination form).

The proposed project would implement the following Pre-construction and Final Design BMPs:

- **BMP 1.** Evaluate project characteristics, including location, project workflow, site conditions, and equipment performance requirements, to determine whether specifications of the use of equipment with repowered engines, electric drive trains, or other high-efficiency technologies are appropriate and feasible for the project or specific elements of the project.
- **BMP 2.** Evaluate the feasibility and efficacy of performing on-site material hauling with trucks equipped with on-road engines.

According to the GGERP, all DWR projects are expected to implement all construction BMPs unless a variance is granted and approved by the DWR CEQA Climate Change Committee (DWR 2012b). Therefore, the proposed project will incorporate the following BMPs into the project design:

- **BMP 7.** Minimize idling time by requiring that equipment be shut down after five minutes when not in use (as required by the State airborne toxics control measure [Title 13, Section 2485 of the California Code of Regulations]). Provide clear signage that posts this requirement for workers at the entrances to the site and provide a plan for the enforcement of this requirement.
- **BMP 8.** Maintain all construction equipment in proper working condition and perform all preventative maintenance. Required maintenance includes compliance with all manufacturer's recommendations, proper upkeep, and replacement of filters and mufflers, and maintenance of all engine and emissions systems in proper operating condition. Maintenance schedules shall be detailed in the Air Quality Control Plan prior to commencement of construction.
- **BMP 9.** Implement tire inflation program on job site to ensure that equipment tires are correctly inflated. Check tire inflation when equipment arrives on-site and every two weeks for equipment that remains on-site. Check vehicles used for hauling materials off-site weekly for correct tire inflation. Procedures for the tire inflation program shall be documented in an Air Quality Management Plan prior to commencement of construction.
- **BMP 10.** Develop a project-specific rideshare program to encourage carpools, shuttle vans, transit passes and/or secure bicycle parking for construction worker commutes.
- **BMP 14.** Develop a project-specific construction debris recycling and diversion program to achieve a documented 50% diversion of construction waste.
- **BMP 15.** Evaluate the feasibility of restricting all material hauling on public roadways to off-peak traffic congestion hours. During construction scheduling and execution minimize, to the extent possible, uses of public roadways that would increase traffic congestion.

The proposed project would not conflict with the AB 32 Scoping Plan, the BAAQMD CEQA guidelines, GGERP, or any other plans, policies, or regulations for the purpose of reducing GHG emissions. Based on the analysis provided in the GGERP and the demonstration that the proposed project is consistent with the GGERP (as shown in Appendix C), DWR as the lead agency has determined that the proposed project's incremental contribution to the cumulative impact of increasing atmospheric levels of GHGs is less than cumulatively considerable and, therefore, the impact would be less than significant.

The proposed project will have a less than significant impact, because it conflicts with some the BMPs of the GGERP. All applicable Project Level GHG Emissions Reduction Measures have been incorporated into the design or implementation plan for the proposed project and Measures not incorporated have been listed and determined not to apply to the proposed project (Appendix C).

## 2.1.9 HAZARDS AND HAZARDOUS MATERIALS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- |   |                          |                          |                                     |                                     |
|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
- 

### 2.1.9.1 Environmental Setting

The Landfill is 0.5 miles southwest from DWR Delta Field Division (DFD) Headquarters. This facility is responsible for the operation and maintenance of existing facilities within DWR right of way. Operation and maintenance of these facilities requires minor amounts of hazardous material, typically in the form of fuel and lubricants for construction equipment.

Originally, the Landfill serviced Harvey O. Banks Pumping Plant as a construction waste disposal site until it was closed in 1981. Today the Landfill is maintained by DWR personnel.

### 2.1.9.2 Discussion

#### a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

*Less than significant impact.* Construction of the proposed project would not require extensive or on-going use of acutely hazardous materials or substances. Proposed project activities would involve limited transport, storage, use, or disposal of hazardous materials. Some examples of hazardous materials handling include fueling and servicing construction equipment on-site, and the transport of fuels, lubricating fluids, and solvents. These types of materials, however, are not acutely hazardous, and all storage, handling, and disposal of these materials is regulated by the California Department of Toxic Substances Control (DTSC), U.S. Environmental Protection Agency, California Environmental Protection Agency, and the Occupational Safety & Health Administration.

Operation of the proposed project would be consistent with existing practices used by DWR. All hazardous materials would be stored and used in accordance with applicable federal, State, and local regulations. In addition, proper spill management, including response plans and spill kits, would be implemented and maintained on site, as is currently required by DWR. None of the proposed project components would generate new sources of hazardous materials. Therefore, impacts would be less than significant due to the proposed project.



**b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?**

*Less than significant.* Materials used in the proposed project are not acutely hazardous and are similar to materials already used by DWR for maintenance of facilities and structures. Implementation of the proposed project would not increase the risk of the release of hazardous materials into the environment. Therefore, impacts would be less than significant due to proposed project activities.

**c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?**

*No impact.* The proposed project is not located within 0.25 mile of any schools existing or proposed. Therefore, no impact is anticipated as a result of the proposed project.

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

*No impact.* Pursuant to Government Code Section 65962.5, the State Water Resources Control Board (SWRCB) GeoTracker and the California Department of Toxic Substances Control (DTSC) EnviroStor online databases were consulted on January 18, 2019, to determine if there are any recorded sites of concern within or near the proposed project area.

No sites of potential concern were identified in either GeoTracker or EnviroStor within a one-mile radius search. The proposed project area is not in an area that would be listed as a hazardous materials cleanup site, pursuant to Government Code Section 65962.5(a)(4). Therefore, no impact is anticipated as a result of the proposed project.

**e) Would the project, 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 for people residing or working in the project area?**

*No impact.* Because Byron Airport (FAA Identifier Number [C83]) is located approximately 1.5 miles northwest of the proposed project location, the proposed project falls within the Airport Influence Area. According to the Contra Costa Airport Land Use Compatibility Plan for Byron Airport Policies, the proposed project area is in Compatibility Zone B2. The zone determines what land uses are allowed within various vicinities of the airport. Zone B2 is primarily concerned with project plans that would permanently alter an area, such as building structures over 70 feet tall, residential or commercial development, or lots increasing persons to no more

than 100 per acre at a given time. The proposed project will not result in any of these listed impacts.

The proposed project site is also considered an Open Land, meaning an area planes could potentially land in an emergency. To qualify as Open Land, the following criteria must be met: (1) area is free of large structures or obstacles such as, large tree, poles, walls and overhead wires, and (2) the area must meet the minimum dimensions of 75 feet by 300 feet. While the proposed project area does meet the listed criteria, construction impacts to the proposed project area will be temporary, and once the proposed project is completed the area will be returned to pre-project conditions. While the proposed project site will be unavailable as Open Land during construction activities, the surrounding and adjacent areas, which also qualify as Open Land, could be used for an emergency landing by planes. In addition, the proposed project's proximity to Byron Airport is not anticipated to result in a safety hazard for people residing or working in the proposed project area. Therefore, there would be no impact as a result of the proposed project.

**g) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?**

*No impact.* According to the Contra Costa County General Plan (CCCD 2005), the proposed project is not located within any major thoroughfares that may be used as an evacuation route or muster location, nor does it contain any essential facilities for emergency response. Therefore, no impact is anticipated as a result of the proposed project.

**h) Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?**

*Less than significant impact.* The proposed project is in an area with no population centers and little to no standing structures. The proposed project is in an area not designated by CAL FIRE as a Very High Fire Hazard Severity Zone (CAL FIRE 2007). Dry vegetation at the site poses a potential fire hazard if it were to be inadvertently ignited by vehicles; however, site preparation measures including grading of access roads and staging areas will significantly reduce the risk of fire during proposed project activities by removing potential fire fuel from areas that will be traversed by vehicles and equipment. Therefore, impacts would be less than significant due to proposed project activities.

## 2.1.10 HYDROLOGY AND WATER QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) result in a substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### 2.1.10.1 Environmental Setting

The Landfill is within 500 feet of the intake channel located upstream of the Harvey O. Banks Pumping Plant and downstream of Clifton Court Forebay. Harvey O. Banks Pumping Plant lifts water from the intake channel, leaving Clifton Court Forebay, into Bethany Reservoir. This water then flows through the California Aqueduct. Water is primarily delivered to the San Joaquin Valley for agricultural uses and parts of Southern California for municipal uses. Bethany Reservoir also serves as a conveyance facility in this reach of the California Aqueduct and provides water-related recreational opportunities. A small creek is approximately 0.12 miles southeast of the proposed project.

### 2.1.10.2 Discussion

#### a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

*Less than significant impact.* The proposed project may result in localized, short-term impacts to water quality. Construction activities such as vegetation clearing, and topsoil removal and grading could result in excess amounts of sediment and nutrient introduction to local drainages or the intake channel. However, this would be a temporary project condition and proper erosion control measures, including not working during rain events, will be put in place prior to and during construction to minimize the amount of runoff. The proposed Landfill cap construction design was developed to ensure there is not an increase of runoff towards the nearby creek. Designs also includes compaction, leveling, and grading that will result in a minimum of a 1% drainage gradient across the cap and ensures surface flows are uniformly distributed across the cap without ponding. Therefore, impacts would be less than significant due to the proposed project.

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

*No impact.* The proposed project would not use groundwater during construction (e.g., dust control, vehicle washing) or operations. Although the proposed project would result in grading and compaction of approximately 6.7 acres of the Landfill cap, project activities will not interfere with groundwater recharge or impede groundwater management of the basin. Therefore, no impact is anticipated as a result of the proposed project.

**c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in:**

**i) substantial erosion or siltation on- or off-site**

*Less than significant impact.* There will be substantial changes in the landscape of the proposed project site that will result in improvements to the drainage regime with the constructed Landfill cap. However, these changes will not result in substantial on- or off-site erosion or siltation, as these impacts will be temporary. Greater details of the construction design are discussed in (a) and (b) of this section. In addition, the proposed project will comply with the requirements of a Construction General Permit to ensure that sediment from disturbed areas will not result in significant impacts. Therefore, impacts would be less than significant due to the proposed project.

**ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite**

*No impact.* The proposed project will improve the drainage regime of surface water runoff and drainage will be equally distributed at a minimum of a 1% gradient across the reconstructed cap. Proposed project activities will not contribute to an increase of on- or off-site flooding. Therefore, no impact is anticipated as a result of the proposed project.

**iii) create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff**

*No impact.* The drainage of the Landfill cap will be at a 1% gradient and surface is designed so that water will be uniformly distributed across the Landfill cap. The

proposed project will decrease the potential for contaminated runoff, because once the Landfill is capped, the materials beneath the Landfill cap will be less likely to be exposed. The proposed project will not create or contribute runoff to existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Therefore, no impact is anticipated as a result of the proposed project.

**iv) impede or redirect flood flows**

*No impact.* The proposed project will not place any structures that would impede or redirect flood flows. Therefore, no impact is anticipated as a result of the proposed project.

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

*No impact.* The proposed project tsunamis not within a flood hazard, tsunami, or seiche zone. Therefore, no impact is anticipated as a result of the proposed project.

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

*No impact.* The proposed project would not substantially degrade water quality or conflict with or obstruct implementation of a water quality control plan or a sustainable groundwater management plan. Therefore, no impact is anticipated as a result of the proposed project.

## 2.1.11 LAND USE AND PLANNING

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

adopted for the purpose of avoiding or mitigating an environmental effect?

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**2.1.11.1 Environmental Setting**

The proposed project area is located in unincorporated lands designated as Public and Semi-Public and considered as Agriculture, Open Space, Wetlands, Parks and Other Non-Urban Uses by the Contra Costa County General Plan, East County Area. Surrounding land uses include the State Water Project, agriculture, and public and semi-public land.

**2.1.11.2 Discussion**

**a) Would the project physically divide an established community?**

*No impact.* The proposed project area is located on DWR property. The proposed project would not alter the existing use of the site and would not divide an established community. Therefore, no impact is anticipated as a result of the proposed project.

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

*No impact.* The proposed project area is owned and maintained by DWR. The proposed project falls under maintenance requirements necessary to ensure that the Landfill is maintained to prevent exposure of waste and erosion due to persistent rodent burrowing and ensure site security. Implementation of the proposed project would not alter or change the existing land use. Therefore, no impact is anticipated as a result of the proposed project.

**2.1.12 MINERAL RESOURCES**

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ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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Would the project:

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?                                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
- 

### 2.1.12.1 Environmental Setting

The California Department of Conservation, California Geological Survey (CGS) conducts Mineral Land Classification surveys that designate land areas, such as mineral resources zones or aggregate resources zones. The CGS has mapped aggregate availability throughout the state, and no aggregate resources zones have been identified on or within the vicinity of the proposed project. The Contra Costa County General Plan also outlines mineral resource goals and policies to protect these areas. The map provided in the County's General Plan shows that the proposed project area is not located in or around an area of known significant mineral resource.

### 2.1.12.2 Discussion

**a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?**

*No impact.* No known mineral resource recovery sites or aggregate resource zones are located on the proposed project site. Because project activities do not include soil removal, the proposed project will not result in a loss of availability of mineral resources. Additionally, the proposed project area has not been designated by the CGS as an area of known mineral resources. Therefore, no impact is anticipated as a result of the proposed project.

**b) Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?**

*No impact.* There are no mineral recovery sites within or near the proposed project area identified in the Contra Costa County General Plan. The proposed project would not result in impacts related to 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. Therefore, no impact is anticipated as a result of the proposed project.

### 2.1.13 NOISE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
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 in other applicable local, state, or federal standards?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

#### 2.1.13.1 Environmental Setting

Existing noise sources in the proposed project area include traffic, airport and agricultural operations, operation of the Banks Pumping Plant, and wildlife vocalizations. The proposed project area is located on DWR property and is bordered by designated agricultural land with Byron Highway to the northwest. The area is devoid of densely populated public housing, with a few rural residences located over a mile from the proposed project site. Traffic traveling along Byron Highway is a regular source of background noise. According to the Contra Costa County

General Plan Noise Element, Byron Highway ranges from 60 to 70 decibels (dB) of community noise equivalent levels (CNEL). Northwest of the proposed project site is Byron airport, which carries sound to the western edge of the California aqueduct at approximately 55 to 60 dB CNEL. Acceptable noise levels for agricultural, utility, industrial, and manufacturing land ranges from 50 to 75 dB CNEL.

### **2.1.13.2 Discussion**

**a) Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?**

*Less than significant impact.* Construction noise levels would fluctuate depending on the particular type, number, and duration of usage of the varying equipment. The level of noise largely depends on the type of construction activities occurring on any given day. Construction equipment used during the proposed project would include backhoe loaders, bulldozers, motor graders, sheep-foot wheel roller compactors, trenchers, hauling trucks, and water trucks. The equipment proposed for use during the proposed project ranges from 74 to 88 dB CNEL approximately 50 feet from the source of activity, a range that is normally considered unacceptable as defined by the Contra Costa County General Plan. However, the nearest noise sensitive receiver to the proposed project is approximately 200 feet away, and the landscape surrounding the proposed project is considered open space with physical barriers such as hills that will dampen the noise level as it travels away from its source. Additionally, project activities would take place during non-sensitive daylight hours with a duration of no more than 6 months. The proposed project will not result in a generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the proposed project in excess of the standards established in the Contra Costa County general plan. Therefore, impacts would be less than significant as a result of the proposed project.

**b) Would the project result in generation of excessive groundborne vibration or groundborne noise levels?**

*Less than significant impact.* Construction activities in the proposed project area may result in varying degrees of temporary ground vibration, depending on the specific construction equipment used and operations involved. Groundborne noise impacts occur due to the vibration of structures; however, these impacts would be temporary. Therefore, due to the distance to the nearest structure and the minor nature of the proposed project, impacts would be less than significant as a result of the proposed project.

- 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 Contra Costa County General Plan defines tolerable noise in the proposed project area to be 65-75 dB CNEL, Byron airport is within 2 miles of the proposed project site and its noise level is approximately 55-60 dB CNEL at the west edge of the intake channel before Harvey O. Banks Pumping Plant of the California Aqueduct, half a mile from the proposed project area. The accumulative noise from the airport and proposed project activities can have the potential to exceed the tolerable range set by the Contra Costa General Plan; however, the landscape surrounding the proposed project area is surrounded by physical barriers such as hills and structures that will dampen accumulative noise levels as it travels away from its source. In addition, the proposed project activities would take place during non-sensitive daylight hours with a temporary work duration of no more than 6 months. Therefore, because the proposed project will not expose people residing or working in the proposed project area to excessive noise levels, impacts would be less than significant as a result of the proposed project.

## 2.1.14 POPULATION AND HOUSING

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### 2.1.14.1 Environmental Setting

The proposed project site has defined boundaries of the Landfill cap and mapped roadways to transport machinery and materials and designated staging areas, all of which will be surrounding the Landfill area. No housing exists near the proposed project site or its surrounding area. All residential homes are located over a mile away in every direction from the proposed project area.

### 2.1.14.2 Discussion

- a) **Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?**

*No impact.* The proposed project will be short term and is intended to improve the Landfill's infrastructure resulting in less maintenance and future projects. Additionally, all work will not increase nor extend the established infrastructure or induce unplanned population growth. Therefore, no impact is anticipated as a result of the proposed project.

- b) **Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?**

*No impact.* The proposed project would not result in impacts to housing or displace any number of existing people nor necessitate the construction of replacement housing. Therefore, no impact is anticipated as a result of the proposed project.

### 2.1.15 PUBLIC SERVICES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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### 2.1.15.1 Environmental Setting

Fire protection and police protection services in the unincorporated areas of Contra Costa County are provided by the Contra Costa County Fire Department and the Contra Costa County Sheriff's Department, respectively. The proposed project site is not accessible to the public.

### 2.1.15.2 Discussion

- a) **Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:**

#### **Fire protection?**

*No impact.* The proposed project site would continue to be served by the Contra Costa County Fire Department. The closest fire station, Station 59, located at 1685 Bixler Road, Discovery Bay, CA is approximately 11.1 miles from the proposed project site. The construction and maintenance activities of the proposed project would not require additional fire protection facilities and access to the site would be maintained during proposed project activities in accordance with Contra Costa County fire policies and regulations. Therefore, no impact is anticipated as a result of the proposed project.

### Police protection?

*No impact.* The Contra Costa County Sheriff's Patrol Division provides uniformed law enforcement services to residents in the unincorporated areas of Contra Costa County, including the area around Banks Pumping Plant. The activities of the proposed project would not require additional police protection facilities or services. Therefore, no impact is anticipated as a result of the proposed project.

### Schools?

*No impact.* The proposed project would not provide new housing or employment opportunities and would not generate new students or increase the demand on local school systems. Therefore, no impact is anticipated as a result of the proposed project.

### Parks?

*No impact.* The proposed project is located on DWR property associated with the SWP and has no public access. No parks are in the immediate vicinity of the proposed project area. Therefore, no impact is anticipated as a result of the proposed project.

### Other public facilities?

*No impact.* No other public facilities exist in the proposed project area that would be affected by the proposed project activities. Therefore, no impact is anticipated as a result of the proposed project.

## 2.1.16 RECREATION

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. Recreation. Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



- b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

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### 2.1.16.1 Environmental Setting

The proposed project is located within a gated DWR State Water Project facility where public access is restricted, therefore the proposed project site is not located within or adjacent to any recreational opportunities. The Bethany Reservoir State Recreation Area, located 1 mile southwest of the proposed project site, is a popular place for water-oriented recreation, especially fishing and windsurfing. The California Aqueduct Bikeway, which starts approximately 1 mile southwest of the proposed project site, is a paved maintenance road that runs adjacent to the California Aqueduct, and is open for bicycling. The San Joaquin Valley section of the bikeway extends 67 miles down the west side of the valley, from Bethany Reservoir to the San Luis Reservoir State Recreation Area (west of Los Banos).

### 2.1.16.2 Discussion

- 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?**

*No Impact.* The proposed project is located in a gated State-operated facility where public access is restricted. Entry to the proposed project site requires gate entry using identification measures. Due to the proposed project's restricted public access and no use of former or future recreational facilities, there will be no substantial deterioration or increase in the use of existing neighborhood and regional parks or other recreational facilities. Therefore, no impact is anticipated as a result of the proposed project.

- b) **Would the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?**

*No Impact.* The proposed project will not include the use, expansion, or construction of recreational facilities. Therefore, no impact is anticipated as a result of the proposed project.

## 2.1.17 TRANSPORTATION

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with a program, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### 2.1.17.1 Environmental Setting

The proposed project site is located on state-owned land associated with DWR State Water Project facilities in an area not accessible to the public. All-access routes are located on DWR property. Local and regional roads in the vicinity of the proposed project will be used to haul equipment and materials to and from the proposed project area.

### 2.1.17.2 Discussion

**a) Would the project conflict with a program, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian.**

*No impact.* The proposed project would not adversely impact Kelso or Burns Road, or any other local or regional roads in the vicinity of the proposed project site. Haul trips to and from the proposed project area may vary in distance, ranging from approximately 15 miles to 97 miles.

These trips would be staggered through the day during non-peak commute hours, when feasible.

All construction equipment will be transported to the proposed project site once and would be left within the Landfill cap boundary, on existing access roads, and/or at one of the staging and stockpile areas after each workday. Public transit does not exist in the immediate vicinity of the proposed project site. While bicycle and pedestrian facilities exist in the area, the proposed project would not affect public use of any of these facilities. Worker commute trips would be minor during the proposed project period, truck trips would be spread out throughout the workday, and no road closures or obstructions to standard roadway flow (including bicyclists and pedestrians) would be part of the proposed project. Therefore, no impact is anticipated as a result of the proposed project.

**b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?**

*No impact.* The proposed project would not adversely impact any local or regional roads in the proposed project vicinity. The equipment would be stored in the Landfill cap boundary, on existing access roads, and/or at one of the staging/stockpile areas and would be hauled in and out before and after the proposed project components are completed. Traffic from the proposed project would not be expected to increase substantially compared to existing conditions. Therefore, no impact is anticipated as a result of the proposed project.

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

*No impact.* The proposed project would not include any change to roadway design or incompatible uses in the proposed project vicinity. Therefore, no impact is anticipated as a result of the proposed project.

**d) Would the project result in inadequate emergency access?**

*No impact.* Construction equipment would not interfere with emergency access on any other local or regional roads within the vicinity of the proposed project site. The proposed project would not include any road or lane closures. Therefore, no impact is anticipated as a result of the proposed project.

## 2.1.18 TRIBAL CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) 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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### 2.1.18.1 Environmental Setting

Before the arrival of European colonists, this region was settled by Native Americans primarily from the Northern Valley Yokuts and Ohlone (referred to as the *Costañoan*, or coast people, by the Spanish), two populations of decentralized tribes grouped by language and shared cultural practices (Kroeber 1925, Wallace 1978). Today, the modern descendants of these cultural groups maintain an active presence in the area. In 2017, DWR initiated the AB 52 process to consult with tribes who may have a concern with this project. On January 23, 2019, a Sacred Lands file search was conducted by the Native American Heritage Commission. While the Sacred Lands search was returned with negative results, a list of six individuals representing six tribal governments was provided. Consultation letters were sent to all six individuals, as well as

a follow-up letter to the Lone Band of Miwok Indians, who had been contacted under Assembly Bill 52 during an earlier stage of the proposed project. Only one response was received from the Wilton Rancheria, and the letters were followed up with phone calls on April 9, 2019. Wilton Rancheria requested that they and the appropriate agencies be notified should Native American artifacts and/or human remains be uncovered during construction.

## **2.1.18.2 Discussion**

**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**

*No Impact.* The records search, field survey, and consultation with Native American tribes found no Tribal Cultural Resources within the proposed project area or surrounding buffer. The records search conducted by NWIC included a review of the California Register of Historical Resources, which found no cultural resources of any sort within a quarter-mile of the proposed project area. Consultation with all six of the tribes provided by the NAHC also resulted in no record of resources with cultural value to any of the tribes. Therefore, no impact is anticipated as a result of the proposed project.

**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.**

*No Impact.* As listed above, the steps necessary to prepare the archaeological technical document found no Tribal Cultural Resources in the proposed project area or within the quarter-mile buffer. Should knowledge of previously unforeseen cultural resources—such as notification by a Native American tribe at a later date—be brought to DWR’s attention, the resources will be reviewed by DWR and their cultural significance to the Tribes will be considered. Therefore, no impact is anticipated as a result of the proposed project.

## 2.1.19 UTILITIES AND SERVICE SYSTEMS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
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 the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a determination by the wastewater treatment provider that 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Comply with federal, state, and local management and reductions statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### 2.1.19.1 Environmental Setting

The Landfill is a closed, unpermitted, solid waste disposal site. The purpose of the proposed project is to comply with CCCHD and California landfill closure regulations and prevent the

exposure of waste, prevent soil erosion, improve surface drainage, ensure site security, and reduce the need for future maintenance. The proposed project has approval from the CCCHD and CalRecycle on the proposed construction plans.

No utilities are currently found within the proposed project site and the proposed project activities will not require additional facilities to be constructed. There is a natural gas pipeline near the proposed project that goes across the California Aqueduct but not within the proposed project site (CEC, 2017, "California natural gas pipeline"). The proposed project site is almost a mile away from Harvey O. Banks Pumping Plant and the closest transmission line is about 0.5 miles away (CEC, 2017, "transmission line"). The proposed project site does not currently generate wastewater or require the use of a wastewater treatment facility. No facilities that would produce wastewater exist within the proposed project area.

### **2.1.19.2 Discussion**

**a) Would the project 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, the construction or relocation of which could cause significant environmental effects?**

*No impact.* The proposed project will not require relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications. No excavations within Landfill crown will occur during grading. The only underground work that will occur is trenching around the perimeter of landfill crown to secure rodent control barrier material and confine Landfill contents. Therefore, no impact is anticipated as a result of the proposed project.

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

*Less than significant.* The proposed project activities would require water for dust suppression during construction but will not require additional water supplies once the proposed project is completed. Therefore, impacts will be less than significant as a result of the proposed project.

**c) Would the project result in a determination by the wastewater treatment provider that 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.* As noted in (a) above, the proposed project would not generate wastewater. Therefore, no impact is anticipated as a result of the proposed project.



**d) Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?**

*No impact.* The proposed project would not generate solid waste. Therefore, no impact is anticipated as a result of the proposed project.

**e) Would the project comply with federal, state, and local management and reductions statutes and regulations related to solid waste?**

*No impact.* The proposed project would not generate solid waste. Therefore, no impact is anticipated as a result of the proposed project.

## 2.1.20 WILDFIRE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

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### 2.1.20.1 Environmental Setting

The proposed project site and surrounding lands and access roads are State Responsibility Areas (SRA). The Fire Hazard Severity Zone is Moderate in this SRA. The zone classification is based on a multitude of factors: fire behavior models using vegetation density, adjacent wildland areas, and distance to wildland areas, another factor being the probability of a fire threatening nearby structures.

The proposed project lies within the Battalion 6 (Contra Costa County) boundary of the Santa Clara Unit Strategic Fire Plan (CALFIRE 2018). This section assesses fire potential and outlines safety response planning, fuel reduction, and public education and outreach. It also includes the utilization of State Parks and local agency cooperators to reach common goals.

**a) Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?**

*No impact.* The Santa Clara Unit Strategic Plan describes priority areas as wild urban interfaces (WUI) that are both SRA and Local Responsibility Areas (LRA) jurisdiction as well as sensitive infrastructures and cultural areas. The proposed project is not a WUI for it is only an SRA not also an LRA. The proposed project will not impact public roads or highways; will not cause rerouting of traffic or road closures; and construction activities will not result in emergency vehicles or law enforcement delays. Safety and emergency response services will be covered in the proposed project's Job Hazard Assessment daily to ensure safe mobility while on the proposed project site and evacuation if necessary. Therefore, no impact is anticipated as a result of the proposed project.

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

*Less than significant.* Tall, dry grasses surround the proposed project area, which increases the potential for heavy equipment and vehicles actively working on the site to exacerbate wildfire risks. However, pre-project activities, such as emergency response plan overview with all

proposed project personnel and water truck usage will decrease the potential wildfire risk. Therefore, impacts will be less than significant as a result of the proposed project.

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

*No impact.* The proposed project does not require the installation or maintenance of associated infrastructure (roads, fuel breaks, emergency water sources, powerlines or other utilities). Therefore, no impact is anticipated as a result of the proposed project.

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

*No impact.* The proposed project will be improving the current runoff regime and drainage of the landfill. The proposed project will have no impact to people or structures that could pose significant risks through downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. Therefore, no impact is anticipated as a result of the proposed project.

## 2.1.21 MANDATORY FINDINGS OF SIGNIFICANCE

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b.	Does the project have impacts that are individually limited but cumulatively considerable?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

("Cumulatively considerable" meant that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of the other current projects and the effects of probable future projects)?

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

### 2.1.21.1 Discussion

- 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 incorporated.* Implementation of the mitigation measures recommended in this Initial Study would ensure that the construction of the proposed project would not substantially degrade the quality of the environment; reduce the habitat, population, or range of a plant or animal species; or eliminate important examples of California history or prehistory. Section 2.1.3, Air Quality, includes mitigation measures to reduce construction-related emissions from off-road equipment and heavy-duty vehicles. Section 2.1.4, Biological Resources, includes mitigation measures to avoid and minimize impacts to wildlife and special-status plants. Section 2.1.5, Cultural Resources, includes mitigation measures in the event that unanticipated archeological or paleontological resources and/or human remains are identified in the proposed project area during construction. With the implementation of the Mitigation Measures found in the sections listed above, impacts would be reduced to less than significant.

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

*No impact.* The impacts of the proposed project are individually limited and not cumulatively considerable. All environmental impacts that could occur as a result of the proposed project would be reduced to a less than significant level through implementation of the mitigation measures recommended in this Initial Study and when viewed in conjunction with other closely

related past, present or reasonably foreseeable future projects, including Bethany Dam Restoration Burrow Prevention Project and Bethany Dam Sediment Removal Project. Therefore, no impact is anticipated as a result of the proposed project.

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

*No impact.* As described in this Initial Study, the implementation of the proposed project could result in temporary air quality impacts during the construction period. Implementation of mitigation measure AQ-1 discussed in Section 2.1.1 in this Initial Study would ensure that the proposed project would not result in environmental effects that would cause substantial adverse effects on human beings. Therefore, no impact is anticipated as a result of the proposed project.

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## Appendix A: Special-status species with potential to occur in the project area

Common Name	Scientific Name	Federal/ State/ CNPS Status	Other Status	Habitat/Range	Effect Determination	Reason for Effect Determination
<b>PLANTS</b>						
Santa Clara thorn-mint	<i>Acanthomintha lanceolata</i>	-/-/4.2		Often serpentinite rocky chaparral, cismontane woodland, coastal scrub. Shale scree and serpentine. 80-1200 m.	No effect	No shale scree or serpentine habitat in the project area.
large-flowered fiddleneck	<i>Amsinckia grandiflora</i>	FE/SE/1B.1		Cismontane woodland, Valley and foothill grassland	Not likely to adversely affect	Suitable habitat in the project area; however, the species is found in relatively undisturbed grassland and the project area is dominated by ruderal species.
bent-flowered fiddleneck	<i>Amsinckia lunaris</i>	-/-/1B.2	BLM: S	Coastal bluff scrub, cismontane woodland, Valley and foothill grasslands	No effect	Out of species range

California androsace	<i>Androsace elongata</i> ssp. <i>acuta</i>	-/-/4.2		Chaparral, cismontane woodland, coastal scrub, meadows and seeps, pinyon and juniper woodland, Valley and foothill grassland	Not likely to adversely affect	Suitable habitat in the project area; however, the species is found in relatively undisturbed grassland and the project area is dominated by ruderal species.
Contra Costa manzanita	<i>Arctostaphylos manzanita</i> ssp. <i>laevigata</i>	-/-/1B.2		Chaparral. Rocky slopes. 150-610 m.	No effect	No chaparral habitat or rocky slopes.
alkali milk-vetch	<i>Astragalus tener</i> var. <i>tener</i>	-/-/1B.2		Playas, Valley and foothill grasslands (adobe clay), vernal pools	Not likely to adversely affect	Vegetation type within the project area is suitable; however, there are no Pescadero or adobe clays.
heartscale	<i>Atriplex cordulata</i> var. <i>cordulata</i>	-/-/1B.2	BLM: S	Chenopod scrub, meadows and seeps, Valley and foothill grasslands (sandy)	Not likely to adversely affect	Suitable habitat in the project area; however, there are no appropriate soils within the project site.
crownscale	<i>Atriplex coronata</i> var. <i>coronata</i>	-/-/4.2		Alkaline, often clay chenopod scrub, Valley and foothill grassland, vernal pools	Not likely to adversely affect	Suitable habitat in the project area; however, there are no appropriate soils within the project site.

Lost Hills crownscale	<i>Atriplex coronata</i> var. <i>vallicola</i>	-/-/1B.2	BLM: S	Chenopod scrub, valley and foothill grassland, vernal pools. In powdery, alkaline soils that are vernal moist with Frankenia, Atriplex spp. and Distichlis. 45-885 m.	No effect	Out of species range. Previously recorded occurrences of <i>A. coronata</i> var. <i>vallicola</i> are now thought to be misidentifications of <i>A. coronata</i> var. <i>coronata</i> . Taxon is limited to the southern San Joaquin Valley.
brittlescale	<i>Atriplex depressa</i>	-/-/1B.2		Alkaline, clay chenopod scrub, meadows and seeps, playas, Valley and foothill grassland, vernal pools	Not likely to adversely affect	Suitable habitat in the project area; however, the project site does not contain alkali soils.
lesser saltscale	<i>Atriplex miniscula</i>	-/-/1B.1		Alkaline, sandy chenopod scrub, playas, Valley and foothill grassland	Not likely to adversely affect	Suitable habitat in the project area; however, the project site does not contain alkali soils.
big-scale balsamroot	<i>Balsamorhiza macrolepis</i>	-/-/1B.2	BLM: S FS: S	Chaparral, cismontane woodland, Valley and foothill grassland	Not likely to adversely affect	Suitable habitat in the project area; however, the species is found in relatively undisturbed grassland and the project area is dominated by ruderal species.

big tarplant	<i>Blepharizonia plumosa</i>	-/-/1B.1		Valley and foothill grassland	Not likely to adversely affect	Suitable habitat in the project area; however, the species is found in relatively undisturbed grassland and the project area is dominated by ruderal species.
Mt. Diablo fairy-lantern	<i>Calochortus pulchellus</i>	-/-/1B.2		Grassy slopes within chaparral, cismontane woodland, and riparian woodland	No effect	Outside of species range.
bristly sedge	<i>Carex comosa</i>	-/-/2B.1		Coastal prairie, marshes and swamps (lake margins), Valley and foothill grassland	No effect	No suitable habitat in the project area.
Succulent owl's clover	<i>Castilleja campestris</i> var. <i>succulenta</i>	T/E/1B.2		Vernal Pools, often acidic soils. 20-705 m.	No effect	No suitable habitat in project area.
Lemmon's jewel-flower	<i>Caulanthus lemmonii</i>	-/-/1B.2	BLM: S FS: S	Pinyon and juniper woodland, Valley and foothill grassland	No effect	Outside of species range.
Congdon's tarplant	<i>Centromadia parryi</i> ssp. <i>congdonii</i>	-/-/1B.1	BLM: S	Alkaline Valley and foothill grassland	Not likely to adversely affect	Suitable habitat in the project area; however, the project site does not contain appropriate soils.

Parry's rough tarplant	<i>Centromadia parryi</i> ssp. <i>rudis</i>	-/-/4.2		Alkaline, vernally mesic, seeps, sometimes roadsides in Valley and foothill grassland, vernal pools	Not likely to adversely effect	Suitable habitat in the project area; however, the project site does not contain appropriate soils.
Bolander's water-hemlock	<i>Cicuta maculata</i> var. <i>bolanderi</i>	-/-/2.1		Coastal, fresh, or brackish water marshes and swamps	No effect	No suitable habitat in project area.
hispid bird's-beak	<i>Chloropyron molle</i> ssp. <i>hispidum</i>	-/-/1B.1	BLM: S	Alkaline meadows and seeps, playas, Valley and foothill grassland	Not likely to adversely affect	No suitable habitat in project area, and the project site is highly disturbed.
palmate-bracted salty bird's-beak	<i>Chloropyron palmatum</i> (= <i>Cordylanthus palmatus</i> )	FE/SE/1B.1		Alkaline chenopod scrub, Valley and foothill grassland	Not likely to adversely affect	No suitable habitat in project area, and the project site is highly disturbed.
small flowered morning glory	<i>Convolvulus simulans</i>	-/-/4.2		Chaparral, coastal scrub, valley and foothill grassland. Wet clay, serpentine ridges. 30-700m.	Not likely to adversely affect	Habitat is marginally suitable due to dominance of non-native, unmanaged ruderal species
Livermore tarplant	<i>Deinandra bacigalupii</i>	-/SE/1B.1		Alkaline meadows and seeps	No effect	Out of species range.

Hospital Canyon larkspur	<i>Delphinium californicum</i> ssp. <i>interius</i>	-/-/1B.2		Openings in chaparral, mesic cismontane woodland, coastal scrub	No effect	No suitable habitat in project area.
recurved larkspur	<i>Delphinium recurvatum</i>	-/-/1B.2	BLM: S	Alkaline chenopod scrub, cismontane woodland, Valley and foothill grassland	Not likely to adversely affect	Suitable habitat in the project area; however, the project site does not contain appropriate soils.
Delta button-celery	<i>Eryngium racemosum</i>	-/SE/1B.1		Vernally mesic clay depressions in riparian scrub	No effect	No suitable riparian habitat.
spiny-sepaled button-celery	<i>Eryngium spinosepalum</i>	-/-/1B.2		Vernal pools, valley and foothill grassland. Some sites on clay soil of granitic origin; vernal pools, within grassland.15-1270 m.	Not likely to adversely affect	Suitable habitat in the project area; however, the project site does not contain appropriate soils.
diamond-petaled California poppy	<i>Eschscholzia rhombipetala</i>	-/-/1B.1	BLM: S	Alkaline, clay Valley and foothill grassland	Not likely to adversely affect	Suitable habitat in the project area; however, habitat is dominated by dense, unmanaged ruderal species that would likely crowd out this short statured species.

San Joaquin spearscale	<i>Extriplex joaquiniana</i>	-/-1B.2	BLM: S	Alkaline, chenopod scrub, meadows and seeps, playas, Valley and foothill grassland	Not likely to adversely affect	Suitable habitat in the project area; however, the project site does not contain appropriate soils.
stinkbells	<i>Fritillaria agrestis</i>	-/-4.2		Clay, sometimes serpentinite chaparral, cismontane woodland, pinyon and juniper woodland, Valley and foothill grassland	Not likely to adversely affect	Suitable habitat in the project area; however, most of the habitat is dominated by dense, unmanaged ruderal species that would likely crowd out this species.
Diablo helianthella	<i>Helianthella castanea</i>	-/-1B.2	BLM: S	Broad-leafed upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, Valley and foothill grassland	No effect	Out of species range.
hogwallow starfish	<i>Hesperovax caulescens</i>	-/-4.2		Mesic, clay Valley and foothill grassland, shallow vernal pools	Not likely to adversely affect	Suitable habitat in the project area; however, the project site does not contain appropriate soils.



Brewer's western flax	<i>Hesperolinon breweri</i>	-/-/1B.2	BLM: S	Usually serpentinite chaparral, cismontane woodland, Valley and foothill grassland	Not likely to adversely affect	No appropriate soils, edge of species range.
woolly rose-mallow	<i>Hibiscus lasiocarpus</i> var. <i>occidentalis</i>	-/-/1B.2		Marshes and swamps (freshwater)	No effect	No suitable wet habitat in the project footprint.
Contra Costa goldfields	<i>Lasthenia conjugens</i>	FE/-/1B.1		Mesic cismontane woodland, alkaline playas, Valley and foothill grassland, vernal pools	Not likely to adversely affect	Suitable habitat in the project area; however, the project site does not contain appropriate soils.
Ferris' goldfields	<i>Lasthenia ferrisiae</i>	-/-/4.2		Alkaline, clay vernal pools	Not likely to adversely affect	Suitable habitat in the project area; however, the project site does not contain appropriate soils.
Delta tule pea	<i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	-/-/1B.2		Freshwater and brackish marshes and swamps	No Effect	No suitable habitat within the project site.
Mason's lilaeopsis	<i>Lilaeopsis masonii</i>	-/R/1B.1		Freshwater and brackish marshes and swamps, riparian scrub	No effect	No suitable habitat within the project site.

Delta mudwort	<i>Limosella australis</i>	-/-/2B.1		Riparian scrub, marshes and swamps	No effect	No suitable habitat within the project site.
showy golden madia	<i>Madia radiata</i>	-/-/1B.1	BLM: S	Cismontane woodland, Valley and foothill grassland	No effect	Out of species range.
little mouseltail	<i>Myosurus minimus</i> ssp. <i>apus</i>	-/-/3.1		Valley and foothill grassland, alkaline vernal pools	No effect	Out of species range; reported populations in this area are presumed hybrids of related species.
adobe navarretia	<i>Navarretia nigelliformis</i> ssp. <i>nigelliformis</i>	-/-/4.2		Clay vernal mesic Valley and foothill grassland, vernal pools	Not likely to adversely effect	Suitable habitat in the project area; however, the project site does not contain appropriate soils.
shining navarretia	<i>Navarretia nigelliformis</i> ssp. <i>radians</i>	-/-/1B.2	BLM: S	Cismontane woodland, Valley and foothill grassland, vernal pools	Not likely to adversely affect	Suitable habitat in the project area; however, the project site does not contain appropriate soils.
Antioch Dunes evening-primrose	<i>Oenothera deltoides</i> ssp. <i>howellii</i>	FE/SE/1B.1		Remnant river bluffs and sand dunes east of Antioch. 1-15 m.	No effect	No suitable habitat within the project site.

hairless popcorn-flower	<i>Plagiobothrys glaber</i>	-/-/1A		Alkaline meadows and seeps, coastal salt marshes and swamps	No effect	No suitable habitat within the project site.
California alkali grass	<i>Puccinellia simplex</i>	-/-/1B.2		Meadows and seeps, chenopod scrub, valley and foothill grasslands, vernal pools. Alkaline, vernal mesic. Sinks, flats, and lake margins. 1-915 m.	Not likely to adversely effect	Suitable habitat in the project area; however, the project site does not contain appropriate soils.
marsh skullcap	<i>Scutellaria galericulata</i>	-/-/2B.2		Lower montane coniferous forest, mesic meadows and seeps, marshes and swamps	No effect	No suitable habitat within the project site.
chaparral ragwort	<i>Senecio aphanactis</i>	-/-/2B.2		Chaparral, cismontane woodland, coastal scrub	No effect	No suitable habitat within the project site.
long-styled sand-spurrey	<i>Spergularia macrotheca</i> var. <i>longistyla</i>	-/-/1B.2 <sup>1</sup>		Alkali seeps, vernal pools, Valley and foothill grassland	Not likely to adversely effect	Suitable habitat in the project area; however, the project site does not contain appropriate soils.

Suisun marsh aster	<i>Symphyotrichum lentum</i>	-/-/1B.2		Brackish and freshwater marshes and swamps	No effect	No suitable habitat within the project site.
saline clover	<i>Trifolium hydrophilum</i>	-/-/1B.2		Marshes and swamps, Valley and foothill grassland (mesic, alkaline), vernal pools	Not likely to adversely effect	Suitable habitat in the project area; however, the project site does not contain appropriate soils.
caper-fruited tropidocarpum	<i>Tropidocarpum capparideum</i>	-/-/1B.1	FS: S	Valley and foothill grassland. Alkaline clay. 0-360 m.	Not likely to adversely effect	Suitable habitat in the project area; however, the project site does not contain appropriate soils.
<b>INVERTEBRATES</b>						
conservancy fairy shrimp	<i>Branchinecta conservatio</i>	FE/-/-	IUCN: EN	Vernal pools on many landforms and soil types	No effect	Small areas of ponding in and around the project footprint that may be suitable for listed vernal pool invertebrates; however, the closest known occurrences are over 20 miles to the southeast, and 30 miles to the northwest.
longhorn fairy shrimp	<i>Branchinecta longiantenna</i>	FE, X/-/-	IUCN: EN	Vernal pools in grasslands and on sandstone outcrops	Not likely to adversely affect	Small areas of ponding in the project area that may be suitable for listed vernal pool invertebrates; however, this species has

						not been observed during surveys.
vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	FT, X/-/-	IUCN: VU	Vernal pools and other ephemeral habitats on many landforms and soil types	Not likely to adversely affect	Small areas of ponding in the project area that may be suitable for listed vernal pool invertebrates; however, this species has not been observed during surveys.
San Bruno elfin butterfly	<i>Callophrys mossii beyensis</i>	FE/-/-	IUCN: CR	Coastal scrub habitat on steep, north-facing slopes within the fog belt. Larval host plant is <i>Sedum spathulifolium</i> .	No effect	Project is outside of species range. No host plants in the project area.
valley elderberry longhorn beetle	<i>Desmocerus californicus dimorphus</i>	FT/-/-		Elderberry shrubs in riparian and oak savanna habitats	No effect	No host plants in the project area.
Delta green ground beetle	<i>Elaphrus viridis</i>	FT/-/-	IUCN: CR	Associated with vernal pool habitat.	No effect	Project is outside of known current distribution and the closest occurrence is over 30 miles to the northwest.
Bay checkerspot butterfly	<i>Euphydryas editha bayensis</i>	FT/-/-	IUCN: CR	Shallow serpentine or similar soils, required dwarf plantain or purple	No effect	Project is outside of species range. No host plants in the project area.

				owl's clover for larval survival.		
vernal pool tadpole shrimp	<i>Lepidurus packardii</i>	FE/-/-	IUCN: EN	Vernal pools and other ephemeral habitats on many landforms and soil types	No effect	Small areas of ponding in the project area that may be suitable for listed vernal pool invertebrates; however, this species has not been observed during surveys. Closest known occurrences are 30 miles northeast, northwest, and southwest.
<b>FISH</b>						
North American Green Sturgeon - southern DPS	<i>Acipenser medirostris</i>	FT/-/-	AFS: VU CDFW: SSC IUCN: NT NMFS: SC	Sacramento River Basin, Sacramento-San Joaquin Delta	No effect	No appropriate habitat in the project area.
Delta Smelt	<i>Hypomesus transpacificus</i>	FT, X/SE/-	AFS: TH IUCN: EN	Rivers and sloughs in the Suisun Bay and the Sacramento-San Joaquin Delta	No effect	No appropriate habitat in the project area.
Steelhead - Central Valley DPS	<i>Oncorhynchus mykiss irideus</i>	FT, X/-/-	AFS: TH	Central Valley rivers and streams, Delta, SF Bay estuary	No effect	No appropriate habitat in the project area.
Chinook Salmon - Central Valley spring-run ESU	<i>Oncorhynchus tshawytscha</i>	FT/ST/-	AFS: TH	Central Valley rivers and streams, Delta, SF Bay estuary	No effect	No appropriate habitat in the project area.

Chinook Salmon - Sacramento River winter-run ESU	<i>Oncorhynchus tshawytscha</i>	FE/SE/-	AFS: EN	Central Valley rivers and streams, Delta, SF Bay estuary	No effect	No appropriate habitat in the project area.
Longfin Smelt	<i>Spirinchus thaleichthys</i>	FC/ST/-	CDFW: SSC	Delta, SF Bay estuary	No effect	No appropriate habitat in the project area.
Euchalon	<i>Thaleichthys pacificus</i>	FT/-/-		Found in Klamath River, Mad River, Redwood Creek, and in small numbers in Smith River and Humboldt Bay tributaries.	No effect	No appropriate habitat in the project area.
<b>AMPHIBIANS</b>						
California tiger salamander	<i>Ambystoma californiense</i>	FT, X/ST/-	IUCN: VU	Grasslands and oak savannas with vernal pools or seasonal ponds	May adversely affect	Several nearby CNDDB occurrences and potential aquatic habitat within 1 mile of the project footprint. Upland habitat within the project site.
foothill yellow-legged frog	<i>Rana boylei</i>	-/-/-	BLM: S CDFW: SSC FS: S IUCN: NT,	Rocky streams and rivers in forest, chaparral, and woodlands	No Effect	Out of species range. No suitable breeding habitat nearby and closest occurrence is 12 miles southwest of the project site.
California red-legged frog	<i>Rana draytonii</i>	FT, X/-/-	CDFW: SSC IUCN: VU	Still water in streams and ponds with deep pools and emergent vegetation in	May adversely affect	Several nearby CNDDB occurrences and potential aquatic habitat within 1 mile of the project



				grasslands, woodlands, and forests		footprint. Upland habitat in the project site.
western spadefoot	<i>Spea hammondi</i>	-/-/-	BLM: S CDFW: SSC IUCN: NT	Occurs primarily in grassland habitats but can be found in valley-foothill hardwood woodlands.	Not likely to adversely affect	Species in not known or likely to occur in the project area. Closest occurrences are 10 miles southwest of the project site.
<b>REPTILES</b>						
Northern California legless lizard	<i>Anniella pulchra</i>	-/-/-	CDFW: SSC FS: S	Vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks	Not likely to adversely affect	Species in not known or likely to occur in the project area. The closest occurrence is over 10 miles south and north of the project site.
California glossy snake	<i>Arizona elegans occidentalis</i>	-/-/-	CDFW: SSC	Arid scrub, washes, grasslands and chaparral, with loose soil for easy burrowing. From the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and	May adversely affect	Suitable grassland habitat is present within the project site. Closest occurrence is 6.5 miles south.

				Peninsular ranges, south to Baja California.		
western pond turtle	<i>Emys</i> (= <i>Actinemys</i> ) <i>marmorata</i>	-/-/-	BLM: S CDFW: SSC FS: S IUCN: VU	Ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches with abundant vegetation in woodland, forest, and grassland	May adversely affect	Suitable upland habitat is present within the project site. Closest occurrence is 0.25 miles away.
San Joaquin whipsnake (coachwhip)	<i>Masticophis flagellum ruddocki</i>	-/-/-	CDFW: SSC	Open, dry, treeless areas, including grassland and saltbush scrub	May adversely affect	Suitable habitat is present within the project site. Closest occurrence is nearly 6 miles away.
Alameda whipsnake (coachwhip)	<i>Masticophis lateralis euryxanthus</i>	FT, X/ST/-		Open areas in canyons, rocky hillsides, chaparral scrublands, open woodlands, pond edges, stream courses in a small area within Contra Costa and Alameda Counties	No effect	Out of species range. Closest occurrence is nearly 7 miles west of the project site.
Blainville's (coast) horned lizard	<i>Phrynosoma blainvillii</i>	-/-/-	BLM: S CDFW: SSC FS: S IUCN: LC	Open areas of sandy soil and low vegetation in grasslands, coniferous forests,	Not likely to adversely affect	Suitable habitat is present in the project area, and available forage in the form of harvester ant colonies are present; however, the closest

				woodlands, and chaparral		occurrences are 5 miles northwest and 7 miles southeast of the project site.
giant garter snake	<i>Thamnophis gigas</i>	FT/ST/-	IUCN: VU	Prefers freshwater marsh and low gradient streams. Has adapted to drainage canals and irrigation ditches.	No effect	Outside of species range and no suitable habitat in the project area.
<b>BIRDS</b>						
Cooper's Hawk (Nesting)	<i>Accipiter cooperii</i>		CDFW: WL IUCN: LC	Woodlands, nests mainly in riparian growth of deciduous trees, and live oaks.	No effect	No suitable woodland habitat in the project area. The closest potential nest trees are nearly 0.5 miles to the southwest of the project site.
Tricolored Blackbird (nesting colony)	<i>Agelaius tricolor</i>	-/ST/-	ABC: WLBCC BLM: S CDFW: SSC FWS: BCC IUCN: EN	Nest in a variety of substrates, most are either flooded or armored, forage in shrub lands, pastures, and wetlands	Not likely to adversely affect	No suitable nesting habitat in the project area. Most vegetation within the project area is grassy, with no tall vegetation that could support a nesting colony. Species may occur in the project area in the winter.

Grasshopper Sparrow	<i>Ammodramus savannarum</i>	-/-/-	CDFW: SSC IUCN: LC	Dense (prefers native) grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes.	Not likely to adversely affect	Marginal habitat quality in the project area. Project site is primarily dominated by non-native ruderal vegetation.
Golden Eagle (nesting & wintering)	<i>Aquila chrysaetos</i>	-/-/-	BLM: S CDF: S CDFW: FP FWS: BCC IUCN: LC	Rolling foothills, mountain areas, sage-juniper flats, and desert.	Not likely to adversely affect	Species in not known or likely to occur in the project area. Has not been observed during surveys, and is unlikely to occur, within ¼ mile of the project site.
Short-eared Owl	<i>Asio flammeus</i>	-/-/-	CDFW: SSC ICUN: LC	Found in swamp lands, both fresh and salt; lowland meadows; irrigated alfalfa fields.	Not likely to adversely affect	No suitable nesting habitat and marginal quality foraging habitat in the project area. The species has some potential to occur during winter.
Burrowing Owl (burrow sites & some wintering sites)	<i>Athene cunicularia</i>	-/-/-	BLM: S CDFW: SSC FWS: BCC IUCN: LC	Grasslands, deserts, and scrublands characterized by low-growing vegetation and suitable burrows	May adversely affect	Suitable habitat is present in the project area and recorded occurrences nearby from 1990's. Observed in spring 2019 near the project site.

Ferruginous Hawk	<i>Buteo regalis</i>	-/-/-	CDFW: WL ICUN: LC FWS: BCC	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats.	Not likely to adversely affect	Project site may provide suitable foraging habitat in the winter. Species is uncommon in the winter and not present in the area during the nesting season.
Swainson's Hawk (nesting)	<i>Buteo swainsoni</i>	-/ST/-	BLM: S FWS: BCC IUCN: LC	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, & agricultural or ranch lands with groves or lines of trees.	Not likely to adversely affect	Species is not known or likely to occur in the project area. Has not been observed during surveys, and is unlikely to occur, within ¼ mile of the project site.
Northern Harrier (nesting)	<i>Circus hudsonius (cyaneus)</i>	-/-/-	CDFW: SSC IUCN: LC	Open areas such as freshwater and brackish marshes, wet meadows, grasslands, pasture. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	Not likely to adversely affect	Very limited marsh habitat in the project area. Closest area of expansive marsh is located 2 miles northeast of the project site. Species may be observed foraging near the project area.
Western Yellow-billed Cuckoo	<i>Coccyzus americanus occidentalis</i>	FT/SE/-	BLM: S FS: S FWS: BCC	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems.	No effect	No suitable habitat in the project area. The closest occurrence is over 20 miles southeast.

White-tailed Kite (nesting)	<i>Elanus leucurus</i>	-/-/-	BLM: S CDFW: FP IUCN: LC	Open areas such as grasslands, oak savannahs and woodlands, scrublands, and marshes	Not likely to adversely affect	No nearby occurrences and no suitable nesting habitat in the project area. Species may be observed foraging near the project area.
California Horned Lark	<i>Eremophila alpestris actia</i>	-/-/-	BLM: S CDFW: WL IUCN: LC	Coastal regions, chiefly from Sonoma County to San Diego County. Also main part of San Joaquin Valley and east to foothills. Nests on ground.	May adversely affect	Openings in densely vegetated habitat could provide suitable nesting habitat.
Prairie Falcon	<i>Falco mexicanus</i>	-/-/-	CDFW: WL FWS: BCC IUCN: LC	Inhabits dry, open terrain, either level or hilly. Nests in cliffs.	Not likely to adversely affect	No nearby cliffs suitable for nesting in the project area. The closest occurrence is 4.5 miles west. Species may be observed foraging near the project area.
Loggerhead Shrike (nesting)	<i>Lanius ludovicianus</i>	-/-/-	CDFW: SSC FWS: BCC IUCN: LC	Open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches	Not likely to adversely affect	Occurrences 5 miles east, adjacent to the intake channel and at CCF, but few shrubs suitable for nesting within the project site. Suitable foraging habitat exists in the project area.

California Black Rail	<i>Laterallus jamaicensis coturniculus</i>	-/ST/-	BLM: S, CDFW: FP FWS: BCC IUCN: NT	Saline, brackish, and freshwater emergent wetlands. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	No effect	No suitable habitat in the project area.
Song Sparrow ("Modesto" population)	<i>Melospiza melodia</i>	-/-/-	CFDW: SSC		No effect	Outside of subspecies' range. No suitable habitat in the project area.
California Ridgway's (clapper) Rail	<i>Rallus (longirostris) obsoletus obsoletus</i>	FE/SE/-	IUCN: NT		No effect	No suitable habitat in the project area.
California Least Tern	<i>Sternula (Sterna) antillarum browni</i>	FE/SE/-	IUCN: EN	Nests along the coast from San Francisco Bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, landfills, or paved areas.	No effect	No suitable habitat in the project area.
Least Bell's Vireo	<i>Vireo bellii pusillus</i>	FE/SE/-	ICUN: NT	Summer resident of Southern California in low riparian in	No effect	No suitable habitat in the project area..

				vicinity of water or in dry river bottoms; below 2000 ft.		
<b>MAMMALS</b>						
pallid bat	<i>Antrozous pallidus</i>	-/-/-	BLM: S CDFW: SSC FS: S IUCN: LC WBWG: H	Roost in rock crevices, old buildings, bridges, caves, mines, and hollow trees within grasslands, shrub lands, woodlands, and forests	Not likely to adversely affect	No suitable roosting habitat in the project area. The closest occurrences are over 15 miles south of the project site.
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	-/-/-	BLM: S CDFW: SSC F: S IUCN: LC WBWG: H	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	Not likely to adversely affect	No suitable roosting habitat in the project area. The closest occurrences are over 15 miles south of the project site.
western mastiff bat	<i>Eumops perotis californicus</i>	-/-/-	BLM: S CDFW: SSC WBWG: H	Roost in crevices in cliff faces and rocks, high buildings, trees, and tunnels in a variety of open,	Not likely to adversely affect	No suitable roosting habitat in the project area. The closest occurrences are 17 miles south of the project site.



				semi-arid to arid habitats		
riparian (San Joaquin Valley) woodrat	<i>Neotoma fuscipes riparia</i>	FE/-/-	CDFW: SSC	Riparian areas along the San Joaquin, Stanislaus & Tuolumne rivers.	No effect	No suitable habitat in the project area
riparian brush rabbit	<i>Sylvilagus bachmani riparius</i>	FE/SE/-		Riparian areas on the San Joaquin River in northern Stanislaus County. Dense thickets of wild rose, willows, and blackberries.	No effect	No suitable habitat in the project area
American badger	<i>Taxidea taxus</i>	-/-/-	CDFW: SSC IUCN: LC	Variety of open, arid habitats, most commonly associated with grasslands, savannas, mountain meadows, and open areas of desert scrub	May adversely affect	Suitable habitat and known occurrences within 1.5 miles of the project site.
San Joaquin kit fox	<i>Vulpes macrotis mutica</i>	FE/ST/-		Variety of habitats, primarily grasslands and scrublands, with loose-textured soil	May adversely affect	Suitable habitat and several known historical occurrences within 2 miles of the project site.

## Appendix B: Plant species found within the project site

Scientific Name	Common Name	Family
<i>Amsinckia menziesii</i>	fiddleneck	Boraginaceae
<i>Avena barbata</i>	slim oat	Poaceae
<i>Baccharis pilularis</i>	coyote brush	Asteraceae
<i>Bromus diandrus</i>	bromegrass	Poaceae
<i>Bromus hordeaceus</i>	soft chess	Poaceae
<i>Bromus madritensis</i>	foxtail chess	Poaceae
<i>Centaurea solstitialis</i>	yellow star thistle	Asteraceae
<i>Centromadia pungens</i>	common tarweed	Asteraceae
<i>Crassula connata</i>	sand pygmy weed	Crassulaceae
<i>Croton setiger</i>	dove weed	Euphorbiaceae
<i>Deinandra lobbiai</i>	threeray tarweed	Asteraceae
<i>Dittrichia graveolens</i>	stinkwort	Asteraceae
<i>Erodium botrys</i>	big heron bill	Geraniaceae
<i>Euphorbia serpyllifolia</i>	thyme-leaved spurge	Euphorbiaceae
<i>Festuca myuros</i>	rattail fescue	Poaceae
<i>Festuca perenne</i>	perennial rye grass	Poaceae
<i>Grindelia camporum</i>	gumweed	Asteraceae
<i>Hordeum murinum</i>	foxtail barley	Poaceae
<i>Hypochaeris glabra</i>	smooth cats ear	Asteraceae
<i>Hypochaeris radicata</i>	hairy cats ear	Asteraceae
<i>Lactuca serriola</i>	prickly lettuce	Asteraceae
<i>Lupinus microcarpus</i>	chick lupine	Fabaceae
<i>Lythrum hyssopifolium</i>	hyssop loosestrife	Lythraceae
<i>Melilotus indicus</i>	annual yellow sweetclover	Fabaceae
<i>Phleum pratense</i>	common timothy	Poaceae
<i>Senecio vulgaris</i>	common groundsel	Asteraceae
<i>Silybum marianum</i>	milk thistle	Asteraceae
<i>Sonchus oleraceus</i>	sow thistle	Asteraceae
<i>Spergularia bocconi</i>	Boccone's sand spurry	Caryophyllaceae
<i>Spergularia rubra</i>	purple sand spurry	Caryophyllaceae
<i>Spergularia villosa</i>	hairy sand spurry	Caryophyllaceae
<i>Trifolium hirtum</i>	rose clover	Fabaceae
<i>Vicia villosa</i>	hairy vetch	Fabaceae

## **Appendix C: Greenhouse gas (GHG) emissions reduction plan consistency determination**

# Greenhouse Gas(GHG) Emissions Reduction Plan Consistency Determination

## For Projects Using Contractors or Other Outside Labor

This form is to be used by DWR project managers to document a DWR CEQA project's consistency with the DWR Greenhouse Gas Emissions Reduction Plan. This form is to be used only when DWR is the Lead Agency and when contractors or outside labor and equipment are used to implement the project.

Additional Guidance on filling out this form can be found at:

[http://dwrclimatechange.water.ca.gov/guidance\\_resources.cfm](http://dwrclimatechange.water.ca.gov/guidance_resources.cfm)

The DWR Greenhouse Gas Emissions Reduction Plan can be accessed at:

<https://water.ca.gov/Programs/All-Programs/Climate-Change-Program/Climate-Action-Plan>

<b>Project Name:</b>	Old Banks Landfill Cap
<b>Environmental Document Type:</b>	CEQA Initial Study/Mitigated Negative Declaration
<b>Manager's Name:</b>	Mike Driller
<b>Manager's E-mail:</b>	Mike.Driller@water.ca.gov
<b>Division:</b>	Division of Engineering
<b>Office, Branch, or Field Division:</b>	Dams and Canals

<b>Short Project Description:</b>
DWR will cap the Old Banks Landfill by clearing existing vegetation, removing the upper 2 to 4 inches of topsoil of the Landfill crown, grading the existing Landfill crown by adding fill soil materials in localized areas in order to bring the site to grade, placing a commercially available Xcluder rodent control fill fabric, placing a 1-foot thick surface layer on top of the rodent control fill fabric to protect it, and return the project site to pre-project conditions by hydroseeding

<b>Project GHG Emissions Summary:</b>		
Total Construction Emissions	218	mtCO <sub>2</sub> e
Maximum Annual Construction Emissions	218	mtCO <sub>2</sub> e
<input checked="" type="checkbox"/> All other emissions from the project not accounted for above will occur as ongoing operational, maintenance, or business activity emissions and therefore have already been accounted for and analyzed in the GGERP.		

<b>Extraordinary Construction Project Determination:</b>	
Do total project construction emissions exceed 25,000 mtCO <sub>2</sub> e for the entire construction phase or exceed 12,500 mtCO <sub>2</sub> e in any single year of construction?	
<input checked="" type="checkbox"/> No- Additional analysis not required	<input type="checkbox"/> Yes - Project specific emissions mitigation measures have been included in the environmental analysis document for the project

**Project GHG Reduction Plan Checklist:**

☒ All Project Level GHG Emissions Reduction Measures have been incorporated into the design or implementation plan for the project. ([Project Level GHG Emissions Reduction Measures](#))

Or

☐ All feasible Project Level GHG Emissions Reduction Measures have been incorporated into the design or implementation plan for the project and Measures not incorporated have been listed and determined not to apply to the proposed project (include as an attachment)

☒ Project does not conflict with any of the Specific Action GHG Emissions Reduction Measures ([Specific Action GHG Emissions Reduction Measures](#))

Would implementation of the project result in additional energy demands on the SWP system of 15 GWh/yr or greater?

☐ Yes ☒ No

If you answered Yes, attach a letter documenting that the project has consulted with the DWR SWP Power and Risk Office regarding the additional power requirements of the project.

Is there substantial evidence that the effects of the proposed project may be cumulatively considerable notwithstanding the proposed project's compliance with the requirements of the DWR GHG Reduction Plan?

☐ Yes ☒ No

If you answered Yes, the project is not eligible for streamlined analysis of GHG emissions using the DWR GHG Emissions Reduction Plan. (See CEQA Guidelines, section 15183.5, subdivision (b)(2).)

Based on the information provided above and information provided in associated environmental documentation completed pursuant to the above referenced project, the DWR CEQA Climate Change Committee has determined that:

- ☒ The entire proposed project is consistent with the DWR Greenhouse Gas Reduction Plan and the greenhouse gases emitted by the project are covered by the plan's analysis.
- ☐ The operational and maintenance phase of the project is consistent with the DWR Greenhouse Gas Reduction Plan and the greenhouse gases emitted by the project are covered by the plan's analysis. Emissions from the construction phase of the project are not covered by the DWR Greenhouse Gas Emissions Reduction Plan and will be mitigated as part of the project.

Project Manager Signature: Michael W. Driller Date: 8/22/2019

C4 Approval Signature: Jennifer Morales Date: 9/9/2019

**Attachments:**

- ☒ GHG Emissions Inventory ☐ List and Explanation of excluded Project level GHG Emissions Reduction Measures ☐ SWP Power and Risk Office Consultation Letter

Links:

<https://current.water.ca.gov/programs/icc/SitePages/Home.aspx>

<https://water.ca.gov/Programs/All-Programs/Climate-Change-Program>