

# Groundwater Recharge and Swainson's Hawk Habitat Preservation Project

## PROPOSED MITIGATED NEGATIVE DECLARATION AND INITIAL STUDY



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## **NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION**

NOTICE IS HEREBY GIVEN that the Sacramento Area Flood Control Agency (SAFCA) (a) has concluded after preparing an Initial Study that the Groundwater Recharge and Swainson's Hawk Habitat Preservation Project (Project) would not have a significant effect on the environment with implementation of mitigation measures described in the Initial Study; (b) has prepared a proposed Mitigated Negative Declaration (MND) for the Project; and (c) anticipates recommending to the SAFCA Board of Directors that it adopt the MND.

### **Project Title**

Groundwater Recharge and Swainson's Hawk Habitat Preservation Project

### **Brief Description of the Project and Its Location**

The project is centrally located in unincorporated Sacramento County south of Sloughhouse Road and the Folsom South Canal and generally between Deer Creek and the Cosumnes River. The parcel to be acquired is Sacramento County Assessor's Parcel Number (APN) 126-0480-004-0000.

The Groundwater Recharge and Swainson's Hawk Habitat Preservation Project consists of protecting 129 acres for groundwater recharge and constructing a pipeline to allow surface water spreading and infiltration on the property. SAFCA will buy fee title to the property that will secure the right to recharge groundwater by surface application on the site. SAFCA will construct a pipeline from the adjoining Omochumne-Hartnell Water District (OHWD) groundwater recharge project (OHWD Project) onto the site. The source of recharge water is excess (winter) stormwater flow diversion from the Cosumnes River. Up to four monitoring wells or real-time transducers will be installed on or near the site.

### **Review Period**

The 30-day public review period begins on March 27, 2020 and ends on April 27, 2020.

### **Date, Time and Place of Public Meeting**

The SAFCA Board of Directors intends to consider adoption of the Mitigated Negative Declaration at its regularly scheduled board meeting on May 21, 2020 after 3:00 p.m. The meeting will be held by teleconference pursuant to Governor Newsom's Executive Order (EO) N-29-20, superseding EO N-25-20, if applicable state or local public officials continue to impose or recommend measures to promote social distancing. If applicable social distancing measures are no longer being imposed or recommended, the meeting will be held at the Sacramento County Board of Supervisors' Chambers located at 700 H Street, Sacramento, CA 95814. To confirm the meeting location or method, please contact SAFCA's Clerk of the Board at (916) 874-8734 or [RussellL@SacCounty.net](mailto:RussellL@SacCounty.net).

**Address Where the Proposed Mitigated Negative Declaration and Documents Incorporated by Reference May Be Reviewed**

The proposed Mitigated Negative Declaration and Initial Study may be downloaded at [http://www.safca.org/protection/Environmental\\_Public\\_Review.html](http://www.safca.org/protection/Environmental_Public_Review.html). The proposed Mitigated Negative Declaration and Initial Study may also be reviewed at:

SAFCA  
1007 7<sup>th</sup> St, 7<sup>th</sup> Floor  
Sacramento, CA 95814

Please call (916) 874-7606 to arrange a viewing during business hours (Monday through Friday between 8:00 a.m. and 5:00 p.m.). In the event the SAFCA office is closed due to public health guidance and you cannot view the document electronically and you wish to review the document, please provide your mailing address to [SAFCAReview@saccounty.net](mailto:SAFCAReview@saccounty.net) and a copy will be mailed to you.

**Contact**

Please send your written comments during the review period to: Gary Bardini, SAFCA, 1007 7th Street, 7th Floor, Sacramento, CA 95814, Fax: (916) 874-8289, Email: [SAFCAReview@saccounty.net](mailto:SAFCAReview@saccounty.net). When e-mailing comments, include the project title in the subject line, attach comments in MS Word format, and include the commenter's name and U.S. Postal Service mailing address.

**Government Code Section 65962.5**

Government Code Section 65962.5 requires state agencies to compile lists of hazardous waste facilities and contamination. The California Department of Toxic Substances Control (DTSC) database, known as Envirostor, and the California State Water Resources Control Board (SWRCB) GeoTracker database did not yield any occurrences at the site as described in the subject Initial Study.

## **PROPOSED MITIGATED NEGATIVE DECLARATION**

The attached Initial Study evaluates the environmental impacts of the Groundwater Recharge and Swainson's Hawk Habitat Preservation Project in accordance with the California Environmental Quality Act (CEQA), Public Resources Code Section 21000 *et seq.*, and the State CEQA Guidelines, 14 California Code of Regulations (CCR) Section 15000 *et seq.*

An Initial Study is conducted by a Lead Agency to determine if a project may have a significant effect on the environment. In accordance with CEQA Guidelines Section 15063, an EIR must be prepared if an Initial Study indicates that the proposed project under review may have a potentially significant impact on the environment. A Negative Declaration may be prepared instead (CEQA Guidelines Section 15070) when either:

- a) The Initial Study shows there is no substantial evidence, in light of the whole record before the agency, that the proposed project may have a significant effect on the environment, or
- b) The Initial Study identifies potentially significant effects, but:
  - (1) Revisions in the project plans or proposals made by or agreed to by the applicant before the proposed negative declaration is released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and
  - (2) There is no substantial evidence, in light of the whole record before the agency, that the proposed project as revised may have a significant effect on the environment.

If revisions are adopted into the proposed project in accordance with CEQA Guidelines Section 15070(b), a Mitigated Negative Declaration (MND) is prepared. For the Groundwater Recharge and Swainson's Hawk Habitat Preservation Project, implementation of the recommended mitigation measures would clearly eliminate significant impacts; so adoption of this document as a Mitigated Negative Declaration is recommended.

### **Brief Project Description**

The Groundwater Recharge and Swainson's Hawk Habitat Preservation Project consists of protecting 129 acres for groundwater recharge and constructing a pipeline to allow surface water spreading and infiltration on the property. SAFCA will buy fee title to the property that will secure the right to recharge groundwater by surface application on the site. SAFCA will construct a pipeline from the adjoining Omochochumne-Hartnell Water District (OHWD) groundwater recharge project (OHWD Project) onto the site. The source of recharge water is excess (winter) stormwater flow diversion from the Cosumnes River. Up to four monitoring wells or real-time transducers will be installed on or near the site. Data collection will be integrated on an internet-based platform.

### **Location of Project and Name of Proponent**

The project is centrally located in unincorporated Sacramento County south of Sloughhouse Road and the Folsom South Canal and generally between Deer Creek and the Cosumnes River, as shown in Figure 1 (Project Location). The parcel to be acquired is Sacramento County Assessor's Parcel Number (APN) 126-0480-004-0000.

The proponent is the Sacramento Area Flood Control Agency (SAFCA). Since SAFCA is a public agency and would implement the project, SAFCA is the Lead Agency for the project for the purposes of CEQA.

### **Proposed Finding**

Although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions and mitigation measures have been incorporated into the project and agreed to by SAFCA as the project proponent. The following determinations from the Initial Study support this conclusion:

1. The project would have no impacts on mineral resources and recreation.
2. The project would have less-than-significant impacts on aesthetics; agriculture and forestry resources; energy; greenhouse gas emissions; hazards and hazardous materials; hydrology and water quality; land use and planning; noise; public services; transportation; utilities and service systems; and wildfire.
3. Proposed mitigation measures would avoid or reduce to less-than-significant levels the project's otherwise potentially significant impacts on air quality; biological resources; cultural resources; geology and soils; and tribal cultural resources.
4. The proposed project, as mitigated, would not make a cumulatively considerable incremental contribution to any significant cumulative impact.

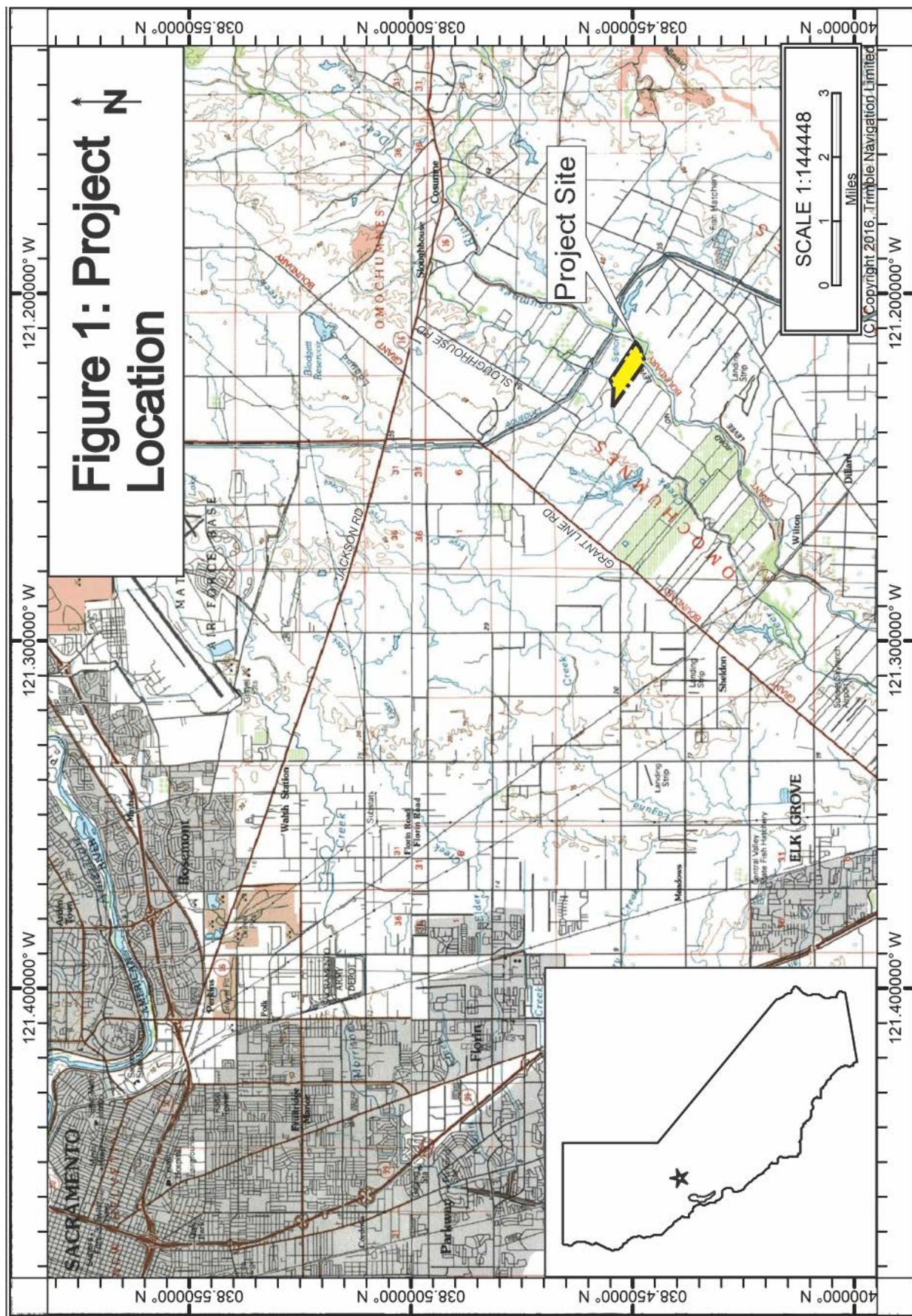
SAFCA will implement the following mitigation measures to avoid or minimize the project's potentially significant impacts. These measures will reduce the potentially significant environmental impacts of the proposed project to less-than-significant levels.

**AQ-1:** SAFCA shall ensure that the construction specifications require the contractor to implement BMPs, including watering all loose and exposed soil surfaces twice daily during construction, limiting vehicle speeds to 15 miles per hour on unpaved roads, minimizing idling time by shutting equipment off when not in use, and maintaining all construction equipment in proper working condition pursuant to manufacturer specifications.

**Timing:** Before construction

**Responsibility:** SAFCA







**BIO-1:** Before the start of any construction activity, SAFCA will develop a worker environmental awareness program and provide environmental training to all personnel working on the project site during construction. Training materials and briefings may include but not be limited to:

- discussion of the federal ESA and CESA, the MBTA, and California Fish and Game Code Sections, and 1602, and specific conditions of any permits from CDFW;
- identification of the special-status plant and wildlife species to be protected and wildlife habitat and sensitive natural communities to be protected;
- identification of special-status species, life history descriptions, habitat requirements during various life stages, and the species' protected status;
- measures to avoid introduction and minimize the spread of invasive weeds during construction and operation;
- hazardous substance spill prevention and containment measures; and
- review of any mitigation requirements related to biological resources.

**Timing:** Before and during construction

**Responsibility:** SAFCA

**BIO-2:** To the extent feasible, SAFCA or its contractor will remove trees and vegetation outside the nesting season, which is defined as February 1 through September 1. If tree or vegetation removal, or commencement of construction occurs, between February 1 and September 1, SAFCA or its contractor will conduct preconstruction surveys for active nests of migratory nesting birds and raptors, including white-tailed kite, northern harrier, Swainson's hawk, ferruginous hawk, Cooper's hawk, and bald eagle, within 14 days before the start of any construction-related activities.

Surveys will be conducted by a qualified biologist who is knowledgeable about the distribution, habitat, life history, and identification of Northern California birds; experienced in nest searching for birds that may occur within the study area; and knowledgeable about survey protocols and/or permits needed to survey for federally listed or state-listed birds. Surveys will cover the entire project area and 500 feet beyond the project area boundaries. Surveys for Swainson's hawks will be conducted within one-quarter mile of project boundaries in accordance with the guidance described in Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (Swainson's Hawk Technical Advisory Committee 2000).

If active nests are found, SAFCA or its contractor will consult with a qualified biologist to establish avoidance buffers around nests that will be sufficient so that breeding is not be likely to be disrupted or adversely affected by project activities. An avoidance buffer will constitute an area where no project-related vegetation removal, earth-moving, and construction will occur. Typical avoidance buffers during the nesting season will be a radius of 100 feet for nesting passerine birds, 500 feet for nesting raptors, and 0.25 mile for nesting Swainson's hawk. In consultation with CDFW, the qualified biologist may modify the size of the exclusion zone depending on the species and the type of

construction activity and associated disturbance anticipated near the nest. Factors to be considered for determining the buffer size will include: the presence of existing buffers provided by vegetation, topography, and infrastructure; nest height; locations of foraging territory; and baseline levels of noise and human activity. The buffer zone will be delineated on project plans and with highly visible flagging. Active nest sites will be monitored periodically throughout the nesting season to identify any sign of disturbance and to document nest status. The buffers will be maintained until a qualified biologist has determined that the young have fledged and are no longer reliant on the nest or parental care for survival.

**Timing:** Before and during construction

**Responsibility:** SAFCA

**BIO-3:** SAFCA will conduct pre-construction surveys within 48 hours before the start of construction activities if construction activities are to occur within 330 feet of a body of water. A qualified biologist will inspect areas where construction activities will occur for signs of western pond turtles and/or western pond turtle nesting activity (recently excavated nests, nest plugs) or nest predation (partially to fully excavated nest chambers, nest plugs, scattered egg shell remains, and egg shell fragments). The qualified biologist shall be familiar with the distribution, habitat, life history, and identification of Northern California turtles.

If western pond turtle active nests are found, construction will not take place within 100 feet of the nest until the turtles have hatched and have left the nest or can be safely relocated, as determined by the qualified biologist. In consultation with CDFW, the qualified biologist may modify the size of the exclusion zone, depending on the type of construction activity and associated disturbance anticipated near the nest.

**Timing:** Before and during construction

**Responsibility:** SAFCA

**BIO-4:** To avoid and minimize impacts on VELB and/or its habitat, SAFCA will implement the following measures:

- SAFCA or its contractors will establish a 20-foot non-disturbance buffer around elderberry shrubs of a sufficient size to support VELB that occur within 165 feet of proposed construction activities. Elderberry shrub avoidance areas will be shown on project plans and will be fenced and/or flagged before construction.
- All construction activities that occur within 165 feet of an elderberry shrub will be conducted outside the VELB flight season (March–July).
- Trimming elderberry shrubs will occur between November and February. Trimming will avoid the removal of any branches or stems that are greater than or equal to 1 inch in diameter. Measures to address regular and/or large-scale maintenance (trimming) will be established in consultation with USFWS.

**Timing:** Before and during construction

**Responsibility:** SAFCA

**BIO-5:** To avoid impacts on valley brodiaea, SAFCA will retain a qualified botanist to conduct preconstruction surveys during the blooming period (April through May). The botanist will survey suitable habitat in the work areas for the species in accordance with CDFW protocols (California Department of Fish and Game 2018). The results of the survey will be documented in a brief report or technical memoranda. If the survey demonstrates the absence of special-status plant species in the project area, no further actions will be required.

If valley brodiaea are found in the project area, the population(s) will be flagged during preconstruction surveys and avoided to the greatest extent feasible. Avoidance measures may consist of placing an equipment limitation zone or equipment exclusion zone (e.g. flagging, fencing, or signage) around plant populations so that direct impacts are minimized while allowing the use of any existing roads or other access areas that may pass through the equipment limitation zone or near the equipment exclusion zone.

If preconstruction surveys reveal the presence of valley brodiaea in the project disturbance area or areas immediately adjacent, SAFCA will notify CDFW; and directly affected areas of special-status plants shall be documented by a qualified botanist. Documentation shall include density and percent cover; key habitat characteristics, including soil type, associated species, hydrology, and topography; photographs of preconstruction conditions; and a map of the location and extent of potentially impacted populations in the project impact area in order to quantify impacts.

For valley brodiaea that cannot be avoided, a qualified botanist or restoration ecologist will prepare a salvage, relocation, or propagation and monitoring plan, as deemed appropriate and in coordination with CDFW prior to construction. The plan will address techniques, location, and procedures required for the successful establishment of the plant populations. The plan will include provisions for performance that address survivability requirements, maintenance, monitoring, implementation, and the annual reporting requirements. Monitoring and success criteria applicable to special-status plant salvage, relocation, or propagation will require the following:

- at least two surveys by a qualified botanist or ecologist per monitoring year,
- at least 80% of the planted area must support vegetation composition and density consistent with reference population conditions,
- at least 80% of the planted area must support target species amounts similar to reference feature conditions,
- a minimum of 5 consecutive years of monitoring to ensure that success criteria are met, and
- remedial actions to restore the intended ecological function of planted areas that fail to meet the success criteria for 3 consecutive years.

**Timing:** Before construction

## **Responsibility: SAFCA**

**BIO-6:** Prior to construction, SAFCA will avoid and minimize disturbances to riparian habitat and sensitive natural communities by aligning the construction corridor to minimize disturbance to the areas necessary for construction and locations that are already disturbed or developed to avoid riparian habitat and sensitive natural communities to the greatest extent feasible, and avoid clearing of trees and shrubs. A qualified biologist will assist with the identification of environmentally sensitive areas in the vicinity of construction to ensure that they are marked for avoidance and preserved to the greatest extent feasible.

If tree or shrub removal in any areas of riparian habitat and sensitive natural communities cannot be avoided, SAFCA will quantify impact acreages based on the final alignment. Prior to construction, SAFCA will obtain a Section 1602 streambed alteration agreement from CDFW if any tree or shrub removal is proposed in or near Deer Creek, the Cosumnes River levee, or associated riparian vegetation that could potentially fall under the jurisdiction of CDFW. The project applicant will implement all conditions in the permit, including any requirements for compensatory mitigation for the loss of riparian habitat as part of the Section 1602 streambed alteration agreement.

If on-site restoration is selected as the compensatory mitigation for impacts on riparian habitat, SAFCA will develop and implement a Revegetation and Restoration Plan to reestablish riparian habitat, including riparian vegetation subject to CDFW jurisdiction, and/or enhancement of existing habitat, on a per-acre basis. The minimum mitigation ratio will be 1.5 acre of riparian habitat restored, created, or enhanced for each acre of permanent or temporary impact. The Revegetation and Restoration Plan will include the following provisions for the restoration of affected riparian habitat:

- baseline data collection at reference sites within the project site to establish expected ranges and minimum thresholds for species composition, relative species richness, and vegetative cover (i.e., herbaceous, shrub, and/or woody canopy);
- an appropriate species planting palette for each sensitive habitat that would be affected with minimum planting densities designed to achieve performance standards for survival cover and density while maintaining the natural character of the vegetation community being restored or created;
- minimum performance standards for percent survival, species composition, relative species richness, and vegetative cover (i.e. herbaceous, shrub, and/or woody canopy) based on data collected from nearby reference sites and life history traits of the plants being restored (e.g. herbaceous vs. woody, fast-growing primary colonizers vs. slow-growing successional species); and
- compensation for the temporal loss of habitat resulting from the removal of trees. Any trees removed from riparian habitat will be replaced with the same or similar species at a ratio of 3:1 (three trees planted for every one tree removed). Tree replacement may be carried out concurrently on riparian habitats that are also being restored, created, or enhanced on a per-acre compensatory basis.

**Timing:** Before and during construction

**Responsibility:** SAFCA

**BIO-7:** Prior to project construction, SAFCA will avoid and minimize disturbances to protected trees by aligning the construction corridor to minimize the temporary and permanent project disturbance to the areas necessary for construction. SAFCA will select locations that are already disturbed or developed to the greatest extent feasible to avoid protected trees, and reduce the footprint of grading to minimize the clearing of trees or working within the driplines of protected trees.

If the final project alignment cannot avoid protected trees or their driplines, then SAFCA will retain a certified arborist to conduct an arborist survey at the pipeline and valve installation locations and prepare an Arborist Survey Report. In this event, SAFCA will obtain a Tree Removal Permit from the County of Sacramento prior to construction, and the Arborist Survey Report will be submitted with the Tree Removal Permit application.

The Arborist Survey Report will include the following information:

- species identification and locations of each tree within and near the project impact areas;
- trunk diameters, measured at standard height;
- approximate tree heights;
- approximate tree dripline radii;
- a brief statement of the reasons for the removal or major trimming of trees;
- identification of suitable measures to protect trees for preservation;
- evaluation of areas in which to plant replacement trees; and
- a site plan showing the accurate location, number of trees affected, species, trunk diameters, approximate heights, and approximate driplines of any trees to be removed.

During project construction, the natural ground within the driplines of protected trees will remain as undisturbed as possible. Grading within the driplines of oak trees will not be permitted unless specifically authorized by the Sacramento County Director of Public Works. If grading within the driplines of native oaks is not avoidable and is permitted by the director, SAFCA will implement the following measures in accordance with the Sacramento County Tree Preservation and Protection Ordinance:

- Major roots two inches or greater in diameter encountered during excavation within the dripline beneath trees to be retained will not be cut except as approved by the arborist, and will be kept moist and covered with earth as soon as possible. Roots one inch to two inches in diameter that are severed will be trimmed and treated with pruning compound and covered with earth as soon as possible.
- Support roots that are inside the dripline of the tree will be protected. The permittee is required to hand-dig in the vicinity of major trees to prevent root cutting and mangling, which may be caused by heavy equipment.
- Cross section illustrations may be required where trees are located adjacent to



roadways, new slopes, or critical areas. In addition, a dimension from the face of a tree to some critical point or line may be required.

**Timing:** Before and during construction

**Responsibility:** SAFCA

**CUL-1:** If interested Native American Tribes provide information demonstrating the significance of the project location and tangible evidence supporting the determination the site is highly sensitive for prehistoric archaeological resources, SAFCA will retain a qualified archaeologist to monitor for potential prehistoric archaeological resources during ground disturbing activities associated with installation of the water pipe.

If buried or previously unidentified historic properties or archaeological resources are discovered during project activities, all work within a 100-foot radius of the find shall cease. SAFCA shall retain a professional archaeologist meeting the Secretary of the Interior's Professional Standards for Archaeologists to assess the discovery and recommend what, if any, further treatment or investigation is necessary for the find. Interested Native American Tribes will also be contacted. Any necessary treatment or investigation shall be developed with interested Native American Tribes providing recommendations and shall be coordinated with the State Historic Preservation Officer, if necessary, and shall be completed before project activities continue in the vicinity of the find.

**Timing:** Before and during construction

**Responsibility:** SAFCA

**CUL-2:** In accordance with the California Health and Safety Code, if human remains are uncovered during ground-disturbing activities, all potentially damaging ground-disturbance in the area of the burial and a 100-foot radius shall halt and the El Dorado County Coroner shall be notified immediately. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands (Health and Safety Code Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, then Federal laws governing the disposition of those remain would come into effect. Specifically, the Native American Graves Protection and Repatriation Act (NAGPRA) requires federal agencies and institutions that receive federal funding to return Native American cultural items to lineal descendants and culturally affiliated Indian Tribes. Cultural items include human remains, funerary objects, sacred objects, and objects of cultural patrimony. NAGPRA also has established procedures in case of inadvertent discovery of Native American cultural items on Federal or Tribal lands, which includes consultation with potential lineal descendants or Tribal officials.

California law recognizes the need to protect Native American human burials, skeletal remains, and items associated with Native American burials from vandalism and

inadvertent destruction. SAFCA shall ensure that the procedures for the treatment of Native American human remains contained in California Health and Safety Code Sections 7050.5 and 7052 and Public Resources Code Section 5097 are followed.

**Timing:** During construction

**Responsibility:** SAFCA

**GEO-1:** The construction contract shall specify that if paleontological resources are discovered during construction, ground disturbance will cease within 100 feet of the discovery, SAFCA will be notified, and SAFCA will consult with a qualified paleontologist to determine additional protection measures as necessary to avoid significant impacts before work resumes in the vicinity.

**Timing:** Before construction

**Responsibility:** SAFCA

**TCR-1:** Should a Tribal Cultural Resource be identified in the project area during construction, the following performance standards shall be met before continuing construction and associated activities that may result in damage to or destruction of a Tribal Cultural Resource:

Each identified Tribal Cultural Resource will be evaluated for California Register of Historical Resources (CRHR) eligibility through application of established eligibility criteria (California Code of Regulations 15064.636), in consultation with consulting Native American Tribes.

If a Tribal Cultural Resource is determined to be eligible for listing on the CRHR, SAFCA will avoid damaging effects to the Tribal Cultural Resource in accordance with California PRC Section 21084.3, if feasible. If SAFCA determines that the project may cause a significant impact to a Tribal Cultural Resource, and measures are not otherwise identified in the consultation process, the following are examples of mitigation capable of avoiding or substantially lessening potential significant impacts to a Tribal Cultural Resource or alternatives that would avoid significant impacts to a Tribal Cultural Resource. These measures may be considered to avoid or minimize significant adverse impacts and constitute the standard by which an impact conclusion of less-than-significant may be reached:

1. Avoid and preserve resources in place, including, but not limited to, planning construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

2. Treat the resource with culturally appropriate dignity taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

- A. Protect the cultural character and integrity of the resource.
- B. Protect the traditional use of the resource.
- C. Protect the confidentiality of the resource.
- D. Establish permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or using the resources or places.
- E. Protect the resource.

**Timing:** Before construction

**Responsibility:** SAFCA

**Initial Study, Including Mitigation Measures**

The Initial Study and mitigation measures are contained in the next section.

## **INITIAL STUDY**

### **Project Description**

#### **Project Title**

Groundwater Recharge and Swainson's Hawk Habitat Preservation Project

#### **Project Proponent and Lead Agency**

Sacramento Area Flood Control Agency (SAFCA)

#### **Contact Person**

Gary Bardini, Director of Planning, (916) 874-7606

#### **Project Location**

The project is centrally located in unincorporated Sacramento County south of Sloughhouse Road and the Folsom South Canal and generally between Deer Creek and the Cosumnes River, as shown in Figure 1 (Project Location). The parcel to be acquired is Sacramento County Assessor's Parcel Number (APN) 126-0480-004-0000, and a short pipeline extension will be constructed on the adjoining parcel 126-0040-004-0000.

The US Geological Survey (USGS) topographic map for the area shows the site as generally level or sloping slightly downward to the west, with site elevations generally between 75 feet and 90 feet above mean sea level.

#### **Background and Objective**

The Omochumne-Hartnell Water District (OHWD) once primarily provided water from the Sly Park unit of the Central Valley Project (CVP) to agricultural users in the District, which stretches along the Cosumnes River above and below the project site. However, after the completion of the Folsom South Canal, the water has been less reliable and there are fewer diverters. As users in the basin have come to rely on groundwater, OHWD has operated flashboard dams in the Cosumnes River to facilitate groundwater recharge (SSCAWA 2019), and in 2019 OHWD constructed a groundwater recharge project using applying excess winter Cosumnes River water onto agricultural land, including a parcel immediately southwest of and adjoining the project site.

The Cosumnes River drains about 940 square miles from the slopes of the Sierra to the Delta (RBI 2006, p. 3). Its mainstem and major tributaries are undammed, so its flow regime is relatively natural (RBI 2006, p. 3). In the river reach near the project site, high groundwater tables once kept the river channel wet throughout the year, but decades of groundwater pumping have lowered groundwater levels so that the groundwater table is now disconnected from the river and this reach of the river dries up (RBI 2006, p. 12). In the nearest monitoring well just

downstream of the site, the groundwater has not been reported within 70 feet of the ground surface since 1990 (DWR 2019).

SAFCA's objective is to implement a pilot project and obtain recharge data using excess wintertime stormwater flows in the Cosumnes River to provide groundwater recharge on the project parcel. The goal is to average 180 acre-feet per year or more of applied water. The recharge will support OHWD summertime agricultural groundwater pumping and over time, in conjunction with other water management efforts, may improve base flows that support fall anadromous fish migration. Increasing stored water in the groundwater basin will reduce groundwater pumping costs. Successful completion of the recharge objective will inform future Flood-Managed Aquifer Recharge (Flood-MAR) projects in the region and the state. SAFCA is currently evaluating operational changes in the upper American River watershed that could potentially allow more flexible use of stored water such as for groundwater recharge. Future SAFCA activities may have beneficial cumulative recharge effects in the region.

## **Project Elements**

The Groundwater Recharge and Swainson's Hawk Habitat Preservation Project consists of protecting 129 acres for groundwater recharge and constructing a pipeline to allow surface water spreading and infiltration on the property. SAFCA will buy fee title to the property that will secure the right to recharge groundwater by surface application on the site. SAFCA will construct a pipeline from the adjoining OHWD groundwater recharge project onto and across the acquired parcel. The source of recharge water is excess (winter) stormwater flow diversion from the Cosumnes River. Up to four monitoring wells will be dug and instrumented with real-time transducers to collect groundwater level data. Data collection will be integrated on an internet-based platform.

## **Real Estate**

The project would acquire Sacramento County APN 126-0480-004-0000, a 129.069-acre parcel (see Figure 2, Real Estate). The acreage is rounded to 129 acres for discussion purposes in this report. This parcel is referred to as the "recharge site" in this document. This parcel is currently encumbered by a conservation easement (Sacramento County Clerk/Recorder 2018) held by the Sacramento Valley Conservancy (SVC) that creates restrictions in perpetuity preserving the site's conservation values, which include agricultural, open space, wildlife, and habitat values. The conservation easement includes a management plan for the parcel that specifies the following owner responsibilities (SVC 2018):

- Agricultural production, or mowing or grazing that produces prey for Swainson's hawks. (The Easement Holder is funded and authorized to do annual mowing or grazing of the easement area, in the case that the Preserve Owner does not engage in these activities.)
- Maintaining signage, especially "No Trespassing" signs.
- Maintenance of farm roads.
- Coordinating trash removal.
- Performing general inspections of the Preserve area as required.





Base map: <http://assessorparcelviewer.saccounty.net/JSViewer/assessor.html#>



Figure 2: Real Estate

The land would be purchased in fee title from the existing owner.

Because the conservation easement and its management plan predate the project, implementation of the easement and associated agricultural activities permitted or mandated by the easement and plan, including construction of agricultural improvements, is considered part of the baseline condition rather than an effect of the project. Permitted or mandated activities may entail construction of ancillary agricultural facilities like fences, water troughs, access roads, or irrigation lines, and may result in variable annual activities uses like mowing, grazing, or agricultural cropping that are consistent with the conservation easement and Swainson's hawk foraging values on the site.

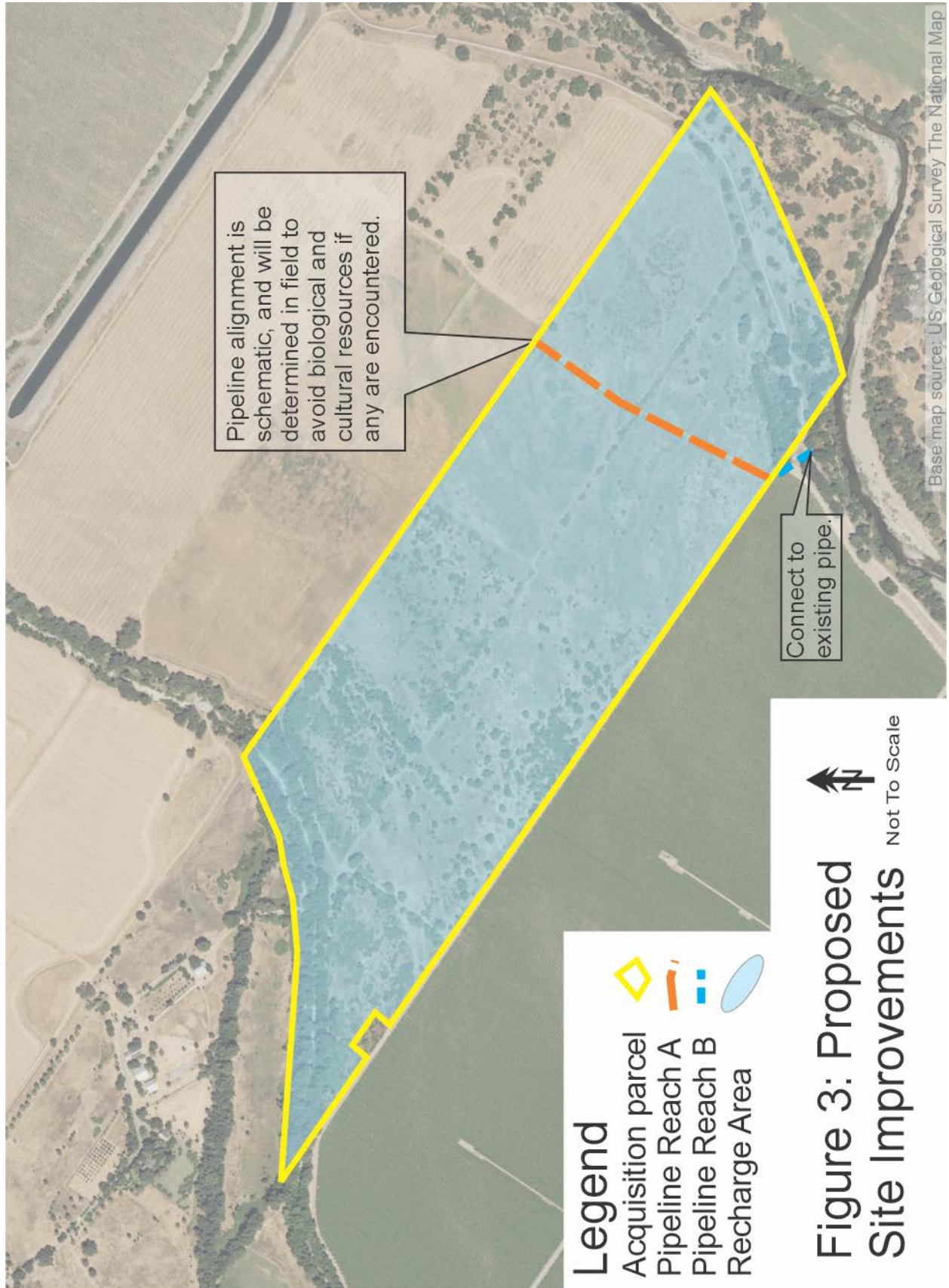
The improvements described below include a pipeline that would connect to the acquisition site from a pipeline that currently terminates on APN 126-0040-004 near the southern corner of the site. The pipeline reach on APN 126-0040-004 is referred to in this document as "Pipeline Reach B." Constructing Pipeline Reach B will require an easement, right of entry, or other agreement allowing construction of the pipeline on this parcel.

Access rights to the project site would be secured through adjoining parcels. Construction access and permanent access may follow different routes through different parcels.

### Improvements

The principal improvement to be constructed is a buried 24" PVC pipeline crossing the project site in a northerly direction from the terminus of an existing pipeline near the southernmost corner of the property to be acquired (See Figure 3, Proposed Site Improvements). This pipeline is described in two reaches for clarity of description. Reach A is the reach on the parcel to be acquired, and Reach B is the reach to be constructed on the adjoining parcel 126-0040-004-0000. The actual alignment of the pipeline will be determined in the field based on input from biologists, archaeologists and tribal representatives as appropriate to ensure that sensitive resources are avoided by the alignment. The length of the pipeline will vary dependent on the final alignment but is expected to be 1,500-2,000 feet. There will be an in-line valve at the connection to the existing pipeline, and overflow valves will be installed at the surface along the pipeline's length to allow water to be released to flow on the property. Roll-out polyethylene tubing may be connected to the valves if needed to distribute water on the site.

Up to four monitoring wells will be dug on or near the site to allow groundwater levels to be monitored in conjunction with recharge. The wells will be constructed and permitted according to Sacramento County standards. These wells, possibly in conjunction with wells on nearby properties, will be instrumented and connected to the internet to allow remote data collection. A biologist and archaeologist will survey the well sites prior to construction if they are placed in previously unsurveyed and undisturbed locations.





## Construction

Construction of the pipeline will be done by excavating a trench with an excavator. The pipe segments will be offloaded along the length of the trench, lowered into place with the excavator and/or a backhoe or similar tractor. The excavated material will be used for backfill and will be placed and compacted with the excavator or backhoe. The pipe will be delivered to the site in up to six truckloads. Disturbed areas will be seeded at the conclusion of construction.

## Water Rights and Diversion

The pipelines will be charged with water originating at an existing diversion on the Cosumnes River approximately 1.2 miles southwest of the project site. Water will be carried to the edge of the project site via an existing 24" pipeline installed in 2019 as part of the OHWD Groundwater Recharge Project. CEQA mitigation for the OHWD Project requires installing fish screens meeting National Marine Fisheries Service (NMFS) criteria prior to operation of the diversion during the months of February 15 through June (OHWD, 2018). Such screens have not yet been installed, and operation will be restricted to December 1 through February 15 until they are.

The water rights will be obtained by OHWD as part of the OHWD Project by application to the California State Water Resources Control Board (SWRCB). OHWD has applied for water on a temporary (180 days or less) basis and will need to re-apply annually for the life of the OHWD Project or until permanent rights are obtained. Although the project will allow groundwater recharge on a new site, it will not change the place of use for the water rights permit, because the ultimate place of use (i.e. where OHWD member farmers will extract groundwater and apply it to fields) is the entire OHWD service area.

Prior to issuing a permit, the SWRCB must make findings that (1) unappropriated water is available to supply the permit applicant, and (2) the applicant's appropriation is in the public interest (SWRCB 2019a). Section 1425(b) of the California Water Code requires the SWRCB to make all of the following findings before issuing a temporary permit:

- (1) The applicant has an urgent need for the water proposed to be diverted and used.
- (2) The water may be diverted and used without injury to any lawful user of water.
- (3) The water may be diverted and used without unreasonable effect upon fish, wildlife, or other instream beneficial uses.

The necessity for making findings (2) and (3) and any diversion limitations or conditions imposed to make those findings will avoid significant effects of the diversions. OHWD has gathered data indicating that minimum fish flows in the project reach of the Cosumnes River during the diversion period would be 180 cfs. During this period, diversions for other users in the reach from the Michigan Bar gage about 14 miles upstream of the site to the legal Delta are in the range of 32-78 cfs. OHWD's water rights permits, when obtained, will not allow withdrawals during flows in the river cannot meet fish flows and withdrawals by other users.

At present, diversions are physically limited to approximately 11 cfs by the existing 5,000 gallon per minute (gpm) pump serving the OHWD system. If this is upgraded in the future to a 14,000 gpm pump as part of the OHWD project, diversions will max out at approximately 31 cfs. With the current pump, OHWD withdrawals for groundwater recharge would be restricted to no more than 7% of flows at Michigan Bar. With an upgraded pump, withdrawals would remain under 14% of river flows. During typical or wet years, withdrawals would be a much smaller portion of flows.

The effect of varying river flows and pre-existing demands on the water are that withdrawal amounts will vary each year based on availability of water, and in many seasons, project withdrawals may not occur during substantial portions of the permitted season.

### Operation

Operation of the Groundwater Recharge and Swainson's Hawk Habitat Preservation Project will occur during months of high flows in the Cosumnes River (December – March). This will be further restricted to the dates of December 1 through February 15 until a fish screen is installed at the diversion point described above. Diversion will coincide with the period when Swainson's hawks have migrated south from California. Water will not be diverted during other months, even if surplus water is available in the river, to avoid flooding the field during the period when the hawks have returned to California and may occupy or forage on the site.

The project goal is to apply an average of 180 acre-feet (af) of water or more annually to the site. This is roughly equivalent to 1 cubic foot/second (cfs) over a 3-month period. The actual amount and rate of water applied will be dependent on the water available in the Cosumnes River and the terms of water rights permits allowing the diversion of river water, as well as by OHWD's recharge activities on adjoining parcels. For example, inundating adjoining vineyards may be undesirable during periods when pruning or sulfur application are occurring. During these periods the project site will be a preferred location for recharge. When water is limited, however, there may be a preference for applying water to the vineyards, where the pump lift is smaller and where recharge water may be closer to wells that will be used for irrigation during dry seasons.

During and for periods after discharge of water on the site, portions of the site will be inundated or will have water flowing across them. As shown in Figure 3, this analysis considers inundation of the entire site. However, due to topography of the site and its surroundings and expected limitations in water availability, inundation may never cover the entire site. Part of the purpose of the project is to determine how rapidly water will infiltrate into the soil, which will influence inundation duration.

During recharge operations, a field manager will visit the site periodically to evaluate the amount and area of standing water on the site and to operate valves and above-ground distribution pipelines to distribute surface water on the site when it is available.



Operations are planned to continue for 15 years after construction, as required by the Proposition 1 grant through which project funding is sought. Upon reaching the 15 year grant project life, operations may be discontinued, depending on results and benefits observed through that period.

#### Other Public Agencies Whose Approval May Be Required

The following public agency permits or approvals may be required for the proposed project.

California Department of Water Resources (DWR): Proposition 1 Integrated Regional Water Management Implementation Grant funding. An application for grant funding has been submitted to DWR for the project analyzed in this document.

California Department of Fish and Wildlife (CDFW): Lake and Streambed Alteration Notification and/or agreement: Fish and Game Code Section 1602 requires notification of an activity changing any streambed. Although this project will use an existing diversion in the Cosumnes River and all pipeline construction will be landward of the levee, CDFW may request a notification for construction activities occurring on the site.

California State Water Resources Control Board (SWRCB): Right to Divert and Use Water. An appropriative right will be needed by OHWD to divert water from the Cosumnes River for groundwater recharge for the existing OHWD Project, and this project will rely on the same permit. OHWD is currently applying for the permit on a temporary (180 days or less) basis, and will need to re-apply or renew the permit annually for the life of the project or until permanent rights are obtained.

County of Sacramento Environmental Management: Well permit for monitoring wells and/or instruments pursuant to Chapter 6.28 of the Sacramento County Code and Section 13801 of the California Water Code.

#### Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact” prior to mitigation as indicated by the analysis that follows.

<input type="checkbox"/>	Aesthetics	<input type="checkbox"/>	Agriculture or 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 checked="" 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 or Planning	<input type="checkbox"/>	Mineral Resources
<input type="checkbox"/>	Noise	<input type="checkbox"/>	Population or Housing	<input type="checkbox"/>	Public Services
<input type="checkbox"/>	Recreation	<input type="checkbox"/>	Transportation	<input checked="" type="checkbox"/>	Tribal Cultural Resources
<input type="checkbox"/>	Utilities or Service Systems	<input type="checkbox"/>	Wildfire	<input checked="" type="checkbox"/>	Mandatory Findings of Significance

## Environmental Analysis

### **Aesthetics**

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>I. AESTHETICS.</b> 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### Setting

The recharge project site consists of formerly-farmed open space. Native and non-native vegetation has begun to return to the recharge site since it was last farmed prior to 1993. Pipeline reach B occurs on the edge of a vineyard. The nearest public view corridor is along Sloughhouse Road approximately one-half mile to the north, but due to flat topography and riparian vegetation on Deer Creek, it does not offer meaningful views of the site. The nearest designated scenic highway is State Route 160, which is 14 miles to the west (OHWD 2018, page 3-1) and out of sight of the project site.

### Impacts

(a), (b), (c), and (d) Scenic vistas, scenic resources, visual character, and light and glare – Less than significant impact

The project will not have substantial visual impacts because of its lack of visibility from public vantage points. It will result in minor disturbance during the construction of the trench and drilling of wells, but the disturbance will be not atypical for agricultural lands like those surrounding the site. The trench will be closed within two to three weeks of first being excavated. Once constructed, the land use will be largely unchanged. Discharge of water over the site for recharge will not substantially change the open space character of the site. Standing water may reflect the sun when the sun is low in the sky but would not be a substantial source of light and glare as seen from a public vantage point.

## Agriculture and Forestry Resources

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>II. AGRICULTURE AND FORESTRY RESOURCES.</b> In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
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 checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>

### Setting

The recharge site has not been farmed since 1993 or earlier (SVC 2018, p. 1). The California Department of Conservation maps the recharge site as Farmland of Local Importance (DOC, 2019), but it has not been farmed since 1993 (SVC 2018, p. 1). The management plan for the conservation easement obligates the landowner to conduct agricultural production or mowing or grazing that produces prey for Swainson's hawks, so agricultural use of the site may occur in the future independent of the project.

Pipeline Reach B is on a parcel that is mapped as Prime Farmland (DOC 2019). The parcel is currently in vineyard production.

Sacramento County has zoned the recharge site as AG-80 (Agricultural 80) and Pipeline Reach B as AG-40 (Agricultural 40) (Sacramento County, 2019b). The purpose of both districts is to promote the long-term agricultural use and discourage the premature and unnecessary conversion of agricultural land to urban uses (Sacramento County, 2019c, p. 2-7). Both the recharge site and Pipeline Reach B are in an area with the Flood (F) combining zone (Sacramento County, 2019b). This zone recognizes that regulation of flood lands is necessary to promote orderly development and beneficial use while minimizing property damage from flooding (Sacramento County,

2019c, p. 4-2). Buildings or structures other than fences are not allowed within the 100-year floodplain (Sacramento County, 2019c, p. 4.3).

The recharge site has an active Williamson Act contract, and Pipeline Reach B is on a parcel that is not enrolled in the Williamson Act (Sacramento County, 2019a). The Williamson Act is a state law that allows local governments to enter contracts with landowners to restrict development of their parcels in exchange for lower property tax assessments.

Forest land as defined in Public Resources Code Section 12220(g) is “land that can support 10-percent native tree cover of any species” (California Legislative Counsel, 2019). Timberland as defined by Public Resources Code Section 4526 is non-federal land available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees. The project site is not Timberland because the conservation easement would preclude reforesting the land. The site is not zoned for timberland production as defined by Government Code Section 51104(g) (Sacramento County 2019b).

### Impacts

#### (a) and (b) Convert Farmland or conflict with agricultural zoning or Williamson Act contracts – Less than significant impact

Assuming the pipeline is 2,000 feet long and the disturbance corridor is 20’ wide, the project would temporarily disturb just under one acre of Farmland of Local Importance. However, the Recharge Site is not currently farmed and Pipeline Reach B is proposed to be constructed on a vineyard perimeter road without disturbing vines. Even if Reach B were to result in disturbance of vines, it would temporarily affect less than 0.1 acre. Once the pipeline trench is backfilled, it will not adversely affect future farm uses. The recharge activity and infrastructure could facilitate farming and would not conflict with agricultural zoning or Williamson Act contracts.

#### (c) and (d) Convert forest land or conflict with forest zoning – Less than significant impact

The project would not convert forest land or remove trees. Native trees such as valley oak occur on the site and are adapted to periodic flooding. The project would not affect land with forest zoning.

## Air Quality

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>III. AIR QUALITY.</b> Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<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 non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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"/>

## Setting

The project site is located within the Sacramento Valley Air Basin (SVAB), a broad, flat valley. The entire air basin is about 200 miles long in a north-south direction, and has a maximum width of about 150 miles, although the valley floor averages only about 50 miles in width. The SVAB is bounded on the north by the Cascade Range, on the south by the San Joaquin Valley Air Basin, on the east by the Sierra Nevada, and on the west by the Coast Range. The project site is located within the Sacramento Metropolitan Air Quality Management District's (SMAQMD's) jurisdictional boundaries. The nearest home that might be considered a "sensitive receptor" for air quality purposes is approximately 600 feet from the site's southern boundary.

The U. S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have established ambient air quality criteria for pollutants shown in Table 1 (Federal and State Ambient Air Quality Standards). These ambient air quality standards represent pollutant concentrations below which the risk of specific adverse health effects is low. The California Air Resources Board operates air quality monitoring stations within the region to measure concentrations of these pollutants in the atmosphere.

Both the federal and State governments have enacted laws requiring the identification of areas not meeting the ambient air quality standards and, within these areas, requiring regional air quality plans to eventually attain the standards. Under the federal Clean Air Act, Sacramento County has been designated attainment or unclassified for all national ambient air quality standards except for the ozone standard and the 24-hour average fine particulate matter (PM2.5) standard. Under the State of California system, Sacramento County is designated non-attainment for ozone and respirable particulate matter (PM10). Ambient air quality at the site would generally be as good as or better than for the county as a whole because of its distance from dense development and vehicle corridors.



**Table 1: Federal and State Ambient Air Quality Status**

<b>Pollutant</b>	<b>Averaging Time</b>	<b>State Standard</b>	<b>Federal Primary Standard</b>	<b>State Attainment Status</b>	<b>Federal Attainment Status</b>
Ozone	1-Hour 8-Hour	0.09 ppm 0.07 ppm	-- 0.07 ppm	Nonattainment	Nonattainment
Carbon Monoxide	1-Hour 8-Hour	20.0 ppm 9.0 ppm	35.0 ppm 9.0 ppm	Attainment	Attainment
Nitrogen Dioxide	1-Hour Annual	0.18 ppm 0.03 ppm	0.1 ppm 0.053 ppm	Attainment	Unclassifiable/ Attainment
PM2.5	24-Hour  Annual	--  12 µg/m <sup>3</sup>	35 µg/m <sup>3</sup>  12 µg/m <sup>3</sup>	Attainment	Nonattainment (24-hr) Attainment (annual)
PM10	24-Hour Annual	50 µg/m <sup>3</sup> 20 µg/m <sup>3</sup>	150 µg/m <sup>3</sup> --	Nonattainment	Attainment
Notes: ppm = parts per million µg/m <sup>3</sup> = micrograms per cubic meter PM2.5 = Fine Particulate Matter PM10 = Respirable Particulate Matter  Source: CARB 2016; SMAQMD 2019b.					

### Impacts

In order to comply with the California and Federal Clean Air Acts, SMAQMD has regulations and programs to minimize emissions of air pollutants. SMAQMD considers a project to have significant impacts if it will lead to concentrations of pollutants that exceed levels based on the California standards in Table 1 or if it emits pollutants in quantities greater than those shown in Table 2. Emissions above these thresholds would be considered cumulatively considerable and would conflict with implementation of SMAQMD air quality plans.

(a) and (b) Conflict with air quality plan, considerable increase in criteria pollutant, or expose sensitive receptors to substantial pollutant concentrations – Less than significant impact with mitigation incorporated

Project emissions were estimated using the SMAQMD Road Construction Emissions Model Version 9.0. The road construction model is recommended by SMAQMD for linear construction projects like pipelines (SMAQMD 2019a, p. 3-5). The model assumed 11 days of construction and an equipment mix that conservatively includes an excavator, a backhoe, and half-time use of a bulldozer. Although the model default assumption is that vehicle trips are 10 miles, the analysis was run with highly conservative trip distances of 30 miles for construction vehicles and 50 miles for worker commute vehicles. Model printouts are contained in Appendix A. Results are shown in Table 3.

Table 2: SMAQMD Air Pollutant Emission Significance Thresholds		
Pollutant	Construction	Operations
Nitrogen Oxides	85 pounds/day	65 pounds/day
Reactive Organic Gases (ozone precursors)	N/A	65 pounds/day
PM2.5	Any emissions over zero are considered significant enough to warrant applying Best Management Practices (BMPs). If all feasible BMPs are applied the standard is 82 pounds/day and 15 tons/year.	
PM10	Any emissions over zero are considered significant enough to warrant applying Best Management Practices (BMPs). If all feasible BMPs are applied the standard is 80 pounds/day for and 14.6 tons/year.	
Source: SMAQMD 2019a		

<b>Table 3: Construction Emissions Estimates</b>						
	<b>ROG</b>	<b>CO</b>	<b>NOx</b>	<b>PM10</b>	<b>PM2.5</b>	<b>SOx</b>
Maximum lbs/day	0.80	8.01	8.97	20.45	4.55	0.02
Project total tons	0.00	0.04	0.05	0.11	0.03	0.00
Notes:  ROG = Reactive Organic Gases, which are ozone precursors CO = Carbon Monoxide NOx = Nitrogen Oxides PM10 = Respirable Particulate Matter PM2.5 = Fine Particulate Matter SOx = Sulfur Oxides  Please refer to Appendix A for model data.						

Table 3 shows that construction emissions of ROG and NOx would be far below numerical SMAQMD significance thresholds, as would be expected for a small project like this. By default SMAQMD considers any emissions of PM10 or PM2.5 to be significant unless BMPs are applied. BMPs that are applicable to the project would not include those for haul trucks or street sweepers since no soil will be hauled to or from the site and the few worker trips will travel over half a mile on private driveways before getting to public streets.

Operational emissions would occur due to pumping during the operational season, plus occasional worker vehicle trips to the site to operate the system. The existing (offsite) pump is

electric, meaning that emissions due to its use would be dependent on the mix of energy sources used by Sacramento Municipal Utility District (SMUD) to serve the pump. For a screening analysis, emissions from a diesel pump were calculated. Table 4 shows those estimates, which are far below SMAQMD's significance thresholds. In practice, not only will the SMUD power mix consist of partially non-emitting energy sources, but a portion of the energy expended to recharge groundwater will be returned in the form of a higher water table and lower pumping emissions upon withdrawal. Vehicle trips would be less than used in the construction phase, which were also far below the significance thresholds. Therefore, the project's operational emissions are considered less than significant.

<b>Table 4: Operational Emissions Estimate for a 5,000-gpm Diesel Pump</b>						
	<b>ROG</b>	<b>CO</b>	<b>NOx</b>	<b>PM10</b>	<b>PM2.5</b>	<b>SOx</b>
Maximum lbs/day	2.58	12.34	17.97	1.39	1.29	0.02
<p>Notes:</p> <p>ROG = Reactive Organic Gases, which are ozone precursors  CO = Carbon Monoxide  NOx = Nitrogen Oxides  PM10 = Respirable Particulate Matter  PM2.5 = Fine Particulate Matter  SOx = Sulfur Oxides</p> <p>Please refer to Appendix A for estimate calculations.</p>						

SMAQMD is in the process of adopting CEQA analysis guidance to address health consequences of project-related pollutant emissions. Although the guidance was not finalized at the time this Initial Study was prepared, the AQMD's draft screening analysis tool (SMAQMD 2020) was used to illustrate the health effects of pollution at the site. The tool showed that emissions at the threshold of significance level of 82 pounds per day of ozone precursors would contribute to less than one hundredth of one percent of the background incidence of emergency room and hospital visits and mortality from asthma, acute myocardial infarction, and respiratory incidents. Since the project is well below these significance thresholds, its contributions to these health effects would be much lower.

#### Mitigation Measures:

AQ-1: SAFCA shall ensure that the construction specifications require the contractor to implement BMPs, including watering all loose and exposed soil surfaces twice daily during construction, limiting vehicle speeds to 15 miles per hour on unpaved roads, minimizing idling time by shutting equipment off when not in use, and maintaining all construction equipment in proper working condition pursuant to manufacturer specifications.

Significance after mitigation: Less than significant

(c) and (d) Expose sensitive receptors to substantial pollutant concentrations or expose a substantial number of people to odors or other emissions – Less than significant impact

The project is distant from potential sensitive receptors, and the construction methods would involve few machines, all of which would have conventional emissions controls. As demonstrated previously, the minimal emissions from this project would be far below weight-based significance thresholds established by SMAAQMD. There would be no long-term substantial sources of emissions. Because of the project's low emissions and distance from receptors, it will not cause adverse health effects. For these reasons, there would be no significant substantial pollutant concentrations or exposures of people to emissions.

## Biological Resources

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>IV. BIOLOGICAL RESOURCES.</b> 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 Wildlife or U.S. Fish and Wildlife 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 Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The following information is based on, and contains information summarized from, a habitat assessment and constraints analysis of the project location by AECOM (AECOM 2020a).

## Setting

### *Regulatory Setting*

The biological study area consists of the entire 129-acre groundwater-recharge parcel, with field surveys for sensitive resources concentrated in the southern portion of the parcel where construction will occur. Regulations applicable to the proposed project include the following.

#### Federal

- Endangered Species Act of 1973, U.S. Code, Title 16, Sections 1531 through 1543.
- Migratory Bird Treaty Act, U.S. Code, Title 16, Sections 703 through 711.
- The Bald Eagle Protection Act of 1940 (16 United States Code [U.S.C.] 668, enacted by 54 Stat. 250)
- Clean Water Act (CWA) (33 U.S.C. 1251 et seq.), especially Sections 401, 402, and 404.

#### State

- California Endangered Species Act, California Fish and Game Code Section 2050 et seq. (CESA)
- Raptors, California Fish and Game Code Section 3503.5.
- Non-game and Migratory Birds, California Fish and Game Code Sections 3513 and 3800.
- Lake and Streambed Alteration Agreements – California Fish and Game Code Sections 1600-1616.
- California Porter-Cologne Water Quality Control Act.

#### Regional and Local

- South Sacramento Habitat Conservation Plan (SSHCP)
- Sacramento County General Plan
- Sacramento County Tree Preservation and Protection Ordinance, Chapter 19.12 of the Sacramento County municipal code, Tree Preservation and Protection
- Sacramento County Swainson's Hawk Ordinance, Chapter 16.130 of Title 16 of the Sacramento County Code
- Sacramento County Aquatic Resources Protection Ordinance, Chapter 16.135 of Sacramento County Code

### *Sensitive Species*

Tables 5 and 6 provide a list of special-status plant and wildlife species that were determined to have the potential to occur in the general project region based on the pre-field database and literature review. The following criteria were applied to assess the potential for species occurrence in the study area:

No Potential to Occur: The project area is outside the species' range or suitable habitat for the species is absent from the Planning Area and adjacent areas.

Not Likely to Occur: The project area is within the species' range, no occurrences of the species have been recorded within or immediately adjacent to the Planning Area, and

either habitat for the species is marginal or potentially suitable habitat may occur, but the species' current known range is restricted to areas outside of the Planning Area.

**Could Occur:** The project area is within the species' range, and no occurrences of the species have been recorded within the project area; however, suitable habitat for the species is present and recorded occurrences of the species are generally present in the vicinity.

**Known to Occur:** The project area is within the species' range, suitable habitat for the species is present, and the species has been recorded from within the project site.

### *Vegetation Types*

Vegetation types were mapped within the study area based on the dominant vegetation composition and were classified to the vegetation alliance level according to the Manual of California Vegetation (Sawyer et al. 2009), as shown in Figure 4. The seven vegetation types in the study area are upland mustards and other ruderal forbs; coyote brush scrub; box elder forest; valley oak woodland; blue elderberry stand; willow riparian woodland; and wild oats and annual brome grassland. A description of each vegetation type in the study area is provided below.

**Upland Mustards and Other Ruderal Forbs** – The majority of the southern half of the study area consists of ruderal vegetation that best fits the *Brassica nigra* - *Raphanus* spp. (Upland Mustards And Other Ruderal Forbs) Herbaceous Semi-Natural Alliance described by the Manual of California Vegetation (CNPS 2020a). This alliance is defined by a greater than 80% relative cover of non-native mustards (e.g., *Brassica nigra*, *Hirshfeldia incana*, *Raphanus sativus*) and other nonnative plants in the herbaceous layer, with mustards as the dominant herbs. Emergent trees and shrubs may also be present at low cover.

**Coyote Brush Scrub** – Approximately one-third of the study area has dense stands of coyote brush and other scrub vegetation, concentrated in the northeastern portion of the parcel. This land cover type is most like the *Baccharis pilularis* Shrubland Alliance (Coyote Brush Scrub). This vegetation alliance is defined by coyote brush contributing greater than 50% absolute cover in the shrub layer (CNPS 2020b).

**Box Elder Forest** – Intermittently-flooded woody riparian vegetation exists in the northern portion of the study area along a floodplain terrace of Deer Creek. Vegetation in this land cover type is most like the *Acer negundo* Forest Alliance (Box Elder Forest) described in CNPS 2020c. This vegetation alliance is defined as containing box elder (*Acer negundo*) trees that are dominant or co-dominant in the tree canopy with other riparian trees, such as Fremont cottonwood, black walnut, sycamore (*Platanus racemosa*), Oregon ash (*Fraxinus latifolia*), white alder (*Alnus rhombifolia*), valley oak (*Quercus lobata*), and black willow (*Salix gooddingii*). Vegetation layers in this community may be two-tiered, with an intermittent to continuous tree canopy above an open to intermittent shrub layer.

**Valley Oak Woodland** – Vegetation cover like the *Quercus lobata* Woodland Alliance (Valley Oak Woodland) is present along the north and south banks of Deer Creek, forming a dense, tree-

**Table 5: Special-Status Plants With Potential to Occur in the Study Area**

Scientific Name	Common Name	Status <sup>1</sup>			Habitat Association	Elevation Range (AMSL <sup>3</sup> )	Blooming Period	Potential to Occur in the Study Area
		Federal	State	CRPR <sup>2</sup>				
<i>Arctostaphylos myrtifolia</i>	lone manzanita	FT	—	1B.2	On lone soil, acidic sandy or clay soils in chaparral and cismontane woodland.	195–1,905 feet	November–March	<b>No potential to occur.</b> Suitable habitats (chaparral, cismontane woodland) are not present in the study area.
<i>Brodiaea rosea</i> ssp. <i>Vallicola</i>	Valley brodiaea	—	—	4.2	Valley and foothill grassland (swales), vernal pools. Old alluvial terraces; silty, sandy, and gravelly loam.	30–1,100 feet	April–May	<b>Could occur.</b> Suitable habitat (grassland, alluvial terrace with silty/sandy loam) present in the study area and the species' elevation range overlaps with the study area.
<i>Crocanthemum suffrutescens</i>	Bisbee Peak rush-rose	—	—	3.2	Chaparral. Often gabbroic or lone soil; often burned or disturbed areas.	245–2,200 feet	April–August	<b>No potential to occur.</b> The species' elevation range is outside the study area, and suitable habitat (chaparral) is not present in the study area.
<i>Downingia pusilla</i>	dwarf downingia	—	—	2B.2	Vernal lake and vernal pool margins with a variety of associates.	0–1,460 feet	March–May	<b>No potential to occur.</b> Suitable habitats (vernal lake or vernal pools) are not present in the study area.
<i>Eriogonum apricum</i> var. <i>apricum</i>	lone buckwheat	FE	SE	1B.1	Chaparral with openings and lone soil.	195–475 feet	July–October	<b>No potential to occur.</b> Suitable habitat (chaparral with lone soil) is not present in the study area.
<i>Eriogonum apricum</i> var. <i>prostratum</i>	Irish Hill buckwheat	FE	SE	1B.1	Chaparral with openings and lone soil.	295–395 feet	June–July	<b>No potential to occur.</b> The species' elevation range is outside the study area, and suitable habitat (chaparral with lone soil) is not present in the study area.
<i>Eryngium pinnatisectum</i>	Tuolumne button-celery	—	—	1B.2	Vernal pools, mesic soils in cismontane woodland and lower montane coniferous forest.	225–3,000 feet	May–August	<b>No potential to occur.</b> The species' elevation range is outside the study area, and suitable habitats (cismontane woodland, lower montane coniferous forest) are not present in the study area.
<i>Gratiola heterosepala</i>	Boggs Lake hedge-hyssop	—	SE	1B.2	On clay soils in vernal pools, sometimes on lake margins.	30–7,790 feet	April–August	<b>No potential to occur.</b> Suitable habitats (vernal pools, lake margins) are not present in the study area.
<i>Horkelia parryi</i>	Parry's horkelia	—	—	1B.2	Chaparral, cismontane woodland in lone formation and other soils.	260–3,510 feet	April–September	<b>No potential to occur.</b> The species' elevation range is outside the study area, and suitable habitats (chaparral, cismontane woodland) are not present in the study area.
<i>Juncus leiospermus</i> var. <i>ahartii</i>	Ahart's dwarf rush	—	—	1B.2	Restricted to the edges of vernal pools in grassland.	95–750 feet	March–May	<b>No potential to occur.</b> Suitable habitats (vernal pools) are not present in the study area.
<i>Legenere limosa</i>	legenere	—	—	1B.1	Usually found in beds of vernal pools; also found in other wet areas and ponds.	0–2,885 feet	April–June	<b>No potential to occur.</b> Suitable habitats (vernal pools, ponds, wet areas) are not present in the study area.

Scientific Name	Common Name	Status <sup>1</sup>			Habitat Association	Elevation Range (AMSL <sup>3</sup> )	Blooming Period	Potential to Occur in the Study Area
		Federal	State	CRPR <sup>2</sup>				
<i>Navarretia eriocephala</i>	hoary navarretia	–	–	4.3	Heavy soils in seasonally wet flats in cismontane woodland; valley and foothill grassland.	340–1,310 feet	May–June	<b>No potential to occur.</b> The species' elevation range is outside the study area, and suitable microhabitat (heavy seasonally wet soils) are not present.
<i>Navarretia myersii</i> ssp. <i>myersii</i>	Pincushion navarretia	–	–	1B.1	Vernal pools often in acidic soils.	340–1,310 feet	May–June	<b>No potential to occur.</b> The species' elevation range is outside the study area, and suitable habitats (vernal pools) are not present in the study area.
<i>Orcuttia tenuis</i>	slender Orcutt grass	FT	SE	1B.1	Vernal pools, often in gravelly substrate.	110–5,775 feet	May–September (October)	<b>No potential to occur.</b> Suitable habitats (vernal pools) are not present in the study area.
<i>Orcuttia viscida</i>	Sacramento Orcutt grass	FE	SE	1B.1	Vernal pools.	95–330 feet	April–July (September)	<b>No potential to occur.</b> Suitable habitats (vernal pools) are not present in the study area.
<i>Sagittaria sanfordii</i>	Sanford's arrowhead	–	–	1B.2	In standing or slow-moving freshwater ponds, marshes, and ditches.	0–2,135 feet	May–October (November)	<b>No potential to occur.</b> Suitable habitat (standing or slow-moving fresh water) is not present in the study area.
<p><b>Notes:</b></p> <p><b><sup>1</sup>Listing Status:</b>  <b>Federal—U.S. Fish and Wildlife Service:</b>  FE = endangered  FT = threatened  – = no status  <b>State—California Department of Fish and Wildlife:</b>  SE = endangered  – = no status</p> <p><b><sup>2</sup>CRPR = California Rare Plant Ranks:</b>  1B = plant species considered rare, threatened, or endangered in California and elsewhere  2B = plant species considered rare, threatened, or endangered in California but more common elsewhere  3 = plant species for which more information is needed  4 = plant species with limited distribution in California</p> <p><b>California Rare Plant Rank Extensions:</b>  .1 = seriously endangered in California (&gt;80% of occurrences are threatened and/or have high degree and immediacy of threat)  .2 = fairly endangered in California (20–80% of occurrences are threatened)  .3 = not very endangered in California</p> <p><b><sup>3</sup>AMSL = above mean sea level</b></p>								



**Table 6: Special-Status Wildlife With Potential to Occur in the Study Area**

Scientific Name	Common Name	Status			Habitat Association	Distribution	Potential to Occur in the Study Area
		Federal	State	CDFW			
Invertebrates							
<i>Branchinecta conservatio</i>	Conservancy fairy shrimp	E	-	-	Cool large vernal pools with moderately turbid water. Found in elevations ranging from 16 to 5,577 feet at water temperatures as high as 73 degrees F.	Only eight populations known to occur, from Vina Plains (Butte and Tehama counties) to Los Padres National Forest (Ventura County) (USFWS 2019). No population is known in Sacramento County.	No potential to occur. This species range does not coincide with the study area (Los Padres Forest Watch 2019).
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	T	-	-	Vernal pools and other seasonal wetlands, typically small but including a wide range of sizes.	More widely distributed than the Conservancy fairy shrimp. Found as far north as Jackson County in Oregon and as far south as the Los Padres National Forest in Ventura County (Los Padres Forest Watch 2019).	No potential to occur. No suitable habitat (i.e., vernal pools or seasonal wetlands) for this species observed in the study area.
<i>Desmocerus californicus dimorphus</i>	valley elderberry longhorn beetle	T	-	-	Red or blue elderberry shrubs, typically in riparian habitats below 3,000 feet in elevation. Prefers to lay eggs in elderberries 2–8 inches in diameter.	Occurs only in the Central Valley from Shasta County to Fresno County.	Could occur. Suitable habitat (elderberry shrubs) present in the study area. One elderberry was observed with two possible VELB exit holes during the biological survey. Recorded occurrences 0.11 miles southwest and 2.8 miles north of the study area have been noted in the CNDDDB database along the Cosumnes River; however, the records are from 1987 (CDFW 2019a). It is possible the VELB exit holes observed during the survey are old. Not enough surveys have been conducted in the area to determine the present state of the VELB population within or near the study area.
<i>Lepidurus packardii</i>	vernal pool tadpole shrimp	E	-	-	Vernal pools and other seasonal wetlands.	Endemic to the grasslands of the Central Valley, Central Coast mountains, and South coast mountains, in astatic rain-filled pools (CDFW 2019a).	No potential to occur. No suitable habitat for this species was observed during the biological survey.
Fish							
<i>Hypomesus transpacificus</i>	Delta smelt	T	E	-	Euryhaline species that primarily lives in brackish water within the Sacramento-San Joaquin River Delta.	Occurs in the Sacramento-San Joaquin River delta.	No potential to occur. No suitable aquatic habitat present. The species' range and habitat does not coincide with the study area.
<i>Oncorhynchus mykiss irideus pop. 11</i>	steelhead - Central Valley DPS	T	-	-	Aquatic, flowing water in the Sacramento and San Joaquin River watersheds. Migrates between freshwater breeding and marine nonbreeding habitats.	Occurs in the Sacramento and San Joaquin River watersheds and Pacific Ocean.	Not likely to occur. No suitable aquatic habitat present. This species' range and habitat preference does coincide with the study area.

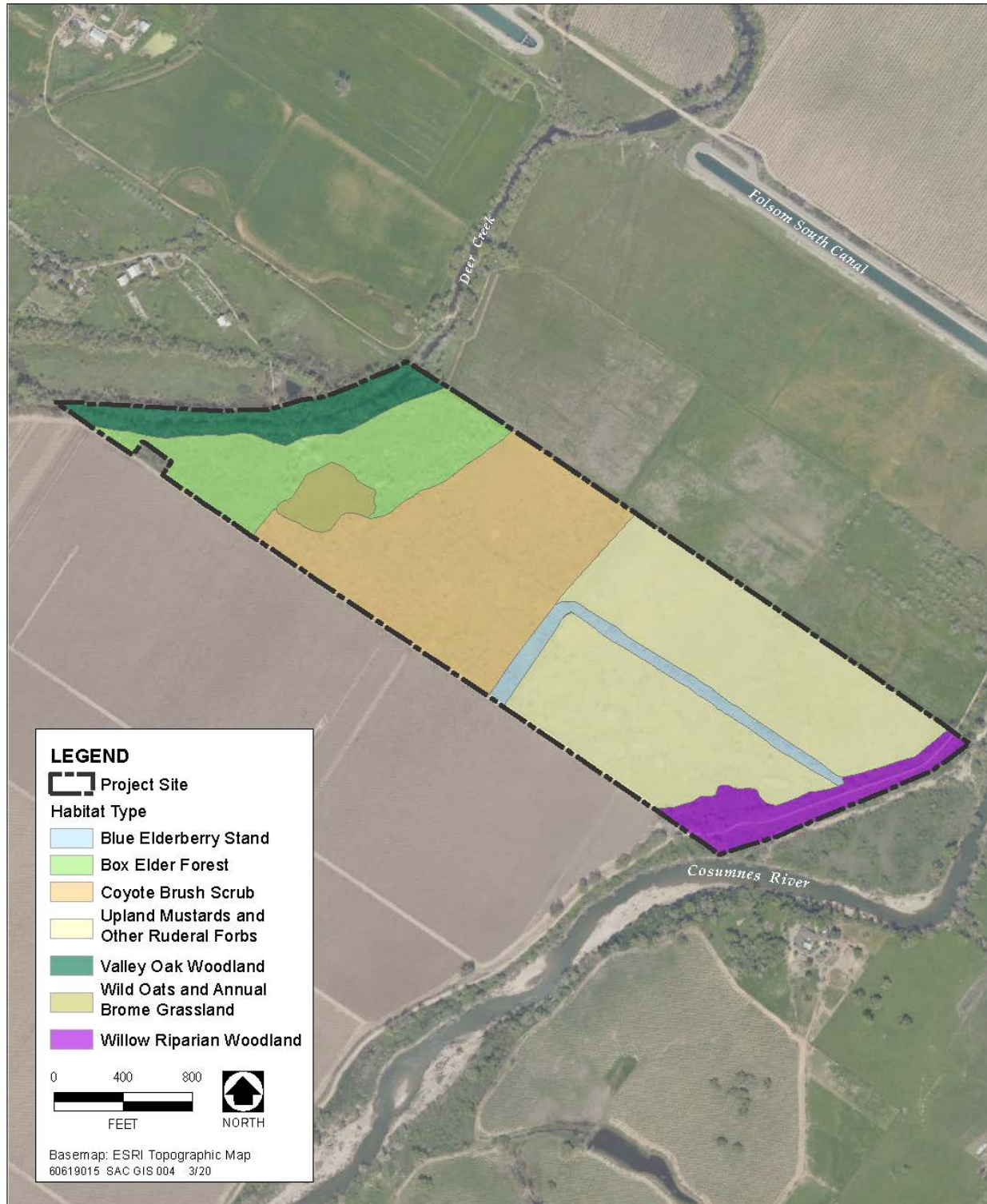
Scientific Name	Common Name	Status			Habitat Association	Distribution	Potential to Occur in the Study Area
		Federal	State	CDFW			
Amphibians & Reptiles							
<i>Ambystoma californiense</i>	California tiger salamander	T	T	WL	Vernal pools and other seasonal wetlands with adequate inundation period and adjacent uplands, primarily grasslands, with burrows and other belowground refugia.	Endemic to California. Most populations in central valley have been extirpated and the remainder are found in the surrounding foothills (California Herps 2019a).	<b>No potential to occur.</b> No suitable habitats (stock ponds, seasonal wetlands or vernal pools) were observed during the biological survey.
<i>Emys (=Actinemys) marmorata</i>	western pond turtle (WPT)	-	-	SSC	Permanent or nearly permanent water in a variety of aquatic habitats. For foraging, ponds, marshes, slow-moving streams, sloughs, and irrigation/drainage ditches; for nesting, soils in nearby uplands with low, sparse vegetation. Basking sites are required for thermoregulation, such as partially submerged logs, rocks, mats of floating vegetation, or open mud banks. Hibernation may occur in aquatic habitats or in burrows of adjacent uplands, often with duff.	Western pond turtle population is distributed north of the San Francisco Bay including the Great Central Valley (California Herps 2019b).	<b>Could occur.</b> Nearest occurrence is approximately 2 miles southeast of study area; recorded in 2016 with 11 adults observed. Has also been observed in Mather Lake, which is located approximately 6 miles north of the study area and is connected to the Cosumnes River by the Folsom South Canal. There is potential for the species to occur in the Folsom South Canal 0.3 mile north of the study area, and in the Cosumnes River channel 0.3 mile south of the study area (CDFW 2019a). The species could also use the nearby uplands, including those in the study area, for nesting grounds.
<i>Rana draytonii</i>	California red-legged frog	T	-	-	Terrestrial habitat is within 1–2 miles of an aquatic breeding site that stays cool and moist through the summer. Breed in deep, still-moving water with a range of emergent cover amounts. Also breed in stock ponds (USFWS 2019).	Endemic to California and Baja California, Mexico. From Mendocino County to Riverside County along the Coast Range and from Calaveras County to Butte County in the Sierra Nevada (USFWS 2019).	<b>No potential to occur.</b> No suitable habitats (stock ponds, seasonal wetlands, or vernal pools) were observed during the biological survey. The nearest occurrence is over 5 miles to the southeast (CDFW 2019a).
<i>Spea hammondii</i>	western spadefoot toad	-	-	SSC	Occurs primarily in grassland habitats but can be found in valley-foothill hardwood woodlands. Needs vernal pools for breeding and egg-laying (CDFW 2019a).	Endemic to California. Found throughout the Central Valley, adjacent foothills, and in the Coast Ranges, just south of Monterey County to northern Baja California, Mexico (Natomas Basin Conservancy 2019).	<b>No potential to occur.</b> No suitable habitats (stock ponds, seasonal wetlands, or vernal pools) were observed during the biological survey. The nearest occurrence is over 5 miles to the southeast (CDFW 2019a).

Scientific Name	Common Name	Status			Habitat Association	Distribution	Potential to Occur in the Study Area
		Federal	State	CDFW			
<i>Thamnophis gigas</i>	giant garter snake	T	T	-	Open water associated with slow-moving streams, sloughs, ponds, marshes, inundated floodplains, rice fields, and ditches within the Central Valley; also requires emergent herbaceous wetland vegetation for escape and foraging habitat, grassy banks and openings in waterside vegetation for basking, and higher elevation upland habitat for cover and refuge from flooding during the snake's inactive season.	Ranges from Glenn County to the southern edge of the San Francisco Bay Delta, and from Merced County to Fresno County.	<b>Unlikely to occur.</b> The study area is located approximately 10 miles northeast of the giant garter snake Badger Creek Recovery Unit in the Cosumnes River. Giant garter snake is documented in the Badger Creek Unit as recently as 2017 (CDFW 2019a). The Cosumnes River in the vicinity of the project area is unlikely to provide suitable aquatic habitat for giant garter snake nor does suitable aquatic habitat occur on or near the project site.
<b>Birds*</b>							
<i>Accipiter cooperii</i> (nesting)	Cooper's hawk	-	-	WL	Requires dense tree stands, or patchy woodland habitat. Nesting usually occurs near open water or riparian vegetation.	Distributed throughout the state of California from sea level to above 9,000 feet in elevation (CDFW 2019a).	<b>Known to occur.</b> iNaturalist observation by CNDDB. A CDFW wildlife biologist in November 2016 observed an active Cooper's hawk nest within 0.4 mile northwest of the northern boundary of the study area (iNaturalist 2019). Observations of Cooper's hawk have also been reported in the near vicinity (iNaturalist 2019). Dense vegetation and proximity to the Cosumnes River also makes it ideal habitat for nesting Cooper's hawk. One deceased Cooper's hawk juvenile and an inactive nest were observed during the biological survey in a small valley oak tree in the southwest corner of the study area.
<i>Agelaius tricolor</i> (nesting colony)	tricolored blackbird	-	T	SSC	Individuals forage in agricultural lands and grasslands, and nest in marshes, riparian scrub, and other areas that support cattails or dense thickets of shrubs or herbs.	Found mostly in the Central Valley of California with scattered populations in the Coast Ranges.	<b>Could occur.</b> The nearest record of this species is approximately 1.45 miles northwest of the study area where 40 nesting birds were observed in 1994. This same record was updated in 2014 with 0 birds observed. Another observation was documented 1.0 mile north of the study area where 2,000 adults were observed nesting in June 1991 (CDFW 2019a). Several 20-year-old or more observations of tricolored blackbird near the study area have documented the decline in colonies in the area. Suitable habitat in the form of grasslands, agricultural lands, and riparian scrub with cattails and shrub thickets were observed in the study area and could potentially house new colonies or transient colonies of tricolored blackbird.

Scientific Name	Common Name	Status			Habitat Association	Distribution	Potential to Occur in the Study Area
		Federal	State	CDFW			
<i>Ammodramus savannarum</i> (nesting)	grasshopper sparrow	-	-	SSC	Prefer short to mid-height open grasslands with scattered shrubs.	Occurs across North American and ranges from southern Canada to Ecuador. Primarily occurs in California as a summer resident from March to September (Shuford and Gardali 2008).	<b>Could occur.</b> Coyote brush scrub and dense grassland habitat in the study area could potentially support the species if present during the breeding season. There are no nearby occurrences of the species (CDFW 2019a).
<i>Aquila chrysaetos</i> (nesting and wintering)	golden eagle	-	-	FP, WL	Typically found in rolling foothills, mountain areas, sage-juniper flats, and deserts.	Uncommon, permanent resident and migrant throughout California, except the Central Valley. More common in southern California than the north. Ranges from sea level up to 11,500 feet in elevation.	<b>Not likely to occur.</b> No suitable nesting habitat in or near the study area, although the species could forage in the study area. The most recent CNDDDB records within 10 miles of the study area are from 1992 and 1991 (CDFW 2019a). There is an iNaturalist observation recorded in 2014 off of Meiss Road in Wilton, approximately 3 miles northeast of the study area.
<i>Athene cunicularia</i> (burrow sites and some wintering sites)	burrowing owl	-	-	SSC	For nesting and foraging, grasslands, agricultural fields, and low scrub habitats, especially where ground squirrel burrows are present; occasionally inhabit artificial structures and small patches of disturbed habitat.	Found throughout western North America. Found throughout most of California; specifically concentrated in the Central Valley, San Francisco Bay region, Carrizo Plain, and Imperial Valley (Shuford and Gardali 2008).	<b>Not likely to occur.</b> An iNaturalist observation from 2018 recorded a burrowing owl 5 miles east of the study area. There is also a CNDDDB record of the species approximately 3.5 miles northwest of the study area (CDFW 2019a). Habitat in the study area is marginally suitable for the species, with tall, dense, weedy vegetation, few small mammal burrows, and no ground squirrel burrows.
<i>Circus hudsonius</i> (nesting)	Northern harrier	-	-	SSC	Nests and forages in grasslands, agricultural fields, and marshes. Nests on the ground within patches of dense, often tall, vegetation in undisturbed areas.	Breeds from sea level to 5,700 feet (amsl) in the Central Valley and Sierra Nevada, and up to 3,600 feet in northeastern California.	<b>Known to occur.</b> The study area is within the breeding range of the species, and suitable nesting and foraging habitat are present. This species was observed foraging in the study area during the field surveys.
<i>Buteo regalis</i> (wintering)	ferruginous hawk	-	-	WL	Occurs in open grasslands, sagebrush flats, desert scrub, low foothills, and fringes of pinyon-juniper habitats.	Uncommon winter resident and migrant at lower elevations and open grasslands in the Modoc Plateau, Central Valley, and Coast Ranges (Zeiner et al. 1988-1990).	<b>Could occur.</b> This species has been documented in the surrounding area between Rancho Murietta and Sloughhouse (iNaturalist 2019). The species was not observed during the survey; however, suitable foraging habitat in the southeastern portion of the study area exists for this species.

Scientific Name	Common Name	Status			Habitat Association	Distribution	Potential to Occur in the Study Area
		Federal	State	CDFW			
<i>Buteo swainsoni</i> (nesting)	Swainson's hawk	-	T	-	Typically nests in large, mature trees in open woodlands, woodland margins, riparian strips along drainage canals, or in isolated trees; typically places nests high in trees; forages in native grasslands and agricultural fields (hay and grain crops, lightly grazed pastures, and some row crops) up to 10 miles or more from nest sites, depending on habitat availability; alfalfa is particularly importance.	Uncommon breeding resident and migrant in the Central Valley, Klamath Basin, Northeastern Plateau, Lassen County, and Mojave Desert (Zeiner et al. 1988-1990).	<b>Could occur.</b> This species could occur during the spring and summer seasons. Several occurrences of nesting Swainson's hawk are recorded on the Cosumnes River near the study area (CDFW 2019a). Citizen observations from iNaturalist also place the species in the nearby vicinity of the study area (iNaturalist 2019). Suitable habitat throughout the study area was observed, including grasslands for foraging and riparian oak woodland habitat for nesting.
<i>Elanus leucurus</i> (nesting)	white-tailed kite	-	-	FP	For nesting, isolated trees, open woodlands, and woodland margins; for foraging, grasslands and agricultural fields.	Occurs throughout California. Yearlong resident in coastal and valley lowlands. Associated with agricultural areas.	<b>Could occur.</b> One observation of white-tailed kite was made 6 miles northwest of study area in 2019 near Vineyard, California (iNaturalist 2019) and 3 miles to the northeast nesting along the Cosumnes River (CDFW 2019a). The study area has suitable habitat such as grasslands, isolated trees, and nearby agricultural fields that could support breeding white-tailed kite.
<i>Haliaeetus leucocephalus</i> (nesting and wintering)	bald eagle	DL	E	FP	Found along large bodies of water such as lakes, reservoirs or free-flowing rivers with abundant fish prey. Nests in old-growth trees mainly in the mountains and foothill forests near large bodies of water.	Found throughout California. Common throughout the central coast from Marin to Santa Barbara counties and inland lakes such as Big Bear Lake, Cachuma Lake, Lake Mathews, Nacimiento Reservoir, San Antonio Reservoir, and along the Colorado River (Zeiner et al. 1988-1990).	<b>Known to occur.</b> This species was observed during the biological survey as a flyover; however, no breeding pairs or nests have been recorded in recent years near the study area (CDFW 2019a, iNaturalist 2019).
<i>Riparia riparia</i> (nesting)	bank swallow	-	T	-	Steep riverbank cliffs, gravel pits, and highway cuts. Requires fine-textured sand soils near streams, rivers, lakes, and the ocean for digging nesting holes.	Neotropical migrant found in riparian and lowlands in California west of the deserts during the spring-fall period.	<b>No potential to occur.</b> No suitable nesting habitat (fine-textured cliffs or banks) present in the study area. The species has been recorded within 8 miles of the study area along the Cosumnes River; however, the observations are from 1987 and there have been no recent observations (CDFW 2019 and iNaturalist 2019).
<b>Mammals</b>							
<i>Taxidea taxus</i>	American badger	-	-	SSC	Occur in open, dry shrublands, forest, and herbaceous habitats with friable soils.	Uncommon, found throughout the state of California.	<b>No potential to occur.</b> No suitable habitat or dens observed in the study area during the survey. Two CNDDB occurrences have been recorded within 7 miles of the study area from 1990 and 1991 (CDFW 2019a).

Scientific Name	Common Name	Status			Habitat Association	Distribution	Potential to Occur in the Study Area
		Federal	State	CDFW			
<b>Notes:</b>  *Because the distribution and abundance of individual bird species varies seasonally, the season, or life phase, during which the species is of conservation concern in California is provided in parentheses beneath the bird species scientific name. There is a potential for any of these bird species to fly over or pass through the Study Area; however, these species would not be at risk of adverse effects unless nesting in or otherwise residing in the Study Area during the season or life phase when the species is of conservation concern in California.  <b><sup>1</sup>Listing Status:</b> <b>Federal Endangered Species Act:</b> FE = endangered FT = threatened FD = delisted — = no status <b>Federal—National Marine Fisheries Service:</b> SC = species of concern <b>State Endangered Species Act:</b> SE = endangered SCE = candidate endangered ST = threatened SCT = candidate threatened SD = delisted SR = rare — = no status <b>CDFW:</b> SSC = species of special concern FP = fully protected — = no status WL = watch listed							



Source: AECOM 2020

Figure 4: Habitat Map

dominated riparian corridor along the northern boundary of the study area. This vegetation alliance is defined by valley oak comprising greater than 35% relative cover in the tree canopy with other riparian trees, such as box elder, white alder, Oregon ash, Fremont cottonwood, and sycamore (CNPS 2020d). The tree canopy is open to continuous, with an open to intermittent shrub layer. In the study area, the valley oak woodland vegetation community is dominated by a continuous canopy of valley oak trees intermixed with Fremont cottonwood, black walnut, box elder, Oregon ash, and black willow, with an intermittent shrub layer consisting of patches of California wild rose (*Rosa californica*) and Himalayan blackberry.

**Blue Elderberry Stand** – A narrow row of elderberry shrubs and other scrub vegetation, bisects the ruderal vegetation in the southern portion of the study area. The elderberries and other shrubs are growing along the top of an approximately 3-foot-tall mounded berm that runs north to south across the parcel and covers a pipeline. Vegetation in this land cover type is most like the *Sambucus nigra* Shrubland Alliance (Blue Elderberry Stands) described by CNPS 2020e. This vegetation alliance is defined by a shrub canopy that is dominated by blue elderberry with other shrubs intermixed, such as coyote brush, toyon (*Heteromeles arbutifolia*), blackberry (*Rubus* spp.), sandbar willow (*Salix exigua*), arroyo willow (*S. lasiolepis*), poison oak (*Toxicodendron diversilobum*), and California grape (*Vitis californica*). Emergent trees such as Oregon ash, black walnut, or valley oak may also be present at low cover. In the study area, the blue elderberry stand is dominated by blue elderberry comprising more than 50% canopy cover, intermixed with Himalayan blackberry, arroyo willow, poison oak, and California blackberry (*Rubus ursinus*). Emergent trees include a few small, scattered black walnut, valley oak, ailing, and almond (*Prunus dulcis*). The understory herbaceous layer consists of wild oats (*Avena* spp.) and other annual grasses intermixed with ruderal forbs, including telegraph weed, milk thistle, and poison hemlock.

**Willow Riparian Woodland** – A small stand of willows and other riparian scrub vegetation is present along the outer base of an engineered levee slope that bounds the Cosumnes River corridor to the south. Although there is no surface water present at this location, the presence of riparian scrub vegetation indicates a high water table. The vegetation community in this area is most like the *Salix gooddingii* – *Salix laevigata* Woodland Alliance (Goodding's Willow – Red Willow Riparian Woodlands) described by the Manual of California Vegetation (CNPS 2020f). This vegetation alliance is defined by black willow and/or red willow (*Salix laevigata*) dominant or co-dominant in the tree or shrub canopy with other riparian tree or shrub species. In the study area, the willow riparian woodland vegetation community is co-dominated by black willow and sandbar willow with box elder, coyote brush, California wild rose, valley oak, and Fremont cottonwood mixed in a lower relative cover, forming a continuous stand of scrub vegetation. The understory layer is also dense, consisting of California blackberry, poison hemlock, and field mustard intermixed with scattered annual grasses.

**Wild Oats and Annual Brome Grassland** – A patch of annual grassland was observed in the north-central portion of the study area in a clearing between two access roads. Vegetation in this area is most like the *Avena* spp. – *Bromus* spp. (Wild Oats and Annual Brome Grasslands) Herbaceous Semi-Natural Alliance (CNPS 2020g). This vegetation alliance is defined by the presence of nonnative annual grasses, such as wild oats (*Avena barbata*, *A. fatua*), bromes



(*Bromus hordeaceus*, *B. diandrus*), and/or barley (*Hordeum murinum*) that are dominant or co-dominant with other non-natives in the herbaceous layer.

**Aquatic Resources** – As discussed previously, the soils in the study area consist of drained sandy loams (NCSS 2003, 2006) that do not appear to retain water for a significant period of time. Site hydrology is characterized by natural precipitation and flooding. During the biological survey in November 2019, the ground surface was dry and felt coarse and sandy to the touch. The most recent precipitation event prior to the survey occurred on September 12, 2019, when the Cosumnes/Wilton region of Sacramento County recorded 0.2 inch of rainfall (Sacramento County 2020a).

No wetlands or wetland indicators (e.g., wetland vegetation, basin/swale topography, cracked mud, surface hydrology) were found during a comprehensive pedestrian survey of the southern portion of the study area (i.e., within the ruderal, elderberry, and willow riparian vegetation communities). The northern portions of the study area (i.e., box elder forest, annual grassland, and valley oak woodland vegetation communities) were surveyed with binoculars from access roads and also resulted in a negative finding of wetlands or wetland indicators. However, indications of periodic flooding (i.e., wrack lines and high water marks) were observed in the box elder forest and valley oak woodland communities in the northern portion of the study area, near Deer Creek.

There is the remnant of an agricultural levee along the south bank of Deer Creek; but it does not protect the northern portion of the site from seasonal flooding, which, according to the landowner, occurs regularly in the late winter/early spring and results in pockets of rapidly draining standing water (J. Sherbakoff, pers. comm., November 25, 2019). At the time of the biological survey, Deer Creek was completely dry. According to the National Wetlands Inventory, this feature is classified as a freshwater forested shrub/wetland with a temporary flooded water regime, in that surface water is present for brief periods (from a few days to a few weeks) during the growing season, but the water table usually lies well below the ground surface for most of the season (USFWS 2020b). Within the study area, Deer Creek has steep scoured banks and little to no vegetation in the channel center, indicating periodic high scouring flows. An approximately 30-foot-tall engineered levee separates the study area from the Cosumnes River corridor to the south. The Cosumnes River is classified as a permanently flooded riverine system (USFWS 2020b) and features a mature Great Valley riparian forest vegetation corridor, dominated by large native oaks and Fremont cottonwoods, along both river banks. Riparian forest and scrub vegetation associated with the Cosumnes River, such as the willow riparian woodland in the southern extent of the study area, also extends beyond levee banks.

Surface water and its drainage or groundwater within the boundaries of the state are considered “waters of the state” and are regulated under the Porter Cologne Act and Section 401 of the Clean Water Act (CWA). Therefore, Deer Creek, which has a defined bed and bank, is a water of the state. Aquatic features that also meet the federal regulatory definition of “waters of the United States” are further regulated under Section 404 of the CWA. While no wetland delineation has been conducted to date within the study area, Deer Creek, at a minimum, is assumed to be subject to USACE jurisdiction because of its apparent hydrologic connection to the Sacramento-San Joaquin Delta downstream. A review of the USFWS National Wetland

Inventory data (USFWS 2020b) identified Deer Creek as the only potentially jurisdictional feature within the study area boundary.

Pursuant to Section 1602 of the California Fish and Game Code, CDFW must receive written notification regarding any activity that may substantially divert or obstruct the natural flow of, or substantially change or use any material from, the bed, channel, or bank of any river, stream, or lake. Both Deer Creek and Cosumnes River to the north and south of the project site, respectively, would meet CDFW's definition of a regulated stream. According to *A Field Guide to Lake and Streambed Alteration Agreements: Section 1600-1607 California Fish and Game Code* (CDFW 1994), a stream contains biologic components, including aquatic and riparian vegetation and all aquatic animals including fish, amphibians, reptiles, invertebrates, and terrestrial species that derive benefits from the stream system. Furthermore, as a physical stream, a stream not only includes water (at least on an intermittent or ephemeral basis), but also a bed, bank, and/or levee; in-stream features such as logs or snags; and various floodplains. The outer edge of riparian vegetation is generally used as the line of demarcation between riparian and upland habitats and is therefore a reasonable and identifiable boundary for the lateral extent of a stream. In most cases, the use of this criterion should result in protecting the fish and wildlife resources at risk. With respect to the proposed project, the outer limits of CDFW jurisdiction would be defined as the outer limits of habitat functionally considered to be riparian.

According to guidance provided in *A Field Guide to Lake and Streambed Alteration Agreements: Section 1600-1607 California Fish and Game Code* (CDFW 1994), the outer edge of riparian vegetation is a reasonable and identifiable boundary for the lateral extent of a stream, the protection of which should result in the preservation of the fish and wildlife at risk within a stream or drainage, and therefore may constitute the limits of CDFW jurisdiction along waterways. Riparian habitats within the study area include the valley oak woodland and box elder forest vegetation communities along Deer Creek and associated floodplain in the northern portion of the study area, and the willow riparian scrub vegetation community adjacent to the Cosumnes River Levee along the southern boundary of the study area.

### *Special-status Plant Species*

The database searches yielded 16 special-status plant species that were evaluated for their potential to occur in the study area, as shown in Table 5. Of these, only valley brodiaea (*Brodiaea rosea* ssp. *vallicola*) was considered to have the potential to occur in the study area. The remaining 15 species were excluded from further analysis due to a lack of suitable habitats (e.g., vernal pools, chaparral, cismontane woodland, wetlands, ditches); the species' known range is outside the study area; or lack of suitable soils. There are no records of special-status plants within or adjacent to the study area.

**Valley Brodiaea** – Valley brodiaea is a California Rare Plant Rank list 4.2 species, meaning that it has a limited distribution in the state and is fairly endangered in California; however, it is not listed pursuant to state or federal endangered species acts. It is a perennial bulbiferous herb in the that blooms from April through May. It is found in valley and foothill grassland habitats, including vernal pools and swales, and on old alluvial terraces with silty, sandy, and gravelly loam. It is endemic to California where it is limited to the northeastern portions of the Central

Valley at elevations ranging from 30 to 1,100 feet above mean sea level (CNPS 2019). There are no CNDDDB records of valley brodiaea within a nine-quadrangle search radius of the study area (CDFW 2019a). However, nine observations of valley brodiaea are recorded in Sacramento County in the CNPS Inventory database (CNPS 2019; CalFlora 2020). The nearest record to the study area is documented from within the Sloughhouse quadrangle, but specific observation information is not available (CalFlora 2020).

### *Special-status Wildlife Species*

Table 6 shows 23 taxa of special-status wildlife evaluated for their potential to occur in the study area or vicinity. Special-status wildlife species observed during the biological survey include Cooper's hawk, northern harrier, bald eagle, and valley elderberry longhorn beetle (exit holes). Potentially suitable habitat is also available in the study area for the following species: western pond turtle, tricolored blackbird, grasshopper sparrow, ferruginous hawk, Swainson's hawk, and white-tailed kite. Giant garter snake was considered unlikely to occur at the project site due to lack of appropriate habitat.

**Valley Elderberry Longhorn Beetle** – Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) (VELB) is a federally threatened taxon under ESA. The VELB is known to occur throughout the Central Valley from southern Shasta County to Fresno County, including the valley floor and lower foothills, usually below 500 feet (above mean sea level [amsl]) in elevation. This taxon is almost always found on or close to its host plant, red or blue elderberry (*Sambucus* species). Females lay their eggs on the bark of the elderberry bush, and the larvae hatch and burrow into the stems. The larval stage can last two years, after which they become pupae and then transform into adult beetles. Adults are active from March to June, breeding and eating (USFWS 2019). A total of 122 elderberry shrubs were recorded within the project area during the field survey, many of which are large enough to provide suitable habitat for the VELB. Valley elderberry longhorn beetle exit holes were observed on one elderberry shrub during the field survey. Therefore, there is a high potential for the species to occur within the project area.

Western pond turtle are known to occur within the vicinity of the project site and have been found in areas connected to lower reaches of the Cosumnes River (CDFW 2019a). Western pond turtles spend much of their lives in water but could occur in upland habitats adjacent to suitable aquatic habitat (i.e. within 300 feet of the Cosumnes River), especially in areas with existing mammal burrows that could provide wintering refugia sites. Few, scattered small mammal burrows indicative of gopher and vole activity were found in the southern and central portions of the project site during the biological survey.

Western pond turtles could be present in the southern portion of the project site throughout the year. Females lay their eggs between April and August in upland habitat, usually in open sunny areas along stream or pond margins that are within 300 feet of aquatic habitat (Sacramento County et al. 2018). Thus, the open ruderal herbaceous habitat adjacent to the Cosumnes River levee could provide suitable nesting habitat. Young turtles hatch within 80 to 100 days, and then move to nearby aquatic habitats (East Contra Costa County Habitat Conservancy[ECCC] 2006). During the winter (November through March), the willow riparian habitat in the southwestern

portion of the project could provide suitable wintering habitat for adult western pond turtles, which may move to woodlands near their aquatic habitat and bury themselves in loose soil and leaf litter to estivate (ECCC 2006; Sacramento County et al. 2018). Potential upland habitats for western pond turtles are limited to the southwest corner of the parcel and where the pipeline connection would occur near the Cosumnes River levee.

**Nesting Birds and Raptors** – Nesting birds and their nests are protected under the California Fish and Game Code (FGC) Section 3503. All birds in the orders Falconiformes and Strigiformes (collectively known as birds of prey) are also protected by FGC Section 3503.5. Birds of prey include raptors, falcons, and owls. The federal Migratory Bird Treaty Act (MBTA) of 1918 (16 United States Code [USC] 703-711) also protects most birds and their nests, including many birds that are non-migratory in California. The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any bird listed in 50 CFR Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations. Any disturbance that causes direct injury, death, nest abandonment, or forced fledging of migratory birds, is restricted under the MBTA. Any removal of active nests during the breeding season or any disturbance that results in the abandonment of nestlings is considered a “take” of the species under federal law. The project and adjacent areas provide nesting and foraging habitat for birds protected under MBTA and/or FGC. Special-status migratory birds and raptors that could occur in the project area include: tricolored blackbird, Cooper’s hawk, ferruginous hawk, Swainson’s hawk, northern harrier, white-tailed kite, bald eagle, and grasshopper sparrow. These species are discussed below.

**Designated Critical Habitat** – Designated critical habitats for Sacramento Orcutt grass and vernal pool fairy shrimp are located within 5 miles of the proposed project in vernal pool complex habitats (USFWS 2020a). No designated critical habitats occur within or adjacent to the study area (USFWS 2019; USFWS 2020a).

**Wildlife Movement Corridors and Nursery Sites** – The Deer Creek and the Cosumnes River riparian corridors function as important wildlife movement corridors. Special-status species that may use these corridors include the western pond turtle, migratory birds, and raptors such as Swainson’s hawk. The natural and semi-natural vegetation communities within the project area between these two riparian corridors is also expected to facilitate the terrestrial movement of common wide-ranging upland species, such as coyote and deer, as well as raptors and other birds.

Native wildlife nursery sites are locations where wildlife concentrate to breed and raise young such as rookeries (i.e., nesting colonies), fish spawning grounds, and colonial bat roosts. No native fish populations are present within the project site. No rookeries or other similar areas with high concentrations of breeding birds are known to occur within or adjacent to the project site. The project site contains limited habitat for some species of bats in the form of large trees that could be used for roosting.

**Trees** – Several valley oaks trees were mapped near the likely pipeline alignment. The Sacramento County Tree Preservation and Protection Ordinance (Sacramento County 2020b).

Trees protected by the ordinance include California native oaks, other native trees, and large landscape trees.

### Impacts

The project will result in the construction of a pipeline that will cross the site. Although biological resources may be temporarily disturbed or displaced during construction, the construction alignment is flexible and will be selected to avoid the most sensitive resources.

#### (a) Effect on candidate, sensitive, or special status species – Less than significant impact with mitigation incorporated

Migratory birds could nest in the trees and shrubs in the riparian, scrub, and ruderal habitats throughout the study area. Raptors, including special status species (e.g. Cooper's hawk, Swainson's hawk, and white-tailed kite) could use larger trees within and adjacent to the site. Ground-nesting birds, such as western meadowlark and northern harrier (a CDFW species of special concern) could nest and forage in dense herbaceous vegetation, and killdeer may nest in open areas along access roads. Grasshopper sparrow (a CDFW species of special concern) may nest in dense vegetation in ruderal and grassland areas where there are scattered shrubs. If construction occurs during the nesting season, it could directly impact nesting birds or indirectly impact them by causing disturbance related to noise, equipment, and human activity such that they would abandon their nests. This impact is potentially significant.

The nests of ground-nesting bird species, such as killdeer, western meadowlark, and northern harrier, could be flooded by groundwater recharge activities, and any chicks or eggs contained within nests could be lost. However, the diversions would be initiated during the winter months. While flooded areas during the beginning of the nesting season may temporarily remove some nesting habitat for ground-nesting species, other similar and suitable habitats occur on the project site and within the immediate project vicinity. Furthermore, the soils within the project site drain rapidly and would not be flooded for an extended period of time, allowing the site to be used for nesting during the majority of the breeding season. The impact of winter flooding is therefore considered less than significant.

Grassland and ruderal portions of the project site provide suitable foraging habitat for raptors, including special-status species. The parcel is currently managed under a conservation easement for the protection of Swainson's hawk foraging habitat. Construction of the pipeline would be limited in extent and temporary in nature, with disturbed areas returned to a natural state similar to preexisting conditions following construction. In addition, flooding for groundwater recharge will be conducted during the winter months when Swainson's hawks are not present in the region. No impacts on foraging habitat for other resident raptors are expected due to the seasonal nature of flooding during winter months, when natural precipitation and flows from Deer Creek would be expected to periodically flood the parcel anyway. Soils in the study area drain rapidly following flood events and vegetation is adapted to periodic seasonal flooding, such that no change in vegetation communities or habitat types is expected as a result of the proposed project. Therefore, the project would not result in any loss of Swainson's hawk or other raptor foraging habitat.

Construction-related impacts on upland habitat in this area would be minor in extent, and are expected to return to pre-project conditions within one growing season because they are dominated by herbaceous vegetation that will reestablish quickly following disturbance. Therefore, no permanent impact on upland habitat for western pond turtle is expected. However, project construction activities could result in the injury or mortality of western pond turtle individuals (e.g. equipment strikes, crushing underground individuals), if present within the project area during construction. This impact would be potentially significant.

Flooding of the parcel during the winter months would not likely impact special-status reptiles because suitable upland habitat is limited to an area within 300 feet of the Cosumnes River channel, most of which is comprised of a 30-foot-tall engineered levee. This area is the highest point in the parcel and would not flood during recharge activities and any mammal burrows within the levee that would provide suitable refugia for the species in this area would not be inundated. Furthermore, western pond turtle is an aquatic species that is adapted to winter flooding conditions throughout their ranges. Nests of western pond turtle would not be affected by winter flooding, since the nesting season is during the spring and summer. This impact is less than significant.

According to the USFWS Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (USFWS 2017a), adverse effects to VELB may occur as a result of construction within 165 feet of elderberry shrubs. Trimming or removal of elderberry shrubs within and adjacent to (i.e., within 20 feet of) pipeline and valve installation areas may remove or destroy VELB eggs and/or larvae, and may reduce the health and vigor of the elderberry shrub. The impact would be potentially significant.

Flooding of the parcel would not likely impact VELB habitat. Elderberry shrubs are a riparian species and are tolerant of regularly saturated soils during the winter months. Most of the elderberry shrubs on the site are growing atop a 3-foot berm or are at the upper elevations of the site, so it is unlikely they would be exposed to extended periods of saturation. As discussed previously, the soils in the study area are well drained and any floodwaters on the site are expected to percolate rapidly. The impact of winter flooding would be less than significant.

Valley brodiaea has the potential to occur in or adjacent to the project area in grassland habitat. Plants listed by the CRPR as Rank 4 plants are considered a watch list and may be considered to be a rare species if they occur in fewer than two California counties or if they are of local concern. Given that valley brodiaea are known only from one record in the Sloughhouse area, with no information available about this population's exact location, extent, habitat, or current status, any incidence of the species in the project could be of local concern. Ground-disturbing construction and staging activities, as well as the movement of mobile equipment, could result in the direct mortality of individuals from the temporary or permanent removal of vegetation, crushing, or trampling. This impact could be potentially significant.

Effects on valley brodiaea in the study area as a result of flooding of the parcel for groundwater recharge are similar to those discussed for elderberry shrubs, above. Valley brodiaea is assumed to be tolerant of regularly saturated soils during the winter months, as it is often found in vernal

pool and swale habitats (CNPS 2019). As discussed previously, the soils in the study area are well drained and any flooding of the site is expected to percolate rapidly. This impact would be less than significant.

Mitigation Measures:

**BIO-1:** Before the start of any construction activity, SAFCA will develop a worker environmental awareness program and provide environmental training to all personnel working on the project site during construction. Training materials and briefings may include but not be limited to:

- discussion of the federal ESA and CESA, the MBTA, and California Fish and Game Code Sections, and 1602, and specific conditions of any permits from CDFW;
- identification of the special-status plant and wildlife species to be protected and wildlife habitat and sensitive natural communities to be protected;
- identification of special-status species, life history descriptions, habitat requirements during various life stages, and the species' protected status;
- measures to avoid introduction and minimize the spread of invasive weeds during construction and operation;
- hazardous substance spill prevention and containment measures; and
- review of any mitigation requirements related to biological resources.

**BIO-2:** To the extent feasible, SAFCA or its contractor will remove trees and vegetation outside the nesting season, which is defined as February 1 through September 1. If tree or vegetation removal, or commencement of construction occurs, between February 1 and September 1, SAFCA or its contractor will conduct preconstruction surveys for active nests of migratory nesting birds and raptors, including white-tailed kite, northern harrier, Swainson's hawk, ferruginous hawk, Cooper's hawk, and bald eagle, within 14 days before the start of any construction-related activities.

Surveys will be conducted by a qualified biologist who is knowledgeable about the distribution, habitat, life history, and identification of Northern California birds; experienced in nest searching for birds that may occur within the study area; and knowledgeable about survey protocols and/or permits needed to survey for federally listed or state-listed birds. Surveys will cover the entire project area and 500 feet beyond the project area boundaries. Surveys for Swainson's hawks will be conducted within one-quarter mile of project boundaries in accordance with the guidance described in Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (CDFW 2000).

If active nests are found, SAFCA or its contractor will consult with a qualified biologist to establish avoidance buffers around nests that will be sufficient so that breeding is not be likely to be disrupted or adversely affected by project activities. An avoidance buffer will constitute an area where no project-related vegetation removal, earth-moving, and construction will occur. Typical avoidance buffers during the nesting season will be a radius of 100 feet for nesting passerine birds, 500 feet for nesting raptors, and 0.25 mile

for nesting Swainson's hawk. In consultation with CDFW, the qualified biologist may modify the size of the exclusion zone depending on the species and the type of construction activity and associated disturbance anticipated near the nest. Factors to be considered for determining the buffer size will include: the presence of existing buffers provided by vegetation, topography, and infrastructure; nest height; locations of foraging territory; and baseline levels of noise and human activity. The buffer zone will be delineated on project plans and with highly visible flagging. Active nest sites will be monitored periodically throughout the nesting season to identify any sign of disturbance and to document nest status. The buffers will be maintained until a qualified biologist has determined that the young have fledged and are no longer reliant on the nest or parental care for survival.

**BIO-3:** SAFCA will conduct pre-construction surveys within 48 hours before the start of construction activities if construction activities are to occur within 330 feet of a body of water. A qualified biologist will inspect areas where construction activities will occur for signs of western pond turtles and/or western pond turtle nesting activity (recently excavated nests, nest plugs) or nest predation (partially to fully excavated nest chambers, nest plugs, scattered egg shell remains, and egg shell fragments). The qualified biologist shall be familiar with the distribution, habitat, life history, and identification of Northern California turtles.

If western pond turtle active nests are found, construction will not take place within 100 feet of the nest until the turtles have hatched and have left the nest or can be safely relocated, as determined by the qualified biologist. In consultation with CDFW, the qualified biologist may modify the size of the exclusion zone, depending on the type of construction activity and associated disturbance anticipated near the nest.

**BIO-4:** To avoid and minimize impacts on VELB and/or its habitat, SAFCA will implement the following measures:

- SAFCA or its contractors will establish a 20-foot non-disturbance buffer around elderberry shrubs of a sufficient size to support VELB that occur within 165 feet of proposed construction activities. Elderberry shrub avoidance areas will be shown on project plans and will be fenced and/or flagged before construction.
- All construction activities that occur within 165 feet of an elderberry shrub will be conducted outside the VELB flight season (March–July).
- Trimming elderberry shrubs will occur between November and February. Trimming will avoid the removal of any branches or stems that are greater than or equal to 1 inch in diameter. Measures to address regular and/or large-scale maintenance (trimming) will be established in consultation with USFWS.

**BIO-5:** To avoid impacts on valley brodiaea, SAFCA will retain a qualified botanist to conduct preconstruction surveys during the blooming period (April through May). The botanist will survey suitable habitat in the work areas for the species in accordance with CDFW protocols (California Department of Fish and Game 2018). The results of the survey will be documented in a brief report or technical memoranda. If the survey



demonstrates the absence of special-status plant species in the project area, no further actions will be required.

If valley brodiaea are found in the project area, the population(s) will be flagged during preconstruction surveys and avoided to the greatest extent feasible. Avoidance measures may consist of placing an equipment limitation zone or equipment exclusion zone (e.g. flagging, fencing, or signage) around plant populations so that direct impacts are minimized while allowing the use of any existing roads or other access areas that may pass through the equipment limitation zone or near the equipment exclusion zone.

If preconstruction surveys reveal the presence of valley brodiaea in the project disturbance area or areas immediately adjacent, SAFCA will notify CDFW; and directly affected areas of special-status plants shall be documented by a qualified botanist. Documentation shall include density and percent cover; key habitat characteristics, including soil type, associated species, hydrology, and topography; photographs of preconstruction conditions; and a map of the location and extent of potentially impacted populations in the project impact area in order to quantify impacts.

For valley brodiaea that cannot be avoided, a qualified botanist or restoration ecologist will prepare a salvage, relocation, or propagation and monitoring plan, as deemed appropriate and in coordination with CDFW prior to construction. The plan will address techniques, location, and procedures required for the successful establishment of the plant populations. The plan will include provisions for performance that address survivability requirements, maintenance, monitoring, implementation, and the annual reporting requirements. Monitoring and success criteria applicable to special-status plant salvage, relocation, or propagation will require the following:

- at least two surveys by a qualified botanist or ecologist per monitoring year,
- at least 80% of the planted area must support vegetation composition and density consistent with reference population conditions,
- at least 80% of the planted area must support target species amounts similar to reference feature conditions,
- a minimum of 5 consecutive years of monitoring to ensure that success criteria are met, and
- remedial actions to restore the intended ecological function of planted areas that fail to meet the success criteria for 3 consecutive years.

Significance after mitigation: Less than significant

(b) Effect on riparian habitat or a sensitive natural community – Less than significant impact with mitigation incorporated

Construction may affect riparian habitat and sensitive natural communities through clearing, trimming, and grading of vegetation for pipeline installation within or adjacent to the willow riparian and/or elderberry stand habitats. No new roads are proposed as part of the project. All construction-related activities are temporary in nature, and native vegetation will not be replaced with infrastructure. The pipeline and valve installation areas will not be kept free of vegetation in

the long term, and disturbed soils will be seeded after construction. Policy CO-115 of the Sacramento County General Plan recommends a functional setback of at least 100 feet, measured from the outside edge of the stream bank, to protect riparian functions and vegetation along the stream bank. The boundaries of the project site are more than 100 feet north of the Cosumnes River bank, and all project construction activities are well over 100 feet south of the banks of Deer Creek.

Effects on riparian habitat and sensitive natural communities in the study area as a result of flooding of the parcel for groundwater recharge are similar to those discussed for elderberry shrubs, above. The valley oak woodland, riparian, and blue elderberry habitats are tolerant of regularly saturated soils during the winter months such as when the parcel is flooded when Deer Creek overflows. As discussed previously, the soils in the study area are well drained and any flooding of the site is expected to percolate rapidly. This impact would be less than significant.

Construction of the new conveyance valves and pipelines could result in a potentially significant effect on CDFW jurisdictional riparian habitat and sensitive natural communities as a result of direct, temporary impacts on vegetation in these habitats. Implementation of the following mitigation measures will reduce the impact to a less than significant level.

#### Mitigation Measures:

**BIO-6:** Prior to construction, SAFCA will avoid and minimize disturbances to riparian habitat and sensitive natural communities by aligning the construction corridor to minimize disturbance to the areas necessary for construction and locations that are already disturbed or developed to avoid riparian habitat and sensitive natural communities to the greatest extent feasible, and avoid clearing of trees and shrubs. A qualified biologist will assist with the identification of environmentally sensitive areas in the vicinity of construction to ensure that they are marked for avoidance and preserved to the greatest extent feasible.

If tree or shrub removal in any areas of riparian habitat and sensitive natural communities cannot be avoided, SAFCA will quantify impact acreages based on the final alignment. Prior to construction, SAFCA will obtain a Section 1602 streambed alteration agreement from CDFW if any tree or shrub removal is proposed in or near Deer Creek, the Cosumnes River levee, or associated riparian vegetation that could potentially fall under the jurisdiction of CDFW. The project applicant will implement all conditions in the permit, including any requirements for compensatory mitigation for the loss of riparian habitat as part of the Section 1602 streambed alteration agreement.

If on-site restoration is selected as the compensatory mitigation for impacts on riparian habitat, SAFCA will develop and implement a Revegetation and Restoration Plan to reestablish riparian habitat, including riparian vegetation subject to CDFW jurisdiction, and/or enhancement of existing habitat, on a per-acre basis. The minimum mitigation ratio will be 1.5 acre of riparian habitat restored, created, or enhanced for each acre of permanent or temporary impact. The Revegetation and Restoration Plan will include the following provisions for the restoration of affected riparian habitat:

- baseline data collection at reference sites within the project site to establish expected ranges and minimum thresholds for species composition, relative species richness, and vegetative cover (i.e., herbaceous, shrub, and/or woody canopy);
- an appropriate species planting palette for each sensitive habitat that would be affected with minimum planting densities designed to achieve performance standards for survival cover and density while maintaining the natural character of the vegetation community being restored or created;
- minimum performance standards for percent survival, species composition, relative species richness, and vegetative cover (i.e. herbaceous, shrub, and/or woody canopy) based on data collected from nearby reference sites and life history traits of the plants being restored (e.g. herbaceous vs. woody, fast-growing primary colonizers vs. slow-growing successional species); and
- compensation for the temporal loss of habitat resulting from the removal of trees. Any trees removed from riparian habitat will be replaced with the same or similar species at a ratio of 3:1 (three trees planted for every one tree removed). Tree replacement may be carried out concurrently on riparian habitats that are also being restored, created, or enhanced on a per-acre compensatory basis.

Significance after mitigation: Less than significant

(c) Effect on wetlands and other waters – Less than significant impact

Deer Creek, which intersects the northern boundary of the study area, is assumed to be subject to California state and USACE jurisdiction. No other wetlands or other waters are present within the study area. No direct impacts to Deer Creek will occur as part of the project. No improvements or changes to the bridge over the creek are proposed. Indirect impacts to Deer Creek during project construction, such as erosion and sedimentation, are not likely, since pipeline installation will take place on flat land approximately 0.5 mile southeast of the Deer Creek channel.

The Cosumnes River to the south of the project is protected by a large constructed levee; thus, no indirect impacts to the Cosumnes River are expected. Therefore, there would be no impact on wetlands or other waters as a result of project implementation.

(d) Interfere with fish or wildlife movement or migratory corridors or nursery sites – Less than significant impact

Construction may temporarily disrupt movement of species on the site. However, after construction, movement corridors will function normally when diversion activities are not occurring. During flooded periods terrestrial wildlife will be confined to dry higher-ground areas. The project will have no permanent effects on the wildlife movement corridors associated with the Cosumnes River or Deer Creek. The project will have no effect on the Pacific flyway; birds using the flyway will continue to do so during and following project development. Project impacts to wildlife movement corridors are therefore considered less than significant.

The project site contains limited habitat for some species of bats in the form of large trees that could be used for roosting. No special-status bats have the potential to occur in the project site. Any maternity roosts of common bat species within the project area would be in the foliage of large trees. Tree-roosting species tend to be solitary or roost in small groups, and mothers are able to fly from disturbance while carrying their young. Because no large trees are expected to be removed, and any bats roosting in trees are able to move from project disturbance, the project will have no effect on bat maternity roosts. Therefore, this impact is less than significant.

(e) Conflict with local biological policies or ordinances – Less than significant impact with mitigation incorporated

By implementing the avoidance and minimization measures proposed in this document, the proposed project would be consistent with the goals and policies of the County of Sacramento General Plan. The project will not result in significant habitat loss for any special status species; therefore, mitigation pursuant to General Plan Policy CO-59 is not required. Any riparian impacts will be mitigated to levels consistent with General Plan Policy CO-89, as provided for under Riparian Habitat and Sensitive Natural Communities, above. As discussed under Riparian Habitat and Sensitive Natural Communities, above, construction setbacks to the Cosumnes River and Deer Creek are consistent with Policy CO-115 of the Sacramento County General Plan, which recommends a functional setback of at least 100 feet measured from the outside edge of the stream bank to protect riparian functions and vegetation along the stream bank. Therefore, there would be no conflict with the Conservation Element of the Sacramento County General Plan and there is no impact.

Chapter 16.130 of Title 16 of the Sacramento County Code addresses the reduction in Swainson's hawk foraging habitat within unincorporated Sacramento County. The project will not result in any loss of Swainson's hawk foraging habitat; therefore, there would be no conflict with Chapter 16 of Sacramento County Code and there is no impact.

The project site supports numerous trees that are protected by local ordinance (Sacramento County 2020b). Protected trees include native trees, such as valley oak, Fremont cottonwood, and California black walnut, as well as large landscape trees. Several valley oak trees were mapped near the proposed pipeline location. Although no tree removal is proposed as part of the project, protected trees may be affected by activities within the dripline, such as the movement or staging of equipment, grading, trenching, or trimming of large limbs for clearance. Implementation of the following mitigation measures will satisfy the requirements of the Sacramento County Tree Preservation and Protection Ordinance and would reduce potential impacts on protected trees to a less than significant level.

Mitigation Measures:

**BIO-7:** Prior to project construction, SAFCA will avoid and minimize disturbances to protected trees by aligning the construction corridor to minimize the temporary and permanent project disturbance to the areas necessary for construction. SAFCA will select locations that are already disturbed or developed to the greatest extent feasible to avoid

protected trees, and reduce the footprint of grading to minimize the clearing of trees or working within the driplines of protected trees.

If the final project alignment cannot avoid protected trees or their driplines, then SAFCA will retain a certified arborist to conduct an arborist survey at the pipeline and valve installation locations and prepare an Arborist Survey Report. In this event, SAFCA will obtain a Tree Removal Permit from the County of Sacramento prior to construction, and the Arborist Survey Report will be submitted with the Tree Removal Permit application.

The Arborist Survey Report will include the following information:

- species identification and locations of each tree within and near the project impact areas;
- trunk diameters, measured at standard height;
- approximate tree heights;
- approximate tree dripline radii;
- a brief statement of the reasons for the removal or major trimming of trees;
- identification of suitable measures to protect trees for preservation;
- evaluation of areas in which to plant replacement trees; and
- a site plan showing the accurate location, number of trees affected, species, trunk diameters, approximate heights, and approximate driplines of any trees to be removed.

During project construction, the natural ground within the driplines of protected trees will remain as undisturbed as possible. Grading within the driplines of oak trees will not be permitted unless specifically authorized by the Sacramento County Director of Public Works. If grading within the driplines of native oaks is not avoidable and is permitted by the director, SAFCA will implement the following measures in accordance with the Sacramento County Tree Preservation and Protection Ordinance:

- Major roots two inches or greater in diameter encountered during excavation within the dripline beneath trees to be retained will not be cut except as approved by the arborist, and will be kept moist and covered with earth as soon as possible. Roots one inch to two inches in diameter that are severed will be trimmed and treated with pruning compound and covered with earth as soon as possible.
- Support roots that are inside the dripline of the tree will be protected. The permittee is required to hand-dig in the vicinity of major trees to prevent root cutting and mangling, which may be caused by heavy equipment.
- Cross section illustrations may be required where trees are located adjacent to roadways, new slopes, or critical areas. In addition, a dimension from the face of a tree to some critical point or line may be required.

Significance after mitigation: Less than significant

(f) Conflict with an adopted conservation plan – Less than significant impact

The project is within the SSHCP area but is not a covered activity, nor is SAFCA a permittee under the SSHCP. With the implementation of the avoidance and minimization measures described above, no species covered by the SSHCP or their habitat would be adversely affected by the project. Therefore, the project will not conflict with or undermine the SSHCP's management objectives or preclude the SSHCP permittee(s) from being able to comply with its provisions.

## Cultural Resources

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>V. CULTURAL RESOURCES.</b> Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 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 dedicated cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The following information is based on a preliminary investigation of the project by AECOM which included a records search at the North Central Information Center of the California Historical Resources Information System (CHRIS), and a field survey of the project site.

### Setting

Prehistoric land-use can be summarized within broad temporal periods that correspond with increasing occupation. The Late Pleistocene Pattern and Period (>10,000 Before Present [B.P.]) in the foothill and eastern Sacramento Valley is practically non-existent. Early Holocene Pattern and Period (circa [ca.] 10,000–7,000 B.P.) was first defined by Bedwell (1970) as a human adaptation to lake, marsh, and grassland environments. In general, although earlier sites likely exist in the area that have yet to be discovered, the best documented evidence for human occupation in the region is found among sites exhibiting traits characteristic of the Windmill Pattern or Early Horizon. Such sites date to as early as 4750 B.P. and as late as 2500 B.P. and show a diversity of food sources and trade. Sites from the later Berkeley Pattern or Middle Horizon (2500 – 1450 B.P.) are often quite similar to Windmill sites. They are followed by the Augustine Pattern or Late Horizon appearing around 1,400 B.P. and extending to proto-historic times.

The ethnographic period is defined as the beginning of written descriptions of native life, at which time the traditional territories of the Nisenan and Plains Miwok encompassed the project site.

The Nisenan territory included the drainages of the Yuba, Bear, and American rivers, and the lower drainages of the Feather River, extending from the crest of the Sierra Nevada to the banks of the Sacramento River and south to the Cosumnes River. Political divisions, constituting tribelets, each had their own respective headmen who lived in the larger villages. However, it is not known which of these larger population centers wielded more influence than others, although they were all located in the foothill areas. In general, more substantial and permanent Nisenan villages were not established on the valley plain between the Sacramento River and the foothills, although this area was used as a rich hunting and gathering ground. (Kroeber 1925 and Wilson and Towne 1978).

The territory of the Plains Miwok included riverine fishing, hunting and resource gathering areas at the lower reaches of the Mokelumne and Cosumnes Rivers and both banks of the Sacramento River from Rio Vista to Freeport. Politically, the Plains Miwok belonged to formal lineages and were organized in small tribes or tribelets, each consisting of a primary village with satellite villages. In the hills, Miwok settled in the small riverine valleys, particularly along the Mokelumne and upper Cosumnes Rivers. However, the river delta plains were less hospitable, and villages were sparse due to expansive marshlands and seasonal flooding (Levy 1978). No ethnographic village sites have been documented within the project Area of Potential Effect (APE).

The 19th century saw precipitous change within the traditional territory of the Nisenan and Plains Miwok. First visited by the Spanish as early as 1806 by Moraga's expedition, Native populations experienced rapid effects of Spanish-era Catholic missionization, diseases introduced by non-Native settlers, and the incursion of Gold Rush-era settlements (Bennyhoff 1977; Levy 1978).

Several roads to the southern mines passed through the Cosumnes River region, and ferries, succeeded by toll bridges, as well as a number of hotels, were established at a very early date. The project site is located within the Omochumnes Mexican land grant. Will Daylor and Jared Sheldon, as owners of the grant, profited from mining, ranching, trading and hotel operations. In 1850 Sheldon built the Slough House Hotel (State Historic Landmark 575) on Deer Creek, where it is now crossed by Jackson Road. It was destroyed by fire in 1890 and rebuilt the same year on the old site. The second building still stands today and the old cemetery is on a knoll just a few yards away (Kyle 2002).

In 1846-47 Jared Sheldon built a gristmill. Four years later he constructed a dam on the Cosumnes River to provide water to operate the mill. It caused flooding of the claims of miners working along the river below the dam. The miners threatened violence, and Sheldon placed a cannon there as a warning. On July 11, 1851, the indignant miners began to tear down the dam. Sheldon arrived with reinforcements two hours later, a battle ensued in which he and two of his men were killed. The dam was swept away by high water in the winter of 1851-52. The site of Sheldon's gristmill (State Historic Landmark 439) is about one mile southeast of Slough House on Meiss Road (Kyle 2002).



Beginning in the 1920s and continuing into the post-World War II period, smaller farms with rural residential homes sprung up in the vicinity of the project as the historically larger parcels were sold off and divided (Britton & Rey 1885; USGS 1909, 1953 and 1968).

### *Previous Studies*

A cultural records search was conducted by the North Central Information Center (NCIC), of the California Historical Resources Information System, California State University, Sacramento on December 18, 2019 (File No. SAC-19-247). It revealed that no resources and no investigations have been documented within the project site; however, one resource was identified as outside of the project within the 0.25-mile search radius, and three studies are either adjacent to or near the project site. Two of the previous investigations (Peak and Gerry 2000 and Jones & Stokes Inc. 1997) consisted of field survey of portions of the south levee of the Cosumnes River. No historic-era or prehistoric sites were identified within 0.25 miles of the project site. The remaining survey was directly adjacent northeast of the project site and did not result in the identification of prehistoric or historic-era resources.

One previously recorded site, P-34-000342 (CA-SAC-315), is near (within 0.25 mile) the project site but outside the APE. According to the report filed by Peak & Associates, Inc. in 1973, CA-SAC-315 (P-34-000342) was a village site with stratified midden deposit and had been badly disturbed.

### *Field Investigation*

AECOM archaeologists Richard Deis and Diana Ewing accompanied by Billy Ayala, a tribal monitor with Wilton Rancheria, and Antonio Ruiz, a tribal monitor with United Auburn Indian Community, conducted a pedestrian survey of the project site on February 11, 2020. Transects were approximately 15 meters apart. The majority of the project site is covered with grasses that severely limited surface visibility to less than 1 percent. The property was at one point leveled and used as a sod farm. The northwest half of the project site is characterized by black walnut trees, sedge beds and dense stands of impenetrable blackberries. Where soil was exposed by gopher activity and numerous deer trails, the sediments are characterized by silty sand. A portion of the proposed pipeline is located on the adjacent Teichert Property. Because there was no access to this parcel at the time of survey it was not included in the field investigations. No prehistoric or historic-era resources were observed during the pedestrian survey.

### Impacts

#### (a) and (b) Change in the significance of historical or archaeological resources – Less than significant impact with mitigation incorporated

No previously conducted cultural resources inventories or sites have been documented within the project site, and an intensive field investigation did not result in the identification of historic-era or prehistoric resources. Therefore the project does not involve disturbance to any known resources. However, the area is known to contain prehistoric and historic resources. It is unlikely but possible that soil disturbance during construction could damage previously unrecorded

cultural resources. If buried historical or archaeological resources were inadvertently discovered and impacted during project implementation, this would be a potentially significant impact. Mitigation Measure CUL-1 would reduce this potentially significant impact to a less than significant level.

Mitigation Measures:

**CUL-1:** If interested Native American Tribes provide information demonstrating the significance of the project location and tangible evidence supporting the determination the site is highly sensitive for prehistoric archaeological resources, SAFCA will retain a qualified archaeologist to monitor for potential prehistoric archaeological resources during ground disturbing activities associated with installation of the water pipe.

If buried or previously unidentified historic properties or archaeological resources are discovered during project activities, all work within a 100-foot radius of the find shall cease. SAFCA shall retain a professional archaeologist meeting the Secretary of the Interior's Professional Standards for Archaeologists to assess the discovery and recommend what, if any, further treatment or investigation is necessary for the find. Interested Native American Tribes will also be contacted. Any necessary treatment or investigation shall be developed with interested Native American Tribes providing recommendations and shall be coordinated with the State Historic Preservation Officer, if necessary, and shall be completed before project activities continue in the vicinity of the find.

Significance after mitigation: Less than significant

(c) Disturb human remains – Less than significant impact with mitigation incorporated

There has been no indication or evidence that the area has been used for human burials in the recent or distant past; therefore, human remains are unlikely to be encountered. If human remains are encountered, the mitigation measure below would reduce potential impacts to a less than significant level.

Mitigation Measures:

**CUL-2:** In accordance with the California Health and Safety Code, if human remains are uncovered during ground-disturbing activities, all potentially damaging ground-disturbance in the area of the burial and a 100-foot radius shall halt and the El Dorado County Coroner shall be notified immediately. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands (Health and Safety Code Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, then Federal laws governing the disposition of those remain would come into effect. Specifically, the Native American Graves Protection and Repatriation Act (NAGPRA) requires federal agencies and institutions that receive federal funding to return Native American cultural items to lineal descendants and culturally affiliated Indian Tribes. Cultural items include human

remains, funerary objects, sacred objects, and objects of cultural patrimony. NAGPRA also has established procedures in case of inadvertent discovery of Native American cultural items on Federal or Tribal lands, which includes consultation with potential lineal descendants or Tribal officials.

California law recognizes the need to protect Native American human burials, skeletal remains, and items associated with Native American burials from vandalism and inadvertent destruction. SAFCA shall ensure that the procedures for the treatment of Native American human remains contained in California Health and Safety Code Sections 7050.5 and 7052 and Public Resources Code Section 5097 are followed.

Significance after mitigation: Less than significant

## Energy

Issues		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>V. Energy.</b> 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>

## Setting

The project site is currently not a substantial consumer of electricity. An existing electric 5,000-gpm pump provides river water to vineyards immediately south of the Recharge Site. Electricity in Sacramento County is provided by the Sacramento Municipal Utility District (SMUD).

Fuel use at the site is nominal. Under the terms of the management plan for the conservation easement on the site, the site must be farmed with specified crops, grazed, or mowed (SVC 2018, p. 5). The site is currently unfarmed open space with little management.

## Impacts

(a) and (b) Wasteful energy use or conflict with energy plans – Less than significant impact

Construction of the project would be short term and would involve very few pieces of machinery and employee trips. Construction energy use will therefore be minimal, and will be further controlled by state law that minimizes idling of construction equipment.

Operation of the project will involve pumping water from the Cosumnes River for land application on the site. Since the project will operate only during winter months when flows are relatively high in the river, the pump lift required to serve the site will be minimal. Furthermore,

some portion of that energy use will be returned in the form of a higher groundwater table that will reduce energy used when recharged groundwater is later pumped from the aquifer. Energy effects will be less than significant.

## Geology and Soils

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>VII. GEOLOGY AND SOILS.</b> Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative 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 geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Setting

The US Geological Survey (USGS) topographic map for the area shows the site as generally level or sloping slightly downward to the west, with site elevations generally between 75 and 90 feet above mean sea level. It is an alluvial floodplain of the Cosumnes River at the southeast edge of the site and Deer Creek at the northwest edge of the site. The flat slopes of the site are not prone to landslides.

The geological layer underlying the site is the Modesto formation (Wagner et al. 1987, Sheet 1). There is some dispute over the age of this unconsolidated alluvium but it is generally placed between 73,000 and 12,000 years before present (EDAW 2006, p. 5.13-5). Mammal fossils have been found in this formation but generally would not be encountered within 10 feet of the ground surface (EDAW 2006, pp. 5.13-8 and 5.13-10). None are known to occur at the site.

Soils are mostly in the Columbia sandy loam series, with small inclusions of Sailboat silt loam at the northern and southwestern edges of the site (NRCS 2019). Sacramento County does not lie within or adjacent to an Alquist-Priolo Earthquake Fault Zone, there are no mapped seismic hazard zones within the County, and ground-shaking potential from an earthquake is relatively low (Sacramento County 2010, pp. 13-30 and 13-31). Liquefaction is soil failure that can occur when saturated soils are shaken by an earthquake. The site is not in an area identified in the County General Plan EIR as an area of liquefaction (Sacramento County, p 13-34)

### Impacts

#### (a) Substantial adverse geological effects – Less than significant impact

As noted in the setting, the site is not near a fault zone, is at low risk of strong seismic shaking or liquefaction, and is not subject to landslides. These effects are less than significant.

#### (b), (c), (d), and (e) Substantial soil erosion, loss of topsoil, unstable or expansive soils – Less than significant impact

The project will disturb less than one acre of the site for less than a month. Because the site is flat, no construction is proposed in waterways, and disturbed areas will be seeded after construction, the project will not cause erosion. During recharge operations, water discharges will be widely distributed at low velocity and will avoid erosion.

The site is not at high risk of landslide or liquefaction. During construction, compliance with California Occupational Safety and Health Administration standards will protect workers from soil stability risks associated with trench excavation.

Loam and sand are not expansive, but clayey layers or inclusions within the project area may be expansive. The project will not construct buildings or other above-ground structures that would be at risk of damage due to soil shrinking and swelling.

No septic tanks are proposed.

Soil impacts are less than significant.

#### (f) Disturb paleontological resources – Less than significant impact with mitigation incorporated

No paleontological resources are known at the site. Trenches to be excavated during construction will be less than five feet deep and will not be likely to encounter paleontological resources. However, if a paleontological resource were to be encountered and needlessly damaged or destroyed during construction, that would be a potentially significant effect.

### Mitigation Measures:

GEO-1: The construction contract shall specify that if paleontological resources are discovered during construction, ground disturbance will cease within 100 feet of the discovery, SAFCA will be notified, and SAFCA will consult with a qualified paleontologist to determine additional protection measures as necessary to avoid significant impacts before work resumes in the vicinity.

Level of significance after mitigation: Less than significant

### **Greenhouse Gas Emissions**

Issues		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>VIII. GREENHOUSE GAS EMISSIONS. Would the project:</b>					
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"/>

### Setting

The earth's climate is changing due to human-caused emissions of carbon dioxide and other gases that trap heat in the atmosphere. These gases are collectively called greenhouse gases (GHG). California scientists have already reported changes including peak runoff in the Sacramento River occurring a month earlier than in the first half of the 20<sup>th</sup> century, birds wintering further north, and loss of 70 percent of the area of Sierra Nevada glaciers (Bedsworth, et al. 2018, p.13). Under a business-as-usual scenario in which no attempt to curtail climate change occurs, carbon dioxide levels in the atmosphere could triple by 2100, leading to average maximum temperatures in the state more than 8 degrees Fahrenheit higher than they were prior to 1950 and snow water equivalents in California's mountains less than one-third of previous levels (Bedsworth, et al. 2018, p. 23 and p. 27). The extent to which atmospheric carbon dioxide levels increase may be reduced by reducing GHG emissions.

Sacramento County is currently working on a Climate Action Plan (Sacramento County 2019) and as part of this has adopted a Climate Action Plan Strategy and Framework Document (Sacramento County 2011). The Framework Document establishes County goals to mitigate GHG emissions, including:

- Decrease use of fossil fuels by transitioning to renewable energy sources.
- Elevate the importance of floodplain and open space protection as a means of protecting water quality and habitat, sequestering carbon, and providing groundwater recharge opportunities, if suitable soil conditions permit.

## Impacts

SMAQMD (2019a) has established significance thresholds for carbon dioxide-equivalent emissions of 1,100 metric tonnes/year. Since climate change is a global phenomenon resulting from emissions around the planet, GHG impacts are inherently cumulative.

### (a) and (b) Generate significant GHG emissions or conflict with adopted climate plans – Less than significant impact

Project emissions were estimated using the SMAQMD Road Construction Emissions Model Version 9.0 as described previously in the Air Quality section. The project would emit 10.35 metric tons of carbon dioxide-equivalent gases during construction, which is far below the SMAQMD significance threshold. As with criteria air pollutant emissions, GHG emissions during operations would consist of vehicle trips and pump emissions. Vehicle trip emissions would be substantially less than those generated during construction, which were estimated at about 313 pounds/day. This would be equivalent to 17 metric tonnes if it persisted for four solid months, although in most cases the site will be visited much less than that. Pump emissions cannot be directly calculated because the pump is electric. However, assuming it were diesel, it would produce about 1,965 pounds/day carbon dioxide-equivalent, or about 7.3 metric tonnes for an average season in which 180 acre-feet of water are applied to the site. Even with these extremely conservative assumptions, it can be seen that project emissions would be far below the SMAQMD significance thresholds. The project would not create cumulatively considerable greenhouse gas emissions, and the impact of GHG emissions would be less than significant.

County progress towards its goal of using renewable energy sources should be demonstrated in the energy mix used by SMUD and thus by the project pump. By promoting groundwater recharge, the project will contribute to the County's adaptation goal of elevating the importance of floodplain and open space protection as a means of protecting water quality and habitat, sequestering carbon, and providing groundwater recharge opportunities, if suitable soil conditions permit. The project is consistent with climate change planning and will have less than significant plan consistency effects.

## Hazards and Hazardous Materials

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>IX. HAZARDS AND HAZARDOUS MATERIALS. Would the project:</b>				
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 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 §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 or excessive noise 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 checked="" type="checkbox"/>	<input type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### Setting

The California Department of Toxic Substances Control (DTSC) database of DTSC activities at known hazardous waste facilities and sites of contamination was searched for sites within two miles of the project site. This database, known as Envirostor, did not yield any known sites with the provided search criteria (DTSC 2019). The California State Water Resources Control Board (SWRCB) maintains a database known as GeoTracker that includes sites such as leaking underground storage tanks that have the potential to impact water quality. No known sites were found in a GeoTracker search of a two-mile radius from the center of the project site (SWRCB 2019b).

There are no schools within ¼ mile of the project site nor public or public use airports within two miles of the project site. There is a private use airport at Lucchetti Ranch approximately 1.7 miles south of the site.



## Impacts

### (a) and (b) Hazardous materials transport, use, disposal, or release – Less than significant impact

The project would not create substantial new use of hazardous materials that could be subject to disposal, transport, or release. During construction, fuel would be used in vehicles and equipment at the site or driving to and from it. This will represent few vehicles over a short time (projected at less than two weeks). Although there is a small chance of accidental fuel spillage on the site or on roads used to get to the site, construction will be overseen by SAFCA or its construction manager, and any spills would be subject to existing laws and regulations concerning such spills. Impacts of hazardous materials use would be less than significant.

### (c), (d), and (e) Presence of listed sites or proximity to schools, listed hazardous sites, or airports – No impact

As noted in the setting, there are no schools within one-quarter mile of the site, the site is not a listed hazardous materials site, and the site is not within two miles of a public airport. The project would have no impact in these categories.

### (f) Emergency response or evacuation plans – Less than significant impact

The project is completely on private land. It would not create new residences or job centers and would not affect any known emergency response or evacuation plans. This impact would be less than significant.

### (g) Exposure to significant risk of wildland fires – Less than significant impact

The site is undeveloped open space. Most of it is in grass, with developed riparian zones along both the Cosumnes River and Deer Creek and some shrubby growth or small trees occurring throughout the site. Sacramento County (2016, page 4-349) maps the area including the site and vicinity as having little to moderate fire threat. The Swainson's hawk easement requires grazing, mowing, or farming the site to keep vegetation low and foster habitat for hawk prey. These management practices will tend to keep fire threat in the little to moderate threat classes. The proposed action will not change fire threat because it will not affect land use or bring more residents or structures to the site. Construction of the project will follow standard construction practices to minimize fire risk, and construction of PVC pipelines does not involve welding or metal grinding that are sources of sparks. Operation of the project will occur during the winter when there are available flows in the Cosumnes River, which will only occur after rains have reduced fire risk in the watershed. This impact will be less than significant.

## Hydrology and Water Quality

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>X. HYDROLOGY AND WATER QUALITY. Would the project:</b>				
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 checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) result in 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 checked="" type="checkbox"/>	<input type="checkbox"/>
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>
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"/>

### Setting

The project is situated between Deer Creek and the Cosumnes River and drains generally west to Deer Creek. The entire site is within a 100-year flood zone. Surface water flows over portions of the site when Deer Creek spills over its banks, such as appears to have occurred in the winter of 2018-2019 following storms far below 100-year intensity.

The site overlies the South American Subbasin of the Sacramento Valley Groundwater Basin. Groundwater recharge is mostly from rivers and streams, especially the Cosumnes River and smaller streams (SCGA 2012, p. 7).

Water quality in the South American Subbasin is generally good, excepting arsenic detections at some points (SCGA 2012, p. 5). Surface water quality objectives are part of the Water Quality Control Plan (Basin Plan) for the California Regional Water Quality Control Board Central Valley Region (CVRWQCB 2018). Cosumnes River water quality is monitored pursuant to the Irrigated Lands Regulatory Program enforced by the CVRWQCB. Arsenic is well below Basin Plan objectives and Chlorpyrifos and Diazinon levels are below detection limits for the period 2010-2019 (CEDEN 2019). The Cosumnes watershed is a source of mercury to the Delta

(Marvin-DiPasquale et al. 2018, p. 3) from historic mining activities in the watershed and is designated as impaired for mercury (RBI 2006, p. 31).

As noted previously, there are no known, listed hazardous materials sites on the property. The site has been used for agriculture in the past, which presumably included application of fertilizers and pesticides and use of petroleum products at the site. Agricultural use has not occurred since 1993 or earlier. The site conservation easement was executed in 2018 and prohibits the landowner from using fertilizers, herbicides, pesticides, biocides, or other agricultural chemicals unless specifically permitted by the Management Plan. The Management Plan does allow the use of these types of chemicals for agricultural management provided the use is not harmful to the Swainson's hawk or its foraging needs.

### Impacts

#### (a) Degrade surface or groundwater quality – Less than significant impact

No significant chemical pollutants are known to occur at the site, and agricultural chemical use in the future will be limited and occur pursuant to appropriate permits under the terms of the conservation easement. Water quality in the Cosumnes River is generally good and will not be a substantial source of pollution for groundwater. The great depth to the aquifer will filter pollutants as the recharge water percolates to the aquifer. Because the project seeks to infiltrate all water applied on the site, it will not be a major source of discharge to either the Cosumnes River or Deer Creek and thus will have minimal influence on surface water quality. Groundwater quality monitoring will be conducted throughout project operations, and will enable the identification of changes from baseline water quality. Water quality impacts will be less than significant.

#### (b) Decrease groundwater recharge – Less than significant impact

The project will increase groundwater recharge by application of surface water on alluvial soils. This will improve groundwater supplies, a beneficial effect of the project. Operation in conjunction with the OHWD Recharge Project will have cumulative benefits but no adverse recharge effects. This is less than significant.

#### (c) Alteration of existing drainage patterns – Less than significant impact

The project does not propose substantial changes to site topography or to any existing drainages. It will not add impervious surfaces to the site. By discharging river water on the site, it will increase surface flow or ponding on the site until the water has percolated into the ground. Flow velocity will be low and will not result in substantial erosion. If erosion occurs near the discharge points, modifications will be made to the discharge point or procedure to minimize erosion.

Construction will result in minor soil disturbance (less than one acre) at the site, which will be restored to pre-existing, flat condition upon completion of construction and seeded. Rains prior to project inundation will allow grasses to germinate and bind loose soils together. Because of

the flat topography, velocities of runoff or inundation water will be low and will not contribute to significant erosion and sedimentation.

Although the project will apply surface water to the site, it will not result in significant flooding impacts because there are no structures on the property and the inundation depths will be shallow. The project will be operated to inundate the site only, but in coordination with the western landowner who is a participant in the OHWD Recharge Project may allow water discharged on the site to runoff and infiltrate into that parcel.

The project will not impede flood flows, but it will redirect flows from the Cosumnes River channel onto the project site by way of an existing intake. No cumulatively significant drainage impacts have been identified in conjunction with the OHWD Recharge Project. The project will have less than significant impacts to drainage patterns in the site area.

(d) and (e) Release pollutants during inundation or conflict with water quality or groundwater management plans – Less than significant impact

No chemicals will be stored at the site that would be released during inundation. Agricultural chemical use may occur, but is expected to be less than under an intensive agricultural operation and will be applied according to chemical label directions that minimize residue after use.

The project will not have adverse water quality impacts that would conflict with the Basin Plan. By contributing to groundwater recharge, it will support groundwater management activities and past and future plans. This is a less than significant impact.

## Land Use and Planning

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XI. LAND USE AND PLANNING. Would the project:</b>				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Setting

The Sacramento County General Plan designates the majority of the site as Agricultural Cropland (Sacramento County 2019e). The Agricultural Cropland designation is used for land suitable for intensive agriculture, and allows single family residences at a density of no more than one per 40 acres (Sacramento County 2017a, p. 12). The General Plan identifies a swath of land along the entire length of the Cosumnes River as Natural Preserve, as well as along Deer Creek from its confluence with the Cosumnes River upstream to Kiefer Boulevard. The Natural Preserve designation overlays a portion of the site along the Cosumnes River and a sliver of the

site along Deer Creek. The Natural Preserve designation identifies natural habitat for priority resource protection.

Sacramento County has zoned the recharge site as AG-80 (Agricultural 80) and Pipeline Reach B as AG-40 (Agricultural 40)(Sacramento County 2019b). The purpose of both districts is to promote long-term agricultural use and discourage premature and unnecessary conversion of agricultural land to urban uses (Sacramento County 2019c, p. 2-7). Both the recharge site and Pipeline Reach B are within the Flood (F) combining zone (Sacramento County 2019b). This zone recognizes that regulation of flood lands is necessary to promote orderly development and beneficial use while minimizing property damage from flooding (Sacramento County 2019c, p. 4-2). Building or structures other than fences are not allowed within the 100-year floodplain (Sacramento County 2019c, p. 4.3).

### Impacts

#### (a) and (b) Divide a community or conflict with a land use plan – Less than significant impact

The project will not physically divide any community. It will not change the land use of the site from its existing agricultural open space and habitat uses. Construction of the pipeline will occur within the area demarcated as Natural Preserve. However, the construction will be aligned to avoid harming natural resources values (see also the discussion in the Biological Resources section) and will be graded to mimic the pre-existing grade and will naturally return to the pre-existing ruderal grassland. Land use impacts will be less than significant.

### **Mineral Resources**

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XII. MINERAL RESOURCES. Would the project:</b>				
a) Result in the loss of availability of a known mineral resource that would be a 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"/>

### Setting

The main mineral resources in production in Sacramento County are aggregate and natural gas (Sacramento County 2017b, p. 12). The primary mineral resource areas are north of Grant Line Road for aggregate resources, in a belt in the eastern county for Kaolin clay, and in the Delta for natural gas. The project vicinity does not contain mineral resources mapped by the County. The California Division of Mines and Geology (now California Geological Survey) has mapped the area as in Mineral Resource Zone 3 (MRZ-3), “areas containing mineral deposits, the significance of which cannot be evaluated from available data” (Dupras 1999, Plate 3). Mining

of aggregate on the site is effectively prohibited by the conservation easement (Sacramento County Clerk-Recorder 2018, p. 4).

### Impacts

#### (a) and (b) Loss of availability of mineral resources – No impact

Because mining mineral resources is prohibited under the conservation easement, the present action would have no impact on mineral resources.

### **Noise**

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XIII. NOISE. Would the project result in:</b>				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<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"/>

### Setting

The site is undeveloped open space with generally low ambient noise levels typical of a rural environment. The nearest transportation noise sources are Sloughhouse Road, Grant Line Road, and Dillard Road, are too far from the site to contribute substantially to the ambient noise environment. There are no public airports in the vicinity. A private landing strip is located approximately one and one-half miles south of the site. Occasional noise sources are associated with agricultural operations, including vineyard cultivation south of the site and river pumps. Under the terms of the conservation easement, the site itself may be subject to agricultural crop production, grazing, or mowing.

The nearest sensitive receptors for noise are single-family homes, one of which is located about 600 feet from the project's southern boundary and one of which is about 1,500 feet from the northern boundary. There is an additional single family home approximately 1,500 feet south of the pump intake that would supply the project.

### Impacts

#### (a) and (b) Generation of substantial noise or vibration – Less than significant impact

The project would generate noise during construction. Typical noise levels from a hydraulic excavator are around 86 decibels at a distance of 50 feet (SCWA 2003, page 4.4-3). As perceived at the nearest receptor south of the site, noise levels on the project site would be substantially attenuated by intervening distance. Although the construction noise would be audible, it would be consistent with an agricultural landscape and of short (less than two weeks) duration. Ground vibrations are generated by heavy construction equipment, but diminish rapidly with distance and would not be detectable offsite.

Operational noise would primarily be generated by the existing electric river pump that would be used to provide water to the site. Pumps can produce around 77 decibels of sound as measured 50 feet away. Because of the distance to the nearest home and the intervening Cosumnes River bank and levee, the project's individual and cumulative contributions to noise produced by this existing pump would be less than significant.

Operational traffic would consist of very few trips per day and would not audibly contribute to average cumulative noise levels on nearby roads. This would be a less than significant impact.

(c) Exposure to airport noise – Less than significant impact

The project would not create new sensitive land uses that would be exposed to noise, nor would it create demand for new air services. Workers would be at the site only occasionally, and would be over a mile from the nearest private airstrip and much more than two miles from the nearest public airport planning area. Airport noise impacts would be less than significant.

## Public Services

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XV. PUBLIC SERVICES. Would the project:</b>				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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"/>

## Setting

The project area is served by the Sacramento Metropolitan Fire District and the Sacramento County Sheriff's Office. The site does not house residents who would create public services demand.

## Impacts

### (a) Impacts on public services – No impact

The project would not house new residents requiring public services. Workers would be on site during construction and intermittently during operation, but they would be coming from the surrounding area and would not generate new services demand. The project would have a less than significant impact on public services.

## **Recreation**

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XVI. RECREATION.</b>				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Setting

The site does not currently have residents who demand recreation services. It does not contain recreational facilities.

## Impacts

### (a) and (b) Recreation – No impact

The project would not house residents creating new demand for recreational facilities nor create new recreational facilities that could impact the environment. It would have no project-specific or cumulative impact on recreation.



## Transportation

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XVII. TRANSPORTATION. Would the project:</b>				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)? (see discussion of CEQA Guidelines below)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<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 checked="" type="checkbox"/>	<input type="checkbox"/>

### Setting

Private access roads to the project site can be accessed using County Roads, including Sloughhouse Road, which connects to Grant Line Road and Jackson Road. Jackson Road is a State Route, as is State Route 99 west of Grant Line Road.

CEQA Guidelines Section 15064.3(b) discusses criteria for analyzing transportation impacts for land use and transportation impacts and allows use of qualitative analysis for assessing the impacts of changes to vehicle miles traveled.

### Impacts

#### (a), (b), (c), and (d) Transportation – Less than significant impact

The project will not change allowable land uses at the site or develop or modify transportation facilities as discussed in CEQA Guidelines section 15064.3(b) parts (1) and (2), so this discussion is qualitative as allowed by section 15064.3(b)(3). The project will generate incidental traffic during construction and operation. The theoretical capacity of two-lane rural highways is 2,000 or more vehicles per hour (Polus et al. 1991, page 128), so the few trips a day associated with the project during construction and occasional trips during operation will not meaningfully change road congestion and thus will not affect traffic plans, programs, or policies. Vehicle miles traveled (VMT) from the project are estimated to be below 500 miles/day during the two-week construction period and much less than that during ongoing operations. Operational trips will be limited to a short period during the year, will mostly not coincide with peak traffic periods (i.e. visits to the site are expected to generally be of short duration and occur mid-day), and will generally be counter-commute (i.e. away from the metropolitan area in the morning and toward the metropolitan area in the evening), the project will not have cumulatively considerable effect on the estimated 26 million VMT/day in Sacramento County.

No construction will affect or encroach upon public roads. Emergency access to the site is limited by private roadways, but the project will not introduce new residents or occupants who

will be affected by emergency access. The project is related to the OHWD Recharge Project, which has already been constructed, so there will be no cumulative effects during construction. The two sites will be operated in coordination, so the addition of project will not considerably add to cumulative traffic. Transportation effects will be less than significant.

## Tribal Cultural Resources

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XVIII. TRIBAL CULTURAL RESOURCES.</b>				
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	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Setting

Please to refer to the earlier section titled “Cultural Resources” for information on the cultural setting of the site.

Public Resources Code (PRC) Section 21080.3.1 requires CEQA lead agencies to provide a project notification to Native American tribes that are traditionally and culturally affiliated with the area of the project and that request notification. On October 2, 2019, SAFCA sent five formal notifications of the project and nine informal notifications to tribal contacts (Appendix B). All notifications were sent by certified mail. Representatives of two tribes requested initiation of consultation regarding tribal cultural resources during the 30-day response period provided by PRC Section 21080.3.1(b). These tribes were the United Auburn Indian Community (UAIC) and the Wilton Rancheria, and in response to SAFCA’s invitation, they provided tribal monitors Antonio Ruiz (UAIC) and Billy Ayala (Wilton Rancheria) to accompany AECOM archaeologists on a site survey on February 11, 2020.

## Impacts

### (a) Change in Significance of a tribal cultural resource – Less than significant impact with mitigation incorporated

As noted in the earlier section titled “Cultural Resources,” no previously conducted cultural resources inventories or sites have been documented within the project site, and an intensive field investigation did not result in the documentation of historic-era or prehistoric resources. Tribal consultation, including participation in the field survey by representatives of UAIC and Wilton Rancheria, has not led to identification of tribal cultural resources as of the printing of this Initial Study. It is unlikely but possible that tribal cultural resources may be encountered during ground-disturbing activities.

### Mitigation Measures:

**TCR-1:** Should a Tribal Cultural Resource be identified in the project area during construction, the following performance standards shall be met before continuing construction and associated activities that may result in damage to or destruction of a Tribal Cultural Resource:

Each identified Tribal Cultural Resource will be evaluated for California Register of Historical Resources (CRHR) eligibility through application of established eligibility criteria (California Code of Regulations 15064.636), in consultation with consulting Native American Tribes.

If a Tribal Cultural Resource is determined to be eligible for listing on the CRHR, SAFCA will avoid damaging effects to the Tribal Cultural Resource in accordance with California PRC Section 21084.3, if feasible. If SAFCA determines that the project may cause a significant impact to a Tribal Cultural Resource, and measures are not otherwise identified in the consultation process, the following are examples of mitigation capable of avoiding or substantially lessening potential significant impacts to a Tribal Cultural Resource or alternatives that would avoid significant impacts to a Tribal Cultural Resource. These measures may be considered to avoid or minimize significant adverse impacts and constitute the standard by which an impact conclusion of less-than-significant may be reached:

1. Avoid and preserve resources in place, including, but not limited to, planning construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
2. Treat the resource with culturally appropriate dignity taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

- A. Protect the cultural character and integrity of the resource.
- B. Protect the traditional use of the resource.
- C. Protect the confidentiality of the resource.
- D. Establish permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or using the resources or places.
- E. Protect the resource.

Significance after mitigation: Less than significant

## Utilities and Service Systems

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

## Setting

The site consists of undeveloped open space. It is not served by public water, wastewater, or storm drainage facilities. It is within the Sacramento Municipal Utility District (SMUD) electrical service area.

## Impacts

- (a) Construction of new utilities and service systems – Less than significant impact

The project would not require the construction of new public utilities or service systems. SMUD electrical service to the pump that would serve the project already exists, and no other public utilities would be needed by the project. The project would expand a private water delivery system for groundwater recharge, as described, analyzed, and where necessary, mitigated, throughout this Initial Study. The recharge project itself will contribute to sustainable groundwater management aiding those using wells in the vicinity. This is a less than significant impact.

(b) Sufficient water supplies – Less than significant impact

The project will be served by an existing water diversion in the Cosumnes River approximately 1.2 miles southwest of the project site and will construct the necessary pipeline extension to reach the site. The amount of water diverted will be regulated pursuant to permits issued by the California State Water Resources Control Board (SWRCB), as described in detail in the project description. Temporary permits will be applied for on an annual basis, until such time as a permanent right is obtained. The permit process will prioritize water deliveries to existing users and instream beneficial uses before any water is made available to the project. Therefore, it is expected that water available will not be sufficient to maximize recharge in all years or at all times during the season of operation even in years when water is available. However, the project is not creating any new consumptive use dependent on project diversions, so there will be no significant environmental impacts associated with insufficient water available for delivery to the project. Instead, during periods of insufficient water availability the project's benefits will not be fully attained. This is a less than significant impact.

(c), (d) and (e) Waste water and solid waste – Less than significant impact

The project will not create new wastewater demand.

The project will generate minor solid waste during construction such as strapping and pallets or blocks used for pipe transport. It may also generate minor solid waste during operation, if for example roll-out polyethylene pipe is used to distribute recharge water on the site. This waste will be minor and will not be inconsistent with the agricultural zoning of the site. It will be subject to all existing solid waste statutes and regulations. This is a less than significant impact.

## Wildfire

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XX. WILDFIRE. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:</b>				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Setting

The project is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones; the site is in an area of little to moderate fire threat (County of Sacramento 2016, pp. 4-345 through 4-349).

## Impacts

### (a) and (b) Emergency plans and exposure of occupants – Less than significant impact

The project would not obstruct existing public roads and would generate a trivial amount of traffic, which would primarily occur during the winter wet season. It would not bring occupants, except workers during a short (two-week) construction period, to the site during fire season and would not exacerbate fire risks. There would be less than significant impacts to emergency plans, public evacuations, or site occupants.

### c) Associated infrastructure or post-fire risk – Less than significant impact

The infrastructure constructed for the project would consist of a 24" water pipeline and ancillary valves crossing the site. Operation would be during periods of high stormwater flows and low fire hazard. There is no fire risk associated with this infrastructure.

The project would not create wildfire risk leading to exposure of people or structures to fire-related or post-fire hazards. The site is flat so post-fire runoff would not create high-velocity debris flows or erosion. There would be less-than significant impacts to infrastructure and post-fire risks.

## Mandatory Findings of Significance

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XXI. MANDATORY FINDINGS OF SIGNIFICANCE.</b>				
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? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Impacts

(a), (b), and (c)      Degrade the environment, contribute to cumulative effects, or adversely affect humans – Less than significant with mitigation incorporated

The project has potentially significant effects on air quality, biological resources, cultural resources, geological resources, and tribal cultural resources. Of these effects, air quality effects are inherently cumulative because they are based on the mass of pollutants emitted, which would not be harmful without their contribution to other emissions that together make the region a nonattainment area for PM10 and PM2.5; this project's contributions are not cumulatively considerable. The resource sections of this Initial Study indicate how the project's impacts, including contributions to cumulative impacts, are mitigated to a less-than-significant level. Potentially significant biological resources impacts can be mitigated with resource-specific measures, including those that avoid the resources or avoid disturbance when they are most vulnerable. The measures would avoid cumulatively considerable effects in the context of other groundwater recharge projects in the vicinity. Potentially significant geological impacts are associated only with possible disturbance of buried paleontological resources. This is unlikely given the shallowness of the proposed excavation and the fact it is occurring in recent alluvium, and mitigation has been incorporated for any discoveries that do occur. Similarly, potentially significant effects associated with as-yet-undiscovered cultural or tribal cultural resources can be addressed by investigation and protection of the resources when found. Mitigation measures in the resource sections above reduce these impacts to less than significant levels.

Greenhouse gas emissions are inherently cumulative impacts, but as with other air pollutants the project contributions are not cumulatively considerable.

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## **Appendix A: Air Quality**



Road Construction Emissions Model		Version 9.0.0		
<b>Data Entry Worksheet</b>				
<p><small>Note: Required data input sections have a yellow background. Only areas with a yellow or blue background can be modified. Program defaults have a white background. The user is required to enter information in cells D10 through D24, E28 through G35, and D38 through D41 for all project types. Please use "Clear Data Input &amp; User Overrides" button first before changing the Project Type or begin a new project.</small></p>				
<b>Input Type</b>				
Project Name	Groundwater Recharge & SWH Habitat			
Construction Start Year	2020	Enter a Year between 2014 and 2040 (inclusive)		
Project Type	4	1) New Road Construction : Project to build a roadway from bare ground, which generally requires more site preparation than widening an existing roadway 2) Road Widening : Project to add a new lane to an existing roadway 3) Bridge/Overpass Construction : Project to build an elevated roadway, which generally requires some different equipment than a new roadway, such as a crane 4) Other Linear Project Type: Non-roadway project such as a pipeline, transmission line, or levee construction		
Project Construction Time	0.50	months		
Working Days per Month	22.00	days (assume 22 if unknown)		
Predominant Soil/Site Type: Enter 1, 2, or 3 (for project within "Sacramento County", follow soil type selection instructions in cells E18 to E20 otherwise see instructions provided in cells J18 to J22)	1	1) Sand Gravel : Use for quaternary deposits (Delta/West County) 2) Weathered Rock-Earth : Use for Laguna formation (Jackson Highway area) or the lone formation (Scott Road, Rancho Murieta) 3) Blasted Rock : Use for Salt Springs Slate or Copper Hill Volcanics (Folsom South of Highway 50, Rancho Murieta)		
Project Length	0.38	miles		
Total Project Area	1.00	acre		
Maximum Area Disturbed/Day	1.00	acre		
Water Trucks Used?	2	1. Yes 2. No		
<b>Material Hauling Quantity Input</b>				
Material Type	Phase	Haul Truck Capacity (yd <sup>3</sup> ) (assume 20 if unknown)	Import Volume (yd <sup>3</sup> /day)	Export Volume (yd <sup>3</sup> /day)
Soil	Grubbing/Land Clearing			
	Grading/Excavator	20.00	20.00	0.00
	Drainage/Utilities/Sub-Grade			
	Paving			
Asphalt	Grubbing/Land Clearing			
	Grading/Excavator			
	Drainage/Utilities/Sub-Grade			
	Paving			
<b>Mitigation Options</b>				
On-road Fleet Emissions Mitigation	Select "2010 and Newer On-road Vehicles Fleet" option when the on-road heavy-duty truck fleet for the project will be limited to vehicles of model year 2010 or newer.			
Off-road Equipment Emissions Mitigation	Select "20% NOx and 45% Exhaust PM reduction" option if the project will be required to use a lower emitting off-road construction fleet. The SMAQMD Construction Mitigation Calculator can be used to confirm compliance with this mitigation measure ( <a href="http://www.airquality.org/Businesses/CEQA-Land-Use-Planning/Mitigation">http://www.airquality.org/Businesses/CEQA-Land-Use-Planning/Mitigation</a> ). Select "Tier 4 Equipment" option if some or all off-road equipment used for the project meets CARB Tier 4 Standard.			

To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.



Please note that the soil type instructions provided in cells E18 to E20 are specific to Sacramento County. Maps available from the California Geologic Survey (see weblink below) can be used to determine soil type outside Sacramento County.  
  
[http://www.conservation.ca.gov/cgs/information/geologic\\_mapping/Pages/goodmaps.aspx#regionalseries](http://www.conservation.ca.gov/cgs/information/geologic_mapping/Pages/goodmaps.aspx#regionalseries)

The remaining sections of this sheet contain areas that require modification when "Other Project Type" is selected.

Note: The program's estimates of construction period phase length can be overridden in cells D50 through D53, and F50 through F51:

Construction Periods	User Override of Construction Months	Program Calculated Months	User Override of Phase Starting Date	Program Default Phase Starting Date
Grubbing/Land Clearing	0.00	0.05		1/1/2020
Grading/Excavator	0.50	0.20	10/12/2020	1/1/2020
Drainage/Utilities/Sub-Grade	0.00	0.18		1/1/2020
Paving	0.00	0.08		1/1/2020
<b>Totals (Months)</b>		1	Note: You have entered a non-default starting date. Please provide starting date for all phases, or default values for other phases will be use	

Note: Soil Hauling emission default values can be overridden in cells D61 through D64, and F61 through F64

Soil Hauling Emissions		User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT				
User Input										
Miles/round trip: Grubbing/Land Clearing				0	0.00					
Miles/round trip: Grading/Excavator	30.00			1	30.00					
Miles/round trip: Drainage/Utilities/Sub-Grade				0	0.00					
Miles/round trip: Paving				0	0.00					
Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/mile)	0.04	0.42	3.03	0.11	0.05	0.02	1,801.75	0.00	0.28	1,886.20
Draining/Utilities/Sub-Grade (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grubbing/Land Clearing (grams/trip)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling Emissions	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavator	0.00	0.03	0.21	0.01	0.00	0.00	119.17	0.00	0.02	124.75
Tons per const. Period - Grading/Excavator	0.00	0.00	0.00	0.00	0.00	0.00	0.66	0.00	0.00	0.69
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.66	0.00	0.00	0.69

Note: Asphalt Hauling emission default values can be overridden in cells D91 through D94, and F91 through F94

Asphalt Hauling Emissions		User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
User Input						
Miles/round trip: Grubbing/Land Clearing				0	0.00	
Miles/round trip: Grading/Excavator				0	0.00	
Miles/round trip: Drainage/Utilities/Sub-Grade				0	0.00	
Miles/round trip: Paving				0	0.00	

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Grading/Excavation (grams/mile)	0.04	0.42	3.03	0.11	0.05	0.02	1,801.75	0.00	0.28	1,886.20
Draining/Utilities/Sub-Grade (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grubbing/Land Clearing (grams/trip)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: Worker commute default values can be overridden in cells D121 through D126

Worker Commute Emissions										
User Input	User Override of Worker Commute Default Values	Default Values								
Miles/ one-way trip	50			Calculated		Calculated				
One-way trips/day	2			Daily Trips		Daily VMT				
No. of employees: Grubbing/Land Clearing	0			0		0.00				
No. of employees: Grading/Excavator	4			8		400.00				
No. of employees: Drainage/Utilities/Sub-Grade	0			0		0.00				
No. of employees: Paving	0			0		0.00				
<b>Emission Rates</b>	<b>ROG</b>	<b>CO</b>	<b>NOx</b>	<b>PM10</b>	<b>PM2.5</b>	<b>SOx</b>	<b>CO2</b>	<b>CH4</b>	<b>N2O</b>	<b>CO2e</b>
Grubbing/Land Clearing (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/mile)	0.02	1.22	0.11	0.05	0.02	0.00	350.90	0.01	0.01	353.67
Drainage/Utilities/Sub-Grade (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grubbing/Land Clearing (grams/trip)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	1.25	3.05	0.37	0.00	0.00	0.00	75.08	0.09	0.04	88.34
Drainage/Utilities/Sub-Grade (grams/trip)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Emissions</b>	<b>ROG</b>	<b>CO</b>	<b>NOx</b>	<b>PM10</b>	<b>PM2.5</b>	<b>SOx</b>	<b>CO2</b>	<b>CH4</b>	<b>N2O</b>	<b>CO2e</b>
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.04	1.13	0.11	0.04	0.02	0.00	310.77	0.01	0.01	313.44
Tons per const. Period - Grading/Excavation	0.00	0.01	0.00	0.00	0.00	0.00	1.71	0.00	0.00	1.72
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.01	0.00	0.00	0.00	0.00	1.71	0.00	0.00	1.72

Note: Water Truck default values can be overridden in cells D153 through D156, I153 through I156, and F153 through F156.

Water Truck Emissions										
User Input	User Override of Default # Water Trucks	Program Estimate of Number of Water Trucks	User Override of Truck Round Trips/Vehicle/Day	Default Values Round Trips/Vehicle/Day	Calculated Trips/day	User Override of Miles/Round Trip	Default Values Miles/Round Trip	Calculated Daily VMT		
Grubbing/Land Clearing - Exhaust								0.00		
Grading/Excavation - Exhaust	1		2.00			30.00		60.00		
Drainage/Utilities/Subgrade								0.00		
Paving								0.00		
<b>Emission Rates</b>	<b>ROG</b>	<b>CO</b>	<b>NOx</b>	<b>PM10</b>	<b>PM2.5</b>	<b>SOx</b>	<b>CO2</b>	<b>CH4</b>	<b>N2O</b>	<b>CO2e</b>
Grubbing/Land Clearing (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/mile)	0.04	0.42	3.03	0.11	0.05	0.02	1,801.75	0.00	0.28	1,886.20
Drainage/Utilities/Sub-Grade (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grubbing/Land Clearing (grams/trip)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Drainage/Utilities/Sub-Grade (grams/trip)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Emissions</b>	<b>ROG</b>	<b>CO</b>	<b>NOx</b>	<b>PM10</b>	<b>PM2.5</b>	<b>SOx</b>	<b>CO2</b>	<b>CH4</b>	<b>N2O</b>	<b>CO2e</b>
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.01	0.06	0.42	0.01	0.01	0.00	238.33	0.00	0.04	249.50
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	1.31	0.00	0.00	1.37
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	1.31	0.00	0.00	1.37

Note: Fugitive dust default values can be overridden in cells D183 through D185.

Fugitive Dust	User Override of Max Acreage Disturbed/Day	Default Maximum Acreage/Day	PM10 pounds/day	PM10 tons/per period	PM2.5 pounds/day	PM2.5 tons/per period
Fugitive Dust - Grubbing/Land Clearing			0.00	0.00	0.00	0.00
Fugitive Dust - Grading/Excavation	1.00		20.00	0.11	4.16	0.02
Fugitive Dust - Drainage/Utilities/Subgrade			0.00	0.00	0.00	0.00

Values in cells D195 through D228, D246 through D279, D297 through D330, and D348 through D381 are required when 'Other Project Type' is selected.

Off-Road Equipment Emissions														
Grubbing/Land Clearing	Default	Mitigation Option		Default	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
	Number of Vehicles	Override of	Default	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
Override of Default Number of Vehicles	Program-estimate	Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Equipment Tier	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User-Defined Off-road Equipment														
If non-default vehicles are used, please provide information in "Non-default Off-road Equipment" tab					ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Number of Vehicles		Equipment Tier	Type		pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grubbing/Land Clearing				pounds per day	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grubbing/Land Clearing				tons per phase	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Grading/Excavation	Default		Mitigation Option		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
	Number of Vehicles	Override of	Default											
	Program-estimate	Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Equipment Tier	Type										
				Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.50				Model Default Tier	Crawler Tractors	0.29	1.25	3.72	0.13	0.14	0.00	380.19	0.12	384.29
				Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00				Model Default Tier	Excavators	0.25	3.27	2.41	0.12	0.11	0.01	500.12	0.16	505.51
				Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Other General Industrial Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00				Model Default Tier	Tractors/Loaders/Backhoes	0.21	2.28	2.11	0.13	0.12	0.00	300.77	0.10	304.01
				Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User-Defined Off-road Equipment														
If non-default vehicles are used, please provide information in "Non-default Off-road Equipment" tab														
	Number of Vehicles		Equipment Tier	Type	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
					pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
	0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Grading/Excavator		pounds per day	0.74	6.80	8.24	0.39	0.36	0.01	1,181.08	0.38	0.01	1,193.81
		Grading/Excavator		tons per phase	0.00	0.04	0.05	0.00	0.00	0.00	6.50	0.00	0.00	6.57

Drainage/Utilities/Subgrade	Mitigation Option			Default	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
	Default	Override of	Default											
	Number of Vehicles	Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Equipment Tier											
Override of Default Number of Vehicles	Program-estimate				pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User-Defined Off-road Equipment				If non-default vehicles are used, please provide information in "Non-default Off-road Equipment" tab										
	Number of Vehicles		Equipment Tier	Type	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
	0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Drainage/Utilities/Sub-Grade				pounds per day	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Drainage/Utilities/Sub-Grade				tons per phase	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Paving	Default		Mitigation Option		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
	Number of Vehicles	Override of	Default											
	Override of Default Number of Vehicles	Program-estimate	Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Equipment Tier										
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User-Defined Off-road Equipment														
If non-default vehicles are used, please provide information in "Non-default Off-road Equipment" tab					ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Number of Vehicles					pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
Equipment Tier														
Type														
0.00					0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00					0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00					0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00					0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00					0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00					0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00					0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00					0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving					pounds per day	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving					tons per phase	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Emissions all Phases (tons per construction period) >=						0.00	0.04	0.05	0.00	0.00	0.00	6.50	0.00	6.57

Equipment default values for horsepower and hours/day can be overridden in cells D403 through D436 and F403 through F436.

Equipment	User Override of Horsepower	Default Values Horsepower	User Override of Hours/day	Default Values Hours/day
Aerial Lifts		63		8
Air Compressors		78		8
Bore/Drill Rigs		221		8
Cement and Mortar Mixers		9		8
Concrete/Industrial Saws		81		8
Cranes		231		8
Crawler Tractors		212		8
Crushing/Proc. Equipment		85		8
Excavators		158		8
Forklifts		89		8
Generator Sets		84		8
Graders		187		8
Off-Highway Tractors		124		8
Off-Highway Trucks		402		8
Other Construction Equipment		172		8
Other General Industrial Equipment		88		8
Other Material Handling Equipment		168		8
Pavers		130		8
Paving Equipment		132		8
Plate Compactors		8		8
Pressure Washers		13		8
Pumps		84		8
Rollers		80		8
Rough Terrain Forklifts		100		8
Rubber Tired Dozers		247		8
Rubber Tired Loaders		203		8
Scrapers		367		8
Signal Boards		6		8
Skid Steer Loaders		65		8
Surfacing Equipment		263		8
Sweepers/Scrubbers		64		8
Tractors/Loaders/Backhoes		97		8
Trenchers		78		8
Welders		46		8

END OF DATA ENTRY SHEET



Road Construction Emissions Model, Version 9.0.0

Daily Emission Estimates for -> Groundwater Recharge & SWH Habitat																																																						
Project Phases (Pounds)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	PM10 (lbs/day)	PM10 (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)	PM2.5 (lbs/day)	PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)																																								
Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00																																								
Grading/Excavation	0.80	8.01	8.97	20.45	0.45	20.00	4.55	0.39	4.16	0.02	1,849.35	0.39	0.08	1,881.51																																								
Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00																																								
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00																																								
Maximum (pounds/day)	0.80	8.01	8.97	20.45	0.45	20.00	4.55	0.39	4.16	0.02	1,849.35	0.39	0.08	1,881.51																																								
Total (tons/construction project)	0.00	0.04	0.05	0.11	0.00	0.11	0.03	0.00	0.02	0.00	10.17	0.00	0.00	10.35																																								
Notes: Project Start Year -> 2020																																																						
Project Length (months) -> 1																																																						
Total Project Area (acres) -> 1																																																						
Maximum Area Disturbed/Day (acres) -> 1																																																						
Water Truck Used? -> No																																																						
<table><tr><td colspan="2">Total Material Imported/Exported Volume (yd³/day)</td><td colspan="3">Daily VMT (miles/day)</td></tr><tr><td>Phase</td><td>Soil</td><td>Asphalt</td><td>Soil Hauling</td><td>Asphalt Hauling</td><td>Worker Commute</td><td>Water Truck</td></tr><tr><td>Grubbing/Land Clearing</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Grading/Excavation</td><td>20</td><td>0</td><td>30</td><td>0</td><td>400</td><td>60</td></tr><tr><td>Drainage/Utilities/Sub-Grade</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Paving</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr></table>															Total Material Imported/Exported Volume (yd³/day)		Daily VMT (miles/day)			Phase	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck	Grubbing/Land Clearing	0	0	0	0	0	0	Grading/Excavation	20	0	30	0	400	60	Drainage/Utilities/Sub-Grade	0	0	0	0	0	0	Paving	0	0	0	0	0	0
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Phase	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck																																																
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PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.																																																						
Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.																																																						
CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.																																																						
Total Emission Estimates by Phase for -> Groundwater Recharge & SWH Habitat																																																						
Project Phases	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	PM10 (tons/phase)	PM10 (tons/phase)	PM10 (tons/phase)	PM2.5 (tons/phase)	PM2.5 (tons/phase)	PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)																																								
(Tons for all except CO2e. Metric tonnes for CO2e)																																																						
Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00																																								
Grading/Excavation	0.00	0.04	0.05	0.11	0.00	0.11	0.03	0.00	0.02	0.00	10.17	0.00	0.00	9.39																																								
Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00																																								
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00																																								
Maximum (tons/phase)	0.00	0.04	0.05	0.11	0.00	0.11	0.03	0.00	0.02	0.00	10.17	0.00	0.00	9.39																																								
Total (tons/construction project)	0.00	0.04	0.05	0.11	0.00	0.11	0.03	0.00	0.02	0.00	10.17	0.00	0.00	9.39																																								
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The CO2e emissions are reported as metric tons per phase.																																																						

HP	62.37879
----	----------

days/180 af      8.146259

HP		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	
		ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O	
Pumps	120	0.751	3.587	5.226	0.006	0.403	0.403	568.299	0.067	0.004	
Emissions Factors Source: SMAQMD, 2018											
Grams/24-hr day	65	1171.56	5595.72	8152.56	9.36	628.68	628.68	886546.4	104.52	6.667322	
pounds/day		2.582848	12.33645	17.97332	0.020635	1.386002	1.386002	1954.5	0.230427	0.014699	
										CO2e	
Global Warming Potential Factor from Road Construction Model								1	25	298	
GHG pounds/day								1954.5	5.760679	4.38028	1964.641
Based on a 180 acre-foot season											
Tonnes/season										7.25951	

## **Appendix B: Tribal Cultural Resources Correspondence**



SENT BY CERTIFIED MAIL. RETURN RECEIPT REQUESTED

October 2, 2019

Gene Whitehouse  
Chairman  
United Auburn Indian Community of the Auburn Rancheria  
10720 Indian Hill Road  
Auburn, CA 95603

**Subject: FORMAL NOTIFICATION PURSUANT TO ASSEMBLY BILL 52  
(PUBLIC RESOURCES CODE 21080.3.1) OF PROPOSED  
GROUNDWATER RECHARGE AND SWAINSON'S HAWK  
HABITAT PRESERVATION PROJECT**

Dear Mr. Gene Whitehouse:

This letter is a formal invitation to your Tribe to consult with the Sacramento Area Flood Control Agency (SAFCA) pursuant to Assembly Bill 52 (Public Resources Code Section 20180.3.1) regarding the proposed Groundwater Recharge and Swainson's Hawk Habitat Preservation Project. The project is in south Sacramento County.

The primary project goal is to increase groundwater recharge near the Cosumnes River, raising the groundwater level to support agricultural pumping and to promote river flow later in spring or summer and earlier in the fall, benefiting fall-run Chinook salmon and other aquatic species. SAFCA is applying for a grant to fund the project, which would acquire a 129-acre portion of a parcel between Deer Creek and the Cosumnes River (see attached Figure 1, Project Location) and construct a pipeline on the site connecting to an existing 24" diameter Omoichumne-Hartnell Water District (OHWD) pipeline at the southern end of the project site. The pipeline would be operated to discharge and spread water on the site during the winter rainy season, allowing the water to infiltrate into the ground and recharge the groundwater table. The project site would be the portion of Sacramento County Assessor's Parcel No. 126-0480-001 that is already subject to a conservation easement preserving habitat for Swainson's hawk, and the project would be constructed and operated to comply with that easement.

Water for the project would be delivered via the existing OHWD pipeline, which has an intake in the Cosumnes River. Water would be spread on the project site during the months of December through March. Water diversions would be subject to annual permitting by the California State Water Resources Control Board. No new intakes would be constructed.

Office 916-874-7606  
Fax 916-874-8289

1007 - 7th Street, 7th Floor  
Sacramento, CA 95814-3407

SAFCA, the lead agency under the California Environmental Quality Act (CEQA), is proposing to prepare a CEQA Initial Study analyzing potential environmental impacts of the proposed project, including potential impacts to tribal cultural resources and other types of cultural resources. As part of the cultural resources review of the proposed project under CEQA, we are providing your Tribe with an opportunity to submit any information that you are willing to share about cultural resources, particularly tribal cultural resources defined in Public Resources Code Section 21074, that may be near the project site shown in Figure 1. We understand that the locations of certain types of cultural resources are sensitive, and resource locations will not be disclosed in public documents and will be kept confidential in accordance with California Government Code Section 6254.10.

If your Tribe would like to participate in formal consultation with SAFCA, please notify the undersigned in writing within 30 calendar days of receipt of this notice. If a written request is not received by SAFCA within 30 calendar days, the consultation process under Public Resources Code Section 21080.3.1 may not take place. SAFCA is, however, committed to continuing to work with your Tribe on the proposed project. Please send written notification to:

M. Holly Gilchrist, Agency Counsel  
Sacramento Area Flood Control Agency  
1007 7<sup>th</sup> St, 7<sup>th</sup> Floor  
Sacramento, CA 95814  
(916) 874-7606  
Email: [gilchristh@SacCounty.NET](mailto:gilchristh@SacCounty.NET)

If you have any questions please feel free to contact SAFCA's Director of Planning Gary Bardini by telephone at (916) 874-7606 or email at [bardinig@saccounty.net](mailto:bardinig@saccounty.net). SAFCA's fax number is (916) 874-8289.

Sincerely,



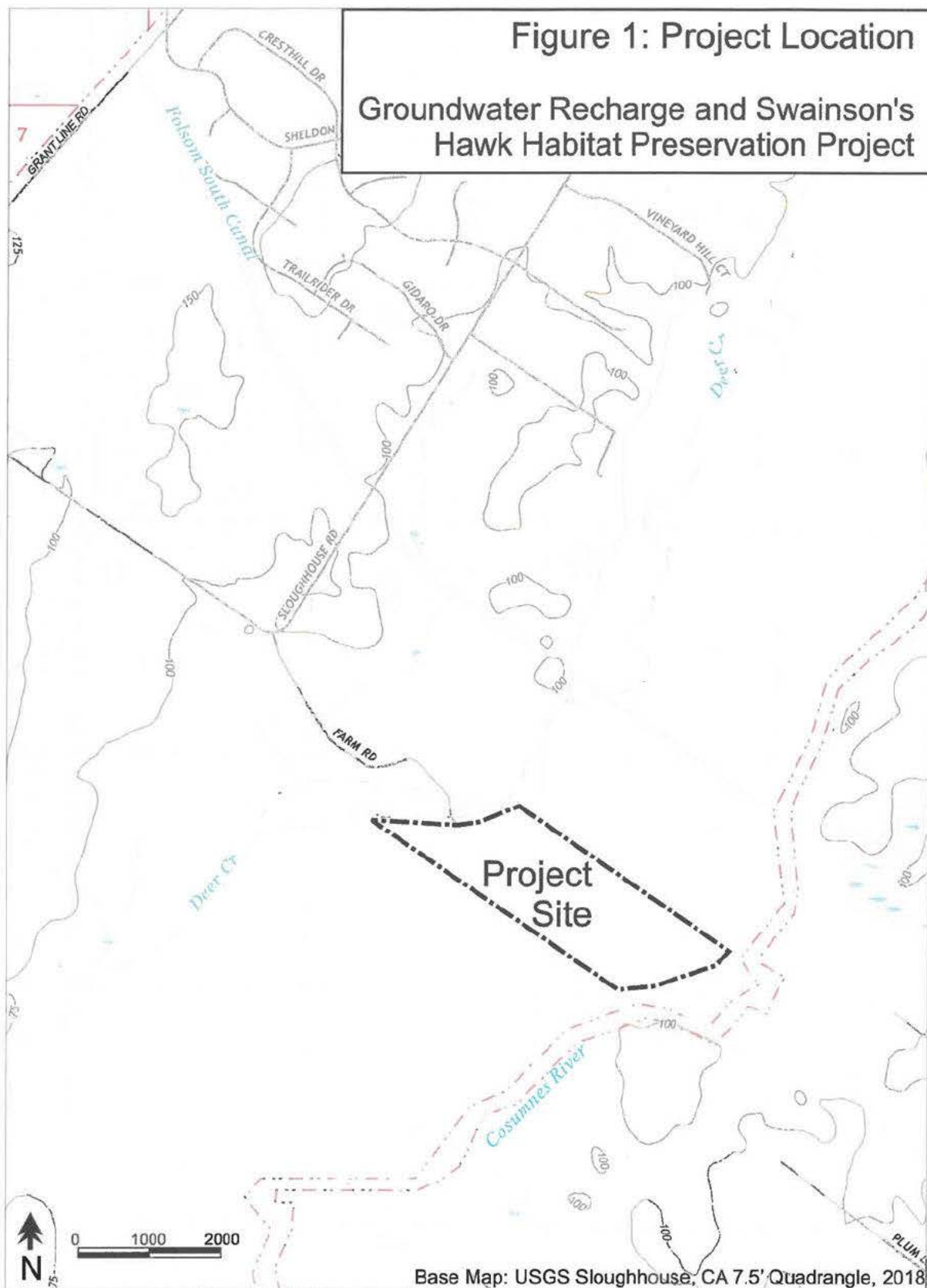
Richard M. Johnson  
Executive Director

Enclosure

cc: Gary Bardini, SAFCA  
KC Sorgen, SAFCA  
Barry Scott, GEI  
Mick Klasson, consultant



**Figure 1: Project Location**  
**Groundwater Recharge and Swainson's Hawk Habitat Preservation Project**





SENT BY CERTIFIED MAIL. RETURN RECEIPT REQUESTED

October 2, 2019

Antonio Ruiz Jr.  
Cultural Resources Officer  
Wilton Rancheria  
9728 Kent St  
Elk Grove, CA 95624

**Subject: FORMAL NOTIFICATION PURSUANT TO ASSEMBLY BILL 52  
(PUBLIC RESOURCES CODE 21080.3.1) OF PROPOSED  
GROUNDWATER RECHARGE AND SWAINSON'S HAWK  
HABITAT PRESERVATION PROJECT**

Dear Mr. Antonio Ruiz Jr.:

This letter is a formal invitation to your Tribe to consult with the Sacramento Area Flood Control Agency (SAFCA) pursuant to Assembly Bill 52 (Public Resources Code Section 20180.3.1) regarding the proposed Groundwater Recharge and Swainson's Hawk Habitat Preservation Project. The project is in south Sacramento County.

The primary project goal is to increase groundwater recharge near the Cosumnes River, raising the groundwater level to support agricultural pumping and to promote river flow later in spring or summer and earlier in the fall, benefiting fall-run Chinook salmon and other aquatic species. SAFCA is applying for a grant to fund the project, which would acquire a 129-acre portion of a parcel between Deer Creek and the Cosumnes River (see attached Figure 1, Project Location) and construct a pipeline on the site connecting to an existing 24" diameter Omoichumne-Hartnell Water District (OHWD) pipeline at the southern end of the project site. The pipeline would be operated to discharge and spread water on the site during the winter rainy season, allowing the water to infiltrate into the ground and recharge the groundwater table. The project site would be the portion of Sacramento County Assessor's Parcel No. 126-0480-001 that is already subject to a conservation easement preserving habitat for Swainson's hawk, and the project would be constructed and operated to comply with that easement.

Water for the project would be delivered via the existing OHWD pipeline, which has an intake in the Cosumnes River. Water would be spread on the project site during the months of December through March. Water diversions would be subject to annual permitting by the California State Water Resources Control Board. No new intakes would be constructed.

Office 916-874-7606  
Fax 916-874-8289

1007 - 7th Street, 7th Floor  
Sacramento, CA 95814-3407



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Sacramento Area Flood Control Agency  
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Sacramento, CA 95814  
(916) 874-7606  
Email: [gilchristh@SacCounty.NET](mailto:gilchristh@SacCounty.NET)

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Sincerely,



Richard M. Johnson  
Executive Director

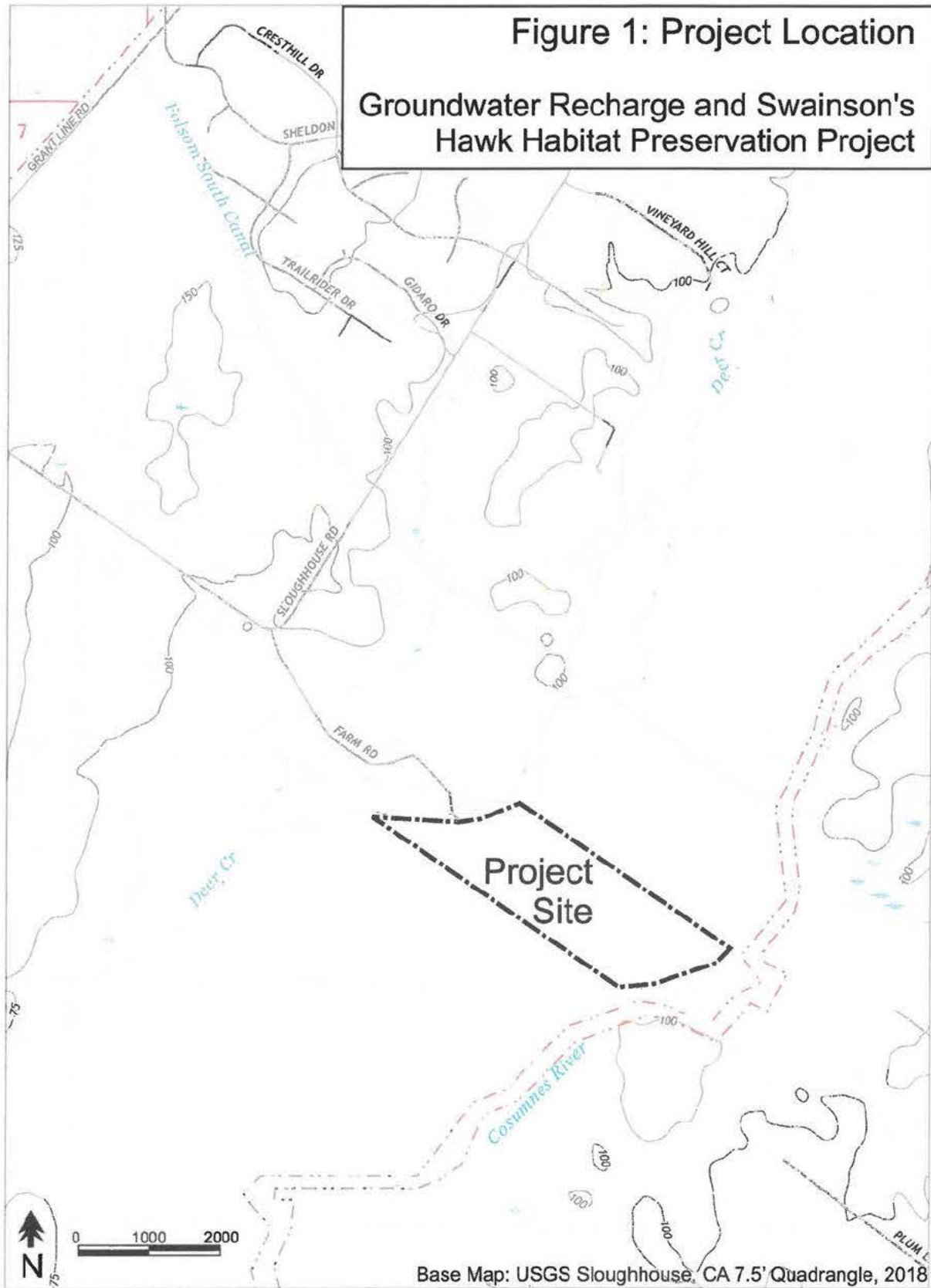
Enclosure

cc: Gary Bardini, SAFCA  
KC Sorgen, SAFCA  
Barry Scott, GEI  
Mick Klasson, consultant



Figure 1: Project Location

Groundwater Recharge and Swainson's Hawk Habitat Preservation Project



Base Map: USGS Sloughouse, CA 7.5' Quadrangle, 2018



SENT BY CERTIFIED MAIL. RETURN RECEIPT REQUESTED

October 2, 2019

Roselynn Lwenya, Ph.D  
Environmental Resource Director/Tribal Historic Preservation Officer  
Buena Vista Rancheria  
1418 20th Street STE 200  
Sacramento, CA 95811

**Subject: FORMAL NOTIFICATION PURSUANT TO ASSEMBLY BILL 52  
(PUBLIC RESOURCES CODE 21080.3.1) OF PROPOSED  
GROUNDWATER RECHARGE AND SWAINSON'S HAWK  
HABITAT PRESERVATION PROJECT**

Dear Ms. Roselynn Lwenya, PhD:

This letter is a formal invitation to your Tribe to consult with the Sacramento Area Flood Control Agency (SAFCA) pursuant to Assembly Bill 52 (Public Resources Code Section 21080.3.1) regarding the proposed Groundwater Recharge and Swainson's Hawk Habitat Preservation Project. The project is in south Sacramento County.

The primary project goal is to increase groundwater recharge near the Cosumnes River, raising the groundwater level to support agricultural pumping and to promote river flow later in spring or summer and earlier in the fall, benefiting fall-run Chinook salmon and other aquatic species. SAFCA is applying for a grant to fund the project, which would acquire a 129-acre portion of a parcel between Deer Creek and the Cosumnes River (see attached Figure 1, Project Location) and construct a pipeline on the site connecting to an existing 24" diameter Omoichumne-Hartnell Water District (OHWD) pipeline at the southern end of the project site. The pipeline would be operated to discharge and spread water on the site during the winter rainy season, allowing the water to infiltrate into the ground and recharge the groundwater table. The project site would be the portion of Sacramento County Assessor's Parcel No. 126-0480-001 that is already subject to a conservation easement preserving habitat for Swainson's hawk, and the project would be constructed and operated to comply with that easement.

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Office 916-874-7606  
Fax 916-874-8289

1007 - 7th Street, 7th Floor  
Sacramento, CA 95814-3407

10-20

SAFCA, the lead agency under the California Environmental Quality Act (CEQA), is proposing to prepare a CEQA Initial Study analyzing potential environmental impacts of the proposed project, including potential impacts to tribal cultural resources and other types of cultural resources. As part of the cultural resources review of the proposed project under CEQA, we are providing your Tribe with an opportunity to submit any information that you are willing to share about cultural resources, particularly tribal cultural resources defined in Public Resources Code Section 21074, that may be near the project site shown in Figure 1. We understand that the locations of certain types of cultural resources are sensitive, and resource locations will not be disclosed in public documents and will be kept confidential in accordance with California Government Code Section 6254.10.

If your Tribe would like to participate in formal consultation with SAFCA, please notify the undersigned in writing within 30 calendar days of receipt of this notice. If a written request is not received by SAFCA within 30 calendar days, the consultation process under Public Resources Code Section 21080.3.1 may not take place. SAFCA is, however, committed to continuing to work with your Tribe on the proposed project. Please send written notification to:

M. Holly Gilchrist, Agency Counsel  
Sacramento Area Flood Control Agency  
1007 7<sup>th</sup> St, 7<sup>th</sup> Floor  
Sacramento, CA 95814  
(916) 874-7606  
Email: [gilchristh@SacCounty.NET](mailto:gilchristh@SacCounty.NET)

If you have any questions please feel free to contact SAFCA's Director of Planning Gary Bardini by telephone at (916) 874-7606 or email at [bardinig@saccounty.net](mailto:bardinig@saccounty.net). SAFCA's fax number is (916) 874-8289.

Sincerely,



Richard M. Johnson  
Executive Director

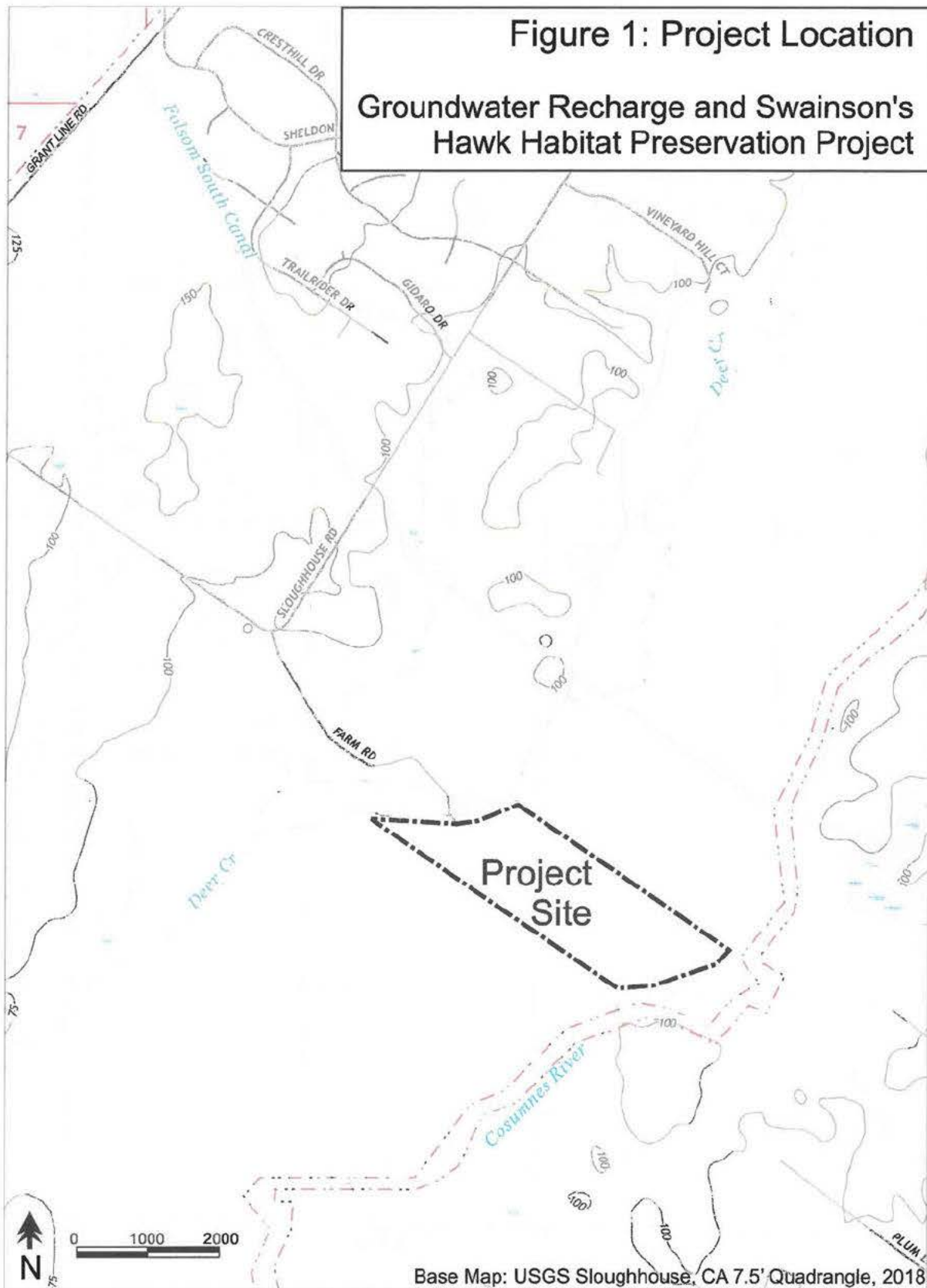
Enclosure

cc: Gary Bardini, SAFCA  
KC Sorgen, SAFCA  
Barry Scott, GEI  
Mick Klasson, consultant



Figure 1: Project Location

Groundwater Recharge and Swainson's  
Hawk Habitat Preservation Project





SENT BY CERTIFIED MAIL. RETURN RECEIPT REQUESTED

October 2, 2019

Jason Camp  
Tribal Historic Preservation Officer  
United Auburn Indian Community of the Auburn Rancheria  
10720 Indian Hill Road  
Auburn, CA 95603

**Subject: FORMAL NOTIFICATION PURSUANT TO ASSEMBLY BILL 52  
(PUBLIC RESOURCES CODE 21080.3.1) OF PROPOSED  
GROUNDWATER RECHARGE AND SWAINSON'S HAWK  
HABITAT PRESERVATION PROJECT**

Dear Mr. Jason Camp:

This letter is a formal invitation to your Tribe to consult with the Sacramento Area Flood Control Agency (SAFCA) pursuant to Assembly Bill 52 (Public Resources Code Section 20180.3.1) regarding the proposed Groundwater Recharge and Swainson's Hawk Habitat Preservation Project. The project is in south Sacramento County.

The primary project goal is to increase groundwater recharge near the Cosumnes River, raising the groundwater level to support agricultural pumping and to promote river flow later in spring or summer and earlier in the fall, benefiting fall-run Chinook salmon and other aquatic species. SAFCA is applying for a grant to fund the project, which would acquire a 129-acre portion of a parcel between Deer Creek and the Cosumnes River (see attached Figure 1, Project Location) and construct a pipeline on the site connecting to an existing 24" diameter Omochumne-Hartnell Water District (OHWD) pipeline at the southern end of the project site. The pipeline would be operated to discharge and spread water on the site during the winter rainy season, allowing the water to infiltrate into the ground and recharge the groundwater table. The project site would be the portion of Sacramento County Assessor's Parcel No. 126-0480-001 that is already subject to a conservation easement preserving habitat for Swainson's hawk, and the project would be constructed and operated to comply with that easement.

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Office 916-874-7606  
Fax 916-874-8289

1007 - 7th Street, 7th Floor  
Sacramento, CA 95814-3407

SAFCA-2019-26


SAFCA, the lead agency under the California Environmental Quality Act (CEQA), is proposing to prepare a CEQA Initial Study analyzing potential environmental impacts of the proposed project, including potential impacts to tribal cultural resources and other types of cultural resources. As part of the cultural resources review of the proposed project under CEQA, we are providing your Tribe with an opportunity to submit any information that you are willing to share about cultural resources, particularly tribal cultural resources defined in Public Resources Code Section 21074, that may be near the project site shown in Figure 1. We understand that the locations of certain types of cultural resources are sensitive, and resource locations will not be disclosed in public documents and will be kept confidential in accordance with California Government Code Section 6254.10.

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M. Holly Gilchrist, Agency Counsel  
Sacramento Area Flood Control Agency  
1007 7<sup>th</sup> St, 7<sup>th</sup> Floor  
Sacramento, CA 95814  
(916) 874-7606  
Email: [gilchristh@SacCounty.NET](mailto:gilchristh@SacCounty.NET)

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Sincerely,

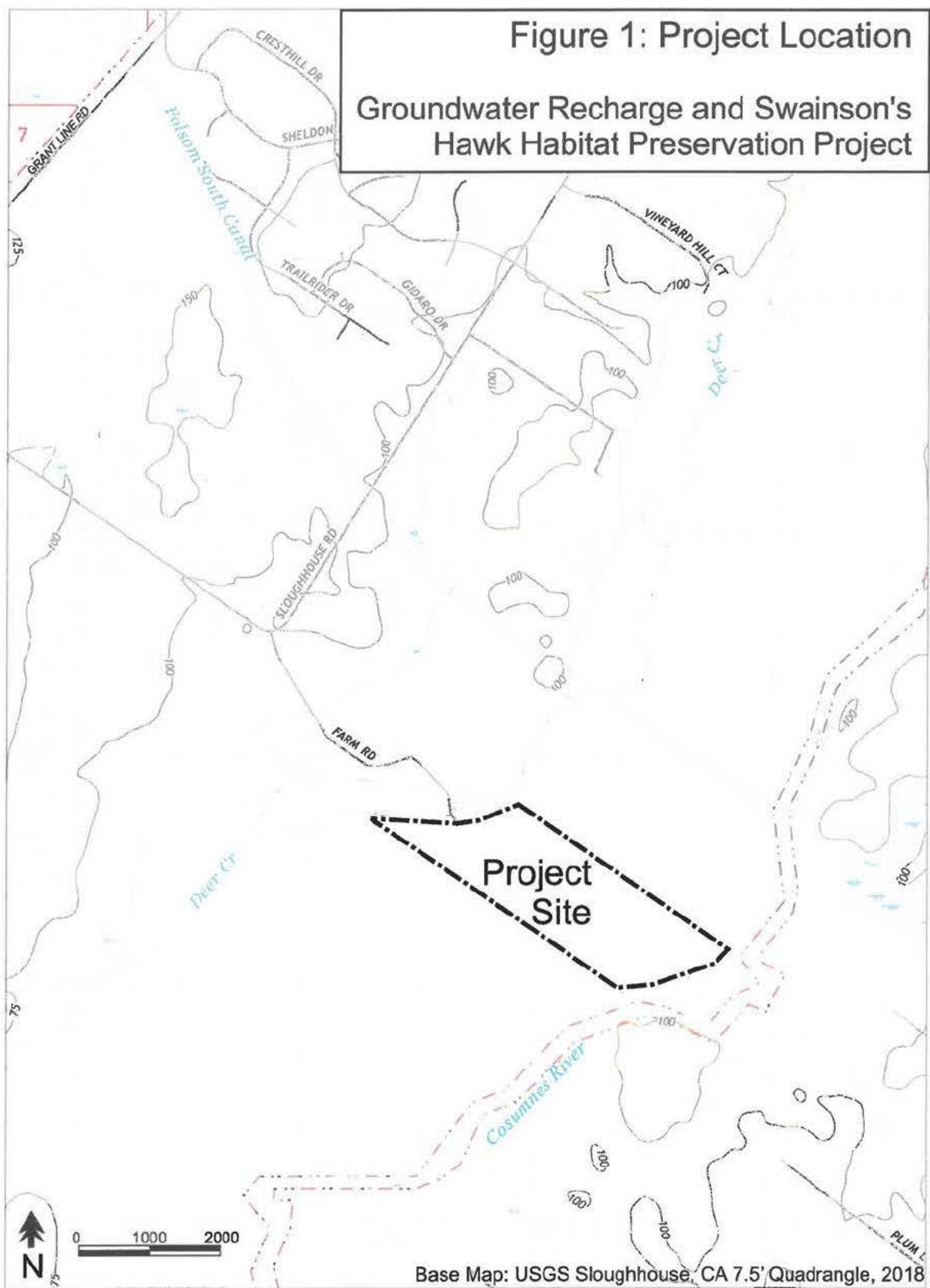


Richard M. Johnson  
Executive Director

Enclosure

cc: Gary Bardini, SAFCA  
KC Sorgen, SAFCA  
Barry Scott, GEI  
Mick Klasson, consultant







SENT BY CERTIFIED MAIL. RETURN RECEIPT REQUESTED

October 2, 2019

Marcos Guerrero  
Cultural Resources Manager  
United Auburn Indian Community of the Auburn Rancheria  
10720 Indian Hill Road  
Auburn, CA 95603

**Subject: FORMAL NOTIFICATION PURSUANT TO ASSEMBLY BILL 52  
(PUBLIC RESOURCES CODE 21080.3.1) OF PROPOSED  
GROUNDWATER RECHARGE AND SWAINSON'S HAWK  
HABITAT PRESERVATION PROJECT**

Dear Mr. Marcos Guerrero:

This letter is a formal invitation to your Tribe to consult with the Sacramento Area Flood Control Agency (SAFCA) pursuant to Assembly Bill 52 (Public Resources Code Section 21080.3.1) regarding the proposed Groundwater Recharge and Swainson's Hawk Habitat Preservation Project. The project is in south Sacramento County.

The primary project goal is to increase groundwater recharge near the Cosumnes River, raising the groundwater level to support agricultural pumping and to promote river flow later in spring or summer and earlier in the fall, benefiting fall-run Chinook salmon and other aquatic species. SAFCA is applying for a grant to fund the project, which would acquire a 129-acre portion of a parcel between Deer Creek and the Cosumnes River (see attached Figure 1, Project Location) and construct a pipeline on the site connecting to an existing 24" diameter Omoichumne-Hartnell Water District (OHWD) pipeline at the southern end of the project site. The pipeline would be operated to discharge and spread water on the site during the winter rainy season, allowing the water to infiltrate into the ground and recharge the groundwater table. The project site would be the portion of Sacramento County Assessor's Parcel No. 126-0480-001 that is already subject to a conservation easement preserving habitat for Swainson's hawk, and the project would be constructed and operated to comply with that easement.

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**Proposed Groundwater and Swainson's Hawk  
Habitat Preservation Project  
Page 2**

SAFCA, the lead agency under the California Environmental Quality Act (CEQA), is proposing to prepare a CEQA Initial Study analyzing potential environmental impacts of the proposed project, including potential impacts to tribal cultural resources and other types of cultural resources. As part of the cultural resources review of the proposed project under CEQA, we are providing your Tribe with an opportunity to submit any information that you are willing to share about cultural resources, particularly tribal cultural resources defined in Public Resources Code Section 21074, that may be near the project site shown in Figure 1. We understand that the locations of certain types of cultural resources are sensitive, and resource locations will not be disclosed in public documents and will be kept confidential in accordance with California Government Code Section 6254.10.

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M. Holly Gilchrist, Agency Counsel  
Sacramento Area Flood Control Agency  
1007 7<sup>th</sup> St, 7<sup>th</sup> Floor  
Sacramento, CA 95814  
(916) 874-7606  
Email: [gilchristh@SacCounty.NET](mailto:gilchristh@SacCounty.NET)

If you have any questions please feel free to contact SAFCA's Director of Planning Gary Bardini by telephone at (916) 874-7606 or email at [bardinig@saccounty.net](mailto:bardinig@saccounty.net). SAFCA's fax number is (916) 874-8289.

Sincerely,

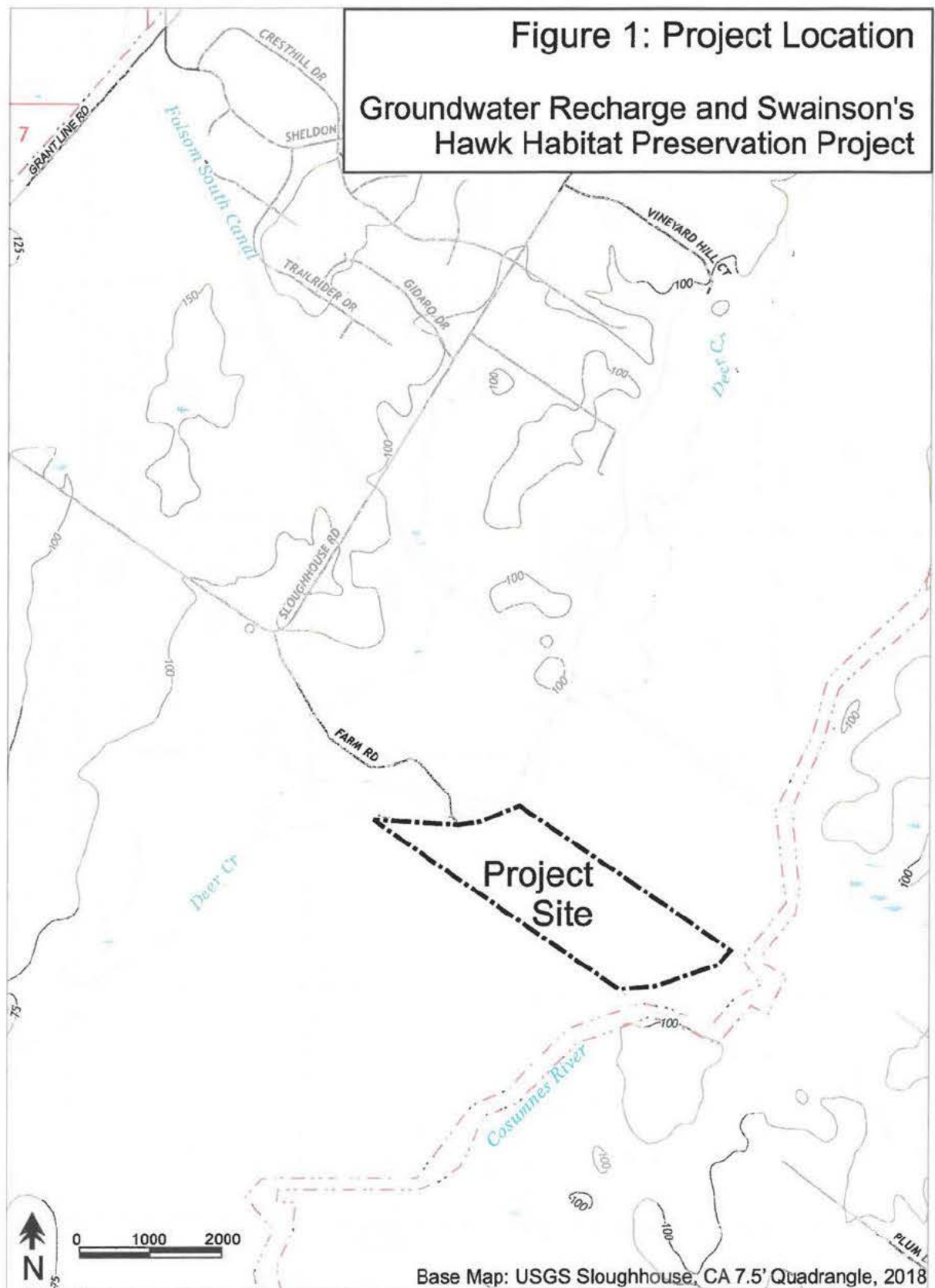


Richard M. Johnson  
Executive Director

Enclosure

cc: Gary Bardini, SAFCA  
KC Sorgen, SAFCA  
Barry Scott, GEI  
Mick Klasson, consultant

**Figure 1: Project Location**  
**Groundwater Recharge and Swainson's Hawk Habitat Preservation Project**





SENT BY CERTIFIED MAIL

October 2, 2019

Don Ryberg  
Chairperson  
Tsi Akim Maidu  
P.O. Box 510  
Browns Valley, CA 95918

**Subject: NOTIFICATION PURSUANT OF PROPOSED GROUNDWATER RECHARGE AND SWAINSON'S HAWK HABITAT PRESERVATION PROJECT**

Dear Mr. Don Ryberg:

This letter is an invitation to your Tribe to consult with the Sacramento Area Flood Control Agency (SAFCA) regarding the proposed Groundwater Recharge and Swainson's Hawk Habitat Preservation Project (project) in south Sacramento County. Your name was provided to us by the Native American Heritage Commission as a potentially interested Native American contact for the project area.

The primary project goal is to increase groundwater recharge near the Cosumnes River, raising the groundwater level to support agricultural pumping and to promote river flow later in spring or summer and earlier in the fall, benefiting fall-run Chinook salmon and other aquatic species. SAFCA is applying for a grant to fund the project, which would acquire a 129-acre portion of a parcel between Deer Creek and the Cosumnes River (see attached Figure 1, Project Location) and will construct a pipeline on the site connecting to an existing 24" diameter Omoichumne-Hartnell Water District (OHWD) pipeline at the southern end of the project site. The pipeline would be operated to discharge and spread water on the site during the winter rainy season, allowing the water to infiltrate into the ground and recharge the groundwater table. The project site would be the portion of Sacramento County Assessor's Parcel No. 126-0480-001 that is already subject to a conservation easement preserving habitat for Swainson's hawk, and the project would be constructed and operated to comply with that easement.

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SAFCA, the lead agency under the California Environmental Quality Act (CEQA), is proposing to prepare a CEQA Initial Study analyzing potential environmental impacts of the proposed project, including potential impacts to tribal cultural resources and other types of cultural resources. As part of the tribal cultural resources and cultural resources review of the proposed project under CEQA, we are providing your Tribe with an opportunity to submit any information that you are willing to share about cultural resources, particularly tribal cultural resources defined in Public Resources Code Section 21074, that may be near the project site shown in Figure 1. We understand that the locations of certain types of cultural resources are sensitive, and resource locations will not be disclosed in public documents and will be kept confidential in accordance with California Government Code Section 6254.10.

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Please contact SAFCA's Director of Planning Gary Bardini by telephone at (916) 874-7606 or email at [bardinig@saccounty.net](mailto:bardinig@saccounty.net) if you have any questions, would like additional information, or if you can provide information about Native American cultural resources in the project area.

Sincerely,

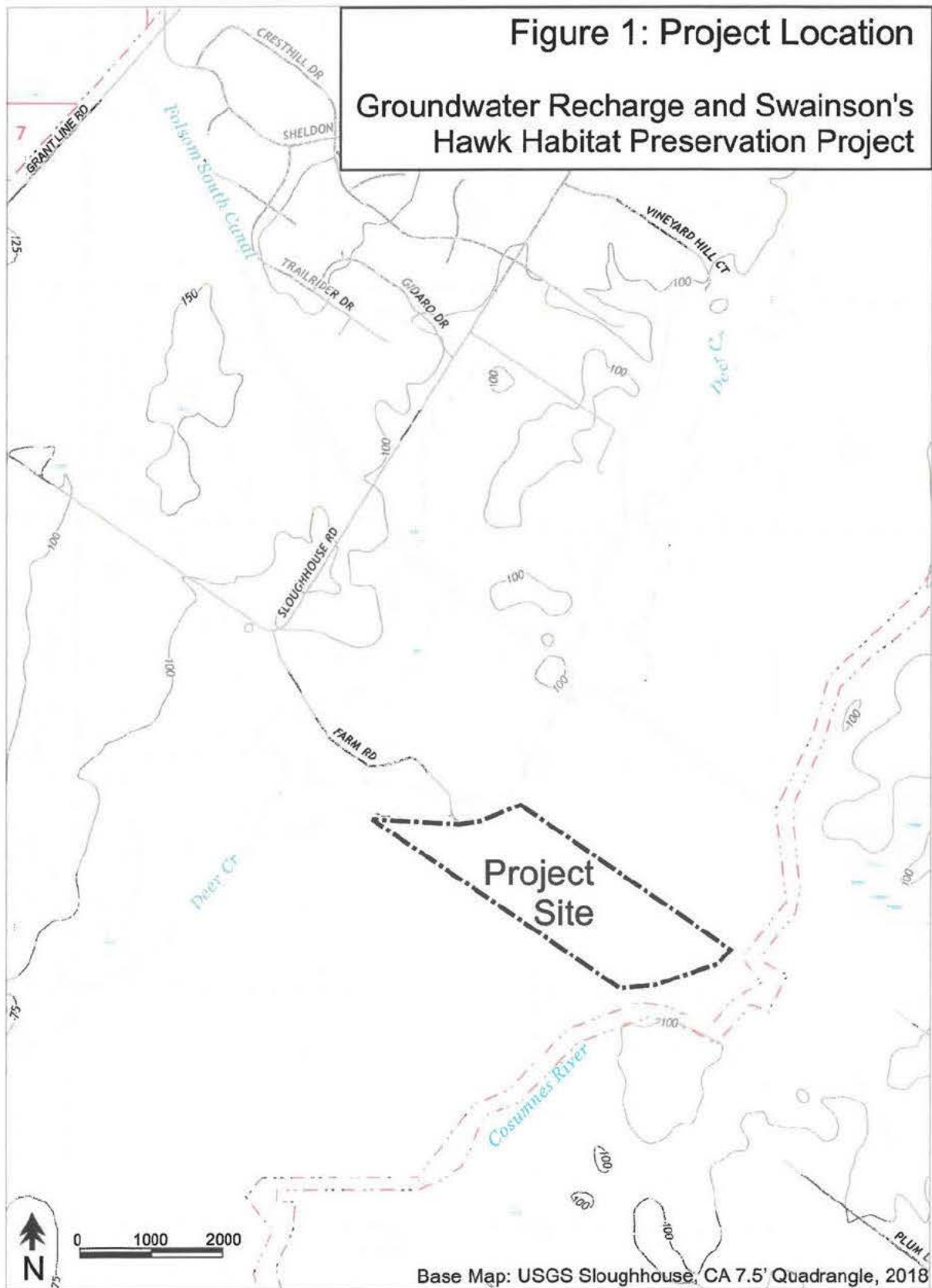


Richard M. Johnson  
Executive Director

Enclosure

cc: Gary Bardini, SAFCA  
KC Sorgen, SAFCA  
Barry Scott, GEI  
Mick Klasson, consultant

**Figure 1: Project Location**  
**Groundwater Recharge and Swainson's Hawk Habitat Preservation Project**





SENT BY CERTIFIED MAIL

October 2, 2019

Grayson Coney  
Cultural Director  
Tsi Akim Maidu  
P.O. Box 510  
Browns Valley, CA 95918

**Subject: NOTIFICATION PURSUANT OF PROPOSED GROUNDWATER RECHARGE AND SWAINSON'S HAWK HABITAT PRESERVATION PROJECT**

Dear Mr. Grayson Coney:

This letter is an invitation to your Tribe to consult with the Sacramento Area Flood Control Agency (SAFCA) regarding the proposed Groundwater Recharge and Swainson's Hawk Habitat Preservation Project (project) in south Sacramento County. Your name was provided to us by the Native American Heritage Commission as a potentially interested Native American contact for the project area.

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Office 916-874-7606  
Fax 916-874-8289

1007 - 7th Street, 7th Floor  
Sacramento, CA 95814-3407

 SAFCA



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Sincerely,

A handwritten signature in blue ink, appearing to read "Richard M. Johnson", is written over the word "Sincerely,".

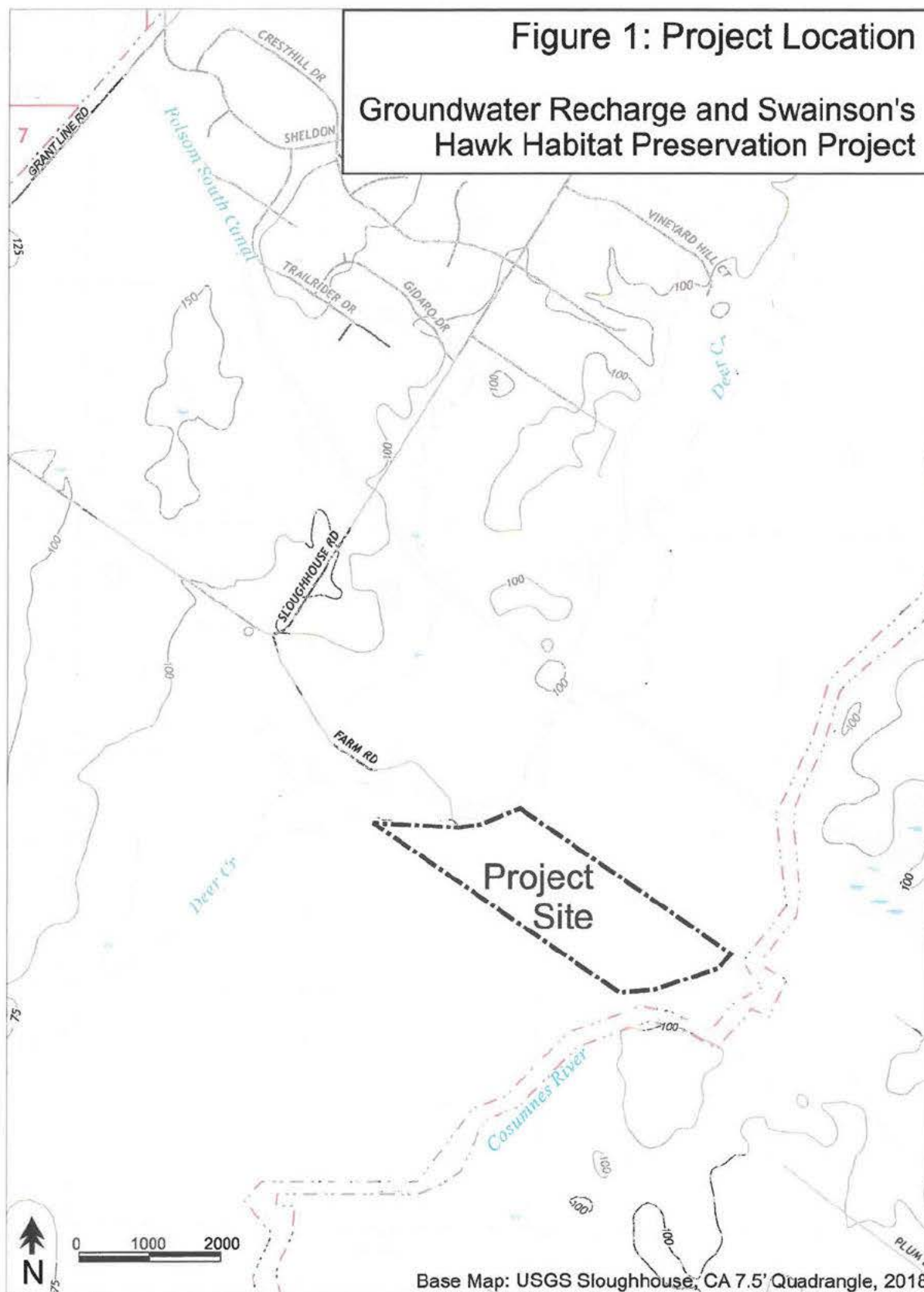
Richard M. Johnson  
Executive Director

Enclosure

cc: Gary Bardini, SAFCA  
KC Sorgen, SAFCA  
Barry Scott, GEI  
Mick Klasson, consultant

Figure 1: Project Location

Groundwater Recharge and Swainson's Hawk Habitat Preservation Project







SENT BY CERTIFIED MAIL

October 2, 2019

Nicholas Fonseca  
Chairperson  
Shingle Springs Band of Miwok Indians  
P.O. Box 1340  
Shingle Springs, CA 95682

**Subject: NOTIFICATION PURSUANT OF PROPOSED GROUNDWATER RECHARGE AND SWAINSON'S HAWK HABITAT PRESERVATION PROJECT**

Dear Mr. Nicholas Fonseca:

This letter is an invitation to your Tribe to consult with the Sacramento Area Flood Control Agency (SAFCA) regarding the proposed Groundwater Recharge and Swainson's Hawk Habitat Preservation Project (project) in south Sacramento County. Your name was provided to us by the Native American Heritage Commission as a potentially interested Native American contact for the project area.

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Fax 916-874-8289

1007 - 7th Street, 7th Floor  
Sacramento, CA 95814-3407

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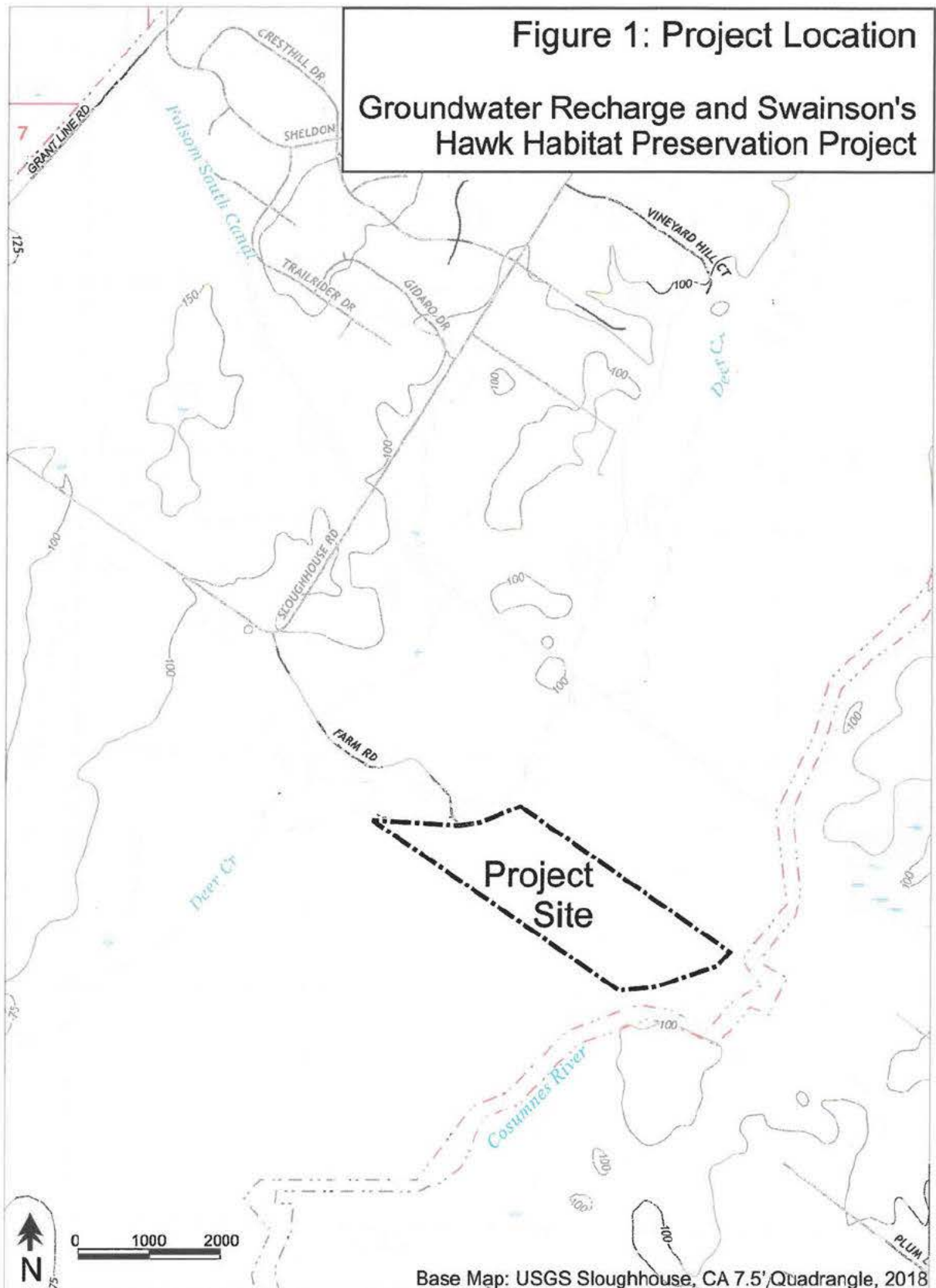
Richard M. Johnson  
Executive Director

Enclosure

cc: Gary Bardini, SAFCA  
KC Sorgen, SAFCA  
Barry Scott, GEI  
Mick Klasson, consultant

Figure 1: Project Location

Groundwater Recharge and Swainson's Hawk Habitat Preservation Project







Sacramento  
Area Flood  
Control  
Agency

SENT BY CERTIFIED MAIL

October 2, 2019

Cosme Valdez  
Chairperson  
Nashville-Eldorado Miwok  
P.O. Box 580986  
Elk Grove, CA 95758-00

**Subject: NOTIFICATION PURSUANT OF PROPOSED GROUNDWATER  
RECHARGE AND SWAINSON'S HAWK HABITAT PRESERVATION  
PROJECT**

Dear Cosme Valdez:

This letter is an invitation to your Tribe to consult with the Sacramento Area Flood Control Agency (SAFCA) regarding the proposed Groundwater Recharge and Swainson's Hawk Habitat Preservation Project (project) in south Sacramento County. Your name was provided to us by the Native American Heritage Commission as a potentially interested Native American contact for the project area.

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Sacramento, CA 95814-3407

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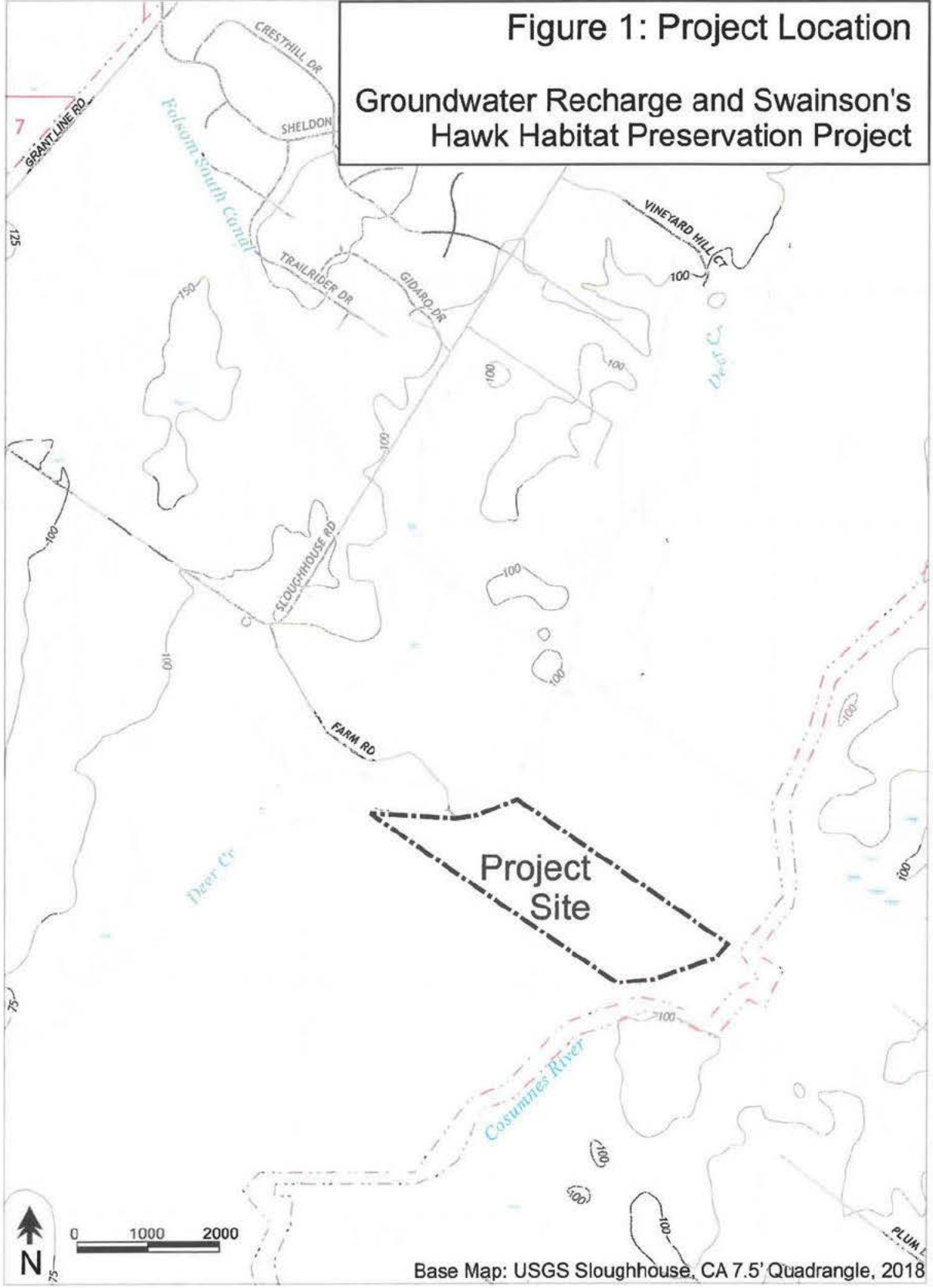
Richard M. Johnson  
Executive Director

Enclosure

cc: Gary Bardini, SAFCA  
KC Sorgen, SAFCA  
Barry Scott, GEI  
Mick Klasson, consultant

Figure 1: Project Location

Groundwater Recharge and Swainson's Hawk Habitat Preservation Project



Base Map: USGS Sloughhouse, CA 7.5' Quadrangle, 2018





SENT BY CERTIFIED MAIL

October 2, 2019

Randy Yonemura  
Cultural Committee Chair  
Ione Band of Miwok Indians  
P.O. Box 699  
Plymouth, CA 95669

**Subject: NOTIFICATION PURSUANT OF PROPOSED GROUNDWATER  
RECHARGE AND SWAINSON'S HAWK HABITAT PRESERVATION  
PROJECT**

Dear Mr. Randy Yonemura:

This letter is an invitation to your Tribe to consult with the Sacramento Area Flood Control Agency (SAFCA) regarding the proposed Groundwater Recharge and Swainson's Hawk Habitat Preservation Project (project) in south Sacramento County. Your name was provided to us by the Native American Heritage Commission as a potentially interested Native American contact for the project area.

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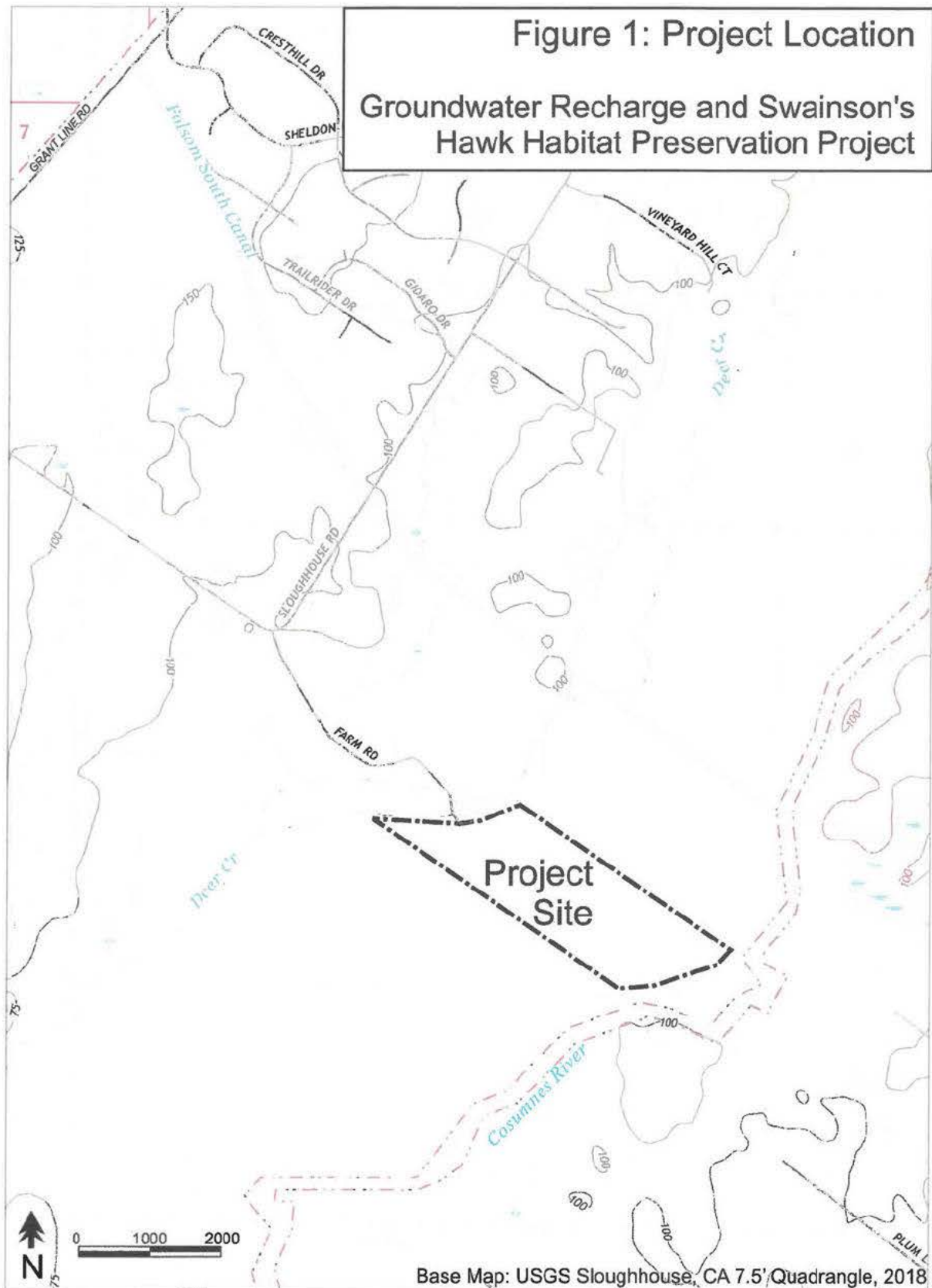


Richard M. Johnson  
Executive Director

Enclosure

cc: Gary Bardini, SAFCA  
KC Sorgen, SAFCA  
Barry Scott, GEI  
Mick Klasson, consultant







SENT BY CERTIFIED MAIL

October 2, 2019

Pamela Cubbler  
Treasurer  
Colfax-Todds Valley Consolidated Tribe  
P.O. Box 4884  
Auburn, CA 95604

**Subject: NOTIFICATION PURSUANT OF PROPOSED GROUNDWATER RECHARGE AND SWAINSON'S HAWK HABITAT PRESERVATION PROJECT**

Dear Ms. Pamela Cubbler:

This letter is an invitation to your Tribe to consult with the Sacramento Area Flood Control Agency (SAFCA) regarding the proposed Groundwater Recharge and Swainson's Hawk Habitat Preservation Project (project) in south Sacramento County. Your name was provided to us by the Native American Heritage Commission as a potentially interested Native American contact for the project area.

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SAFCA

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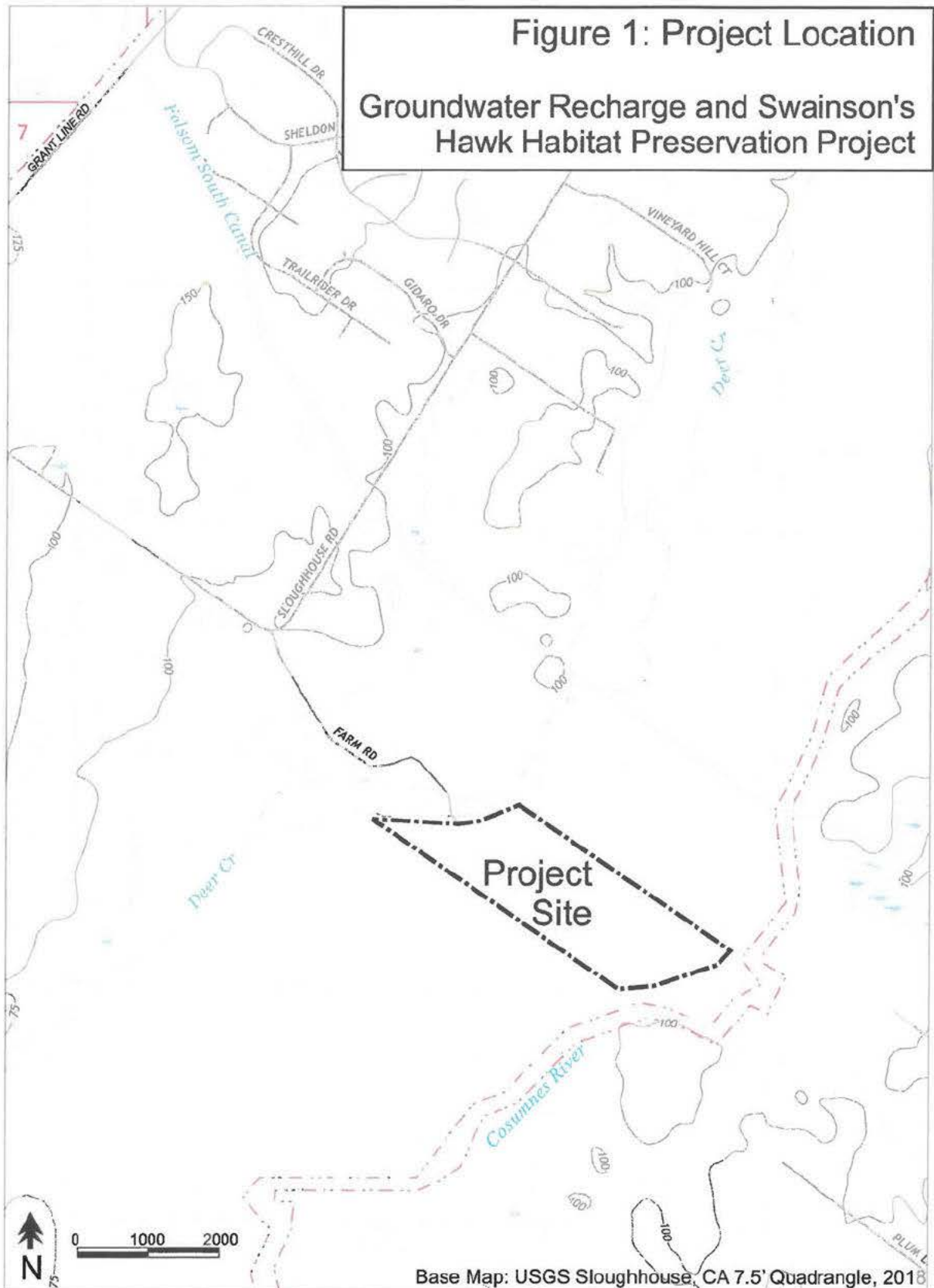
Richard M. Johnson  
Executive Director

Enclosure

cc: Gary Bardini, SAFCA  
KC Sorgen, SAFCA  
Barry Scott, GEI  
Mick Klasson, consultant



**Figure 1: Project Location**  
**Groundwater Recharge and Swainson's Hawk Habitat Preservation Project**





SENT BY CERTIFIED MAIL

October 2, 2019

Rhonda Morningstar Pope  
Chairperson  
Buena Vista Rancheria of Me-Wuk Indians  
1418 20th Street, Suite 200  
Sacramento, CA 95811

**Subject: NOTIFICATION PURSUANT OF PROPOSED GROUNDWATER  
RECHARGE AND SWAINSON'S HAWK HABITAT PRESERVATION  
PROJECT**

Dear Ms. Rhonda Morningstar Pope:

This letter is an invitation to your Tribe to consult with the Sacramento Area Flood Control Agency (SAFCA) regarding the proposed Groundwater Recharge and Swainson's Hawk Habitat Preservation Project (project) in south Sacramento County. Your name was provided to us by the Native American Heritage Commission as a potentially interested Native American contact for the project area.

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Richard M. Johnson  
Executive Director

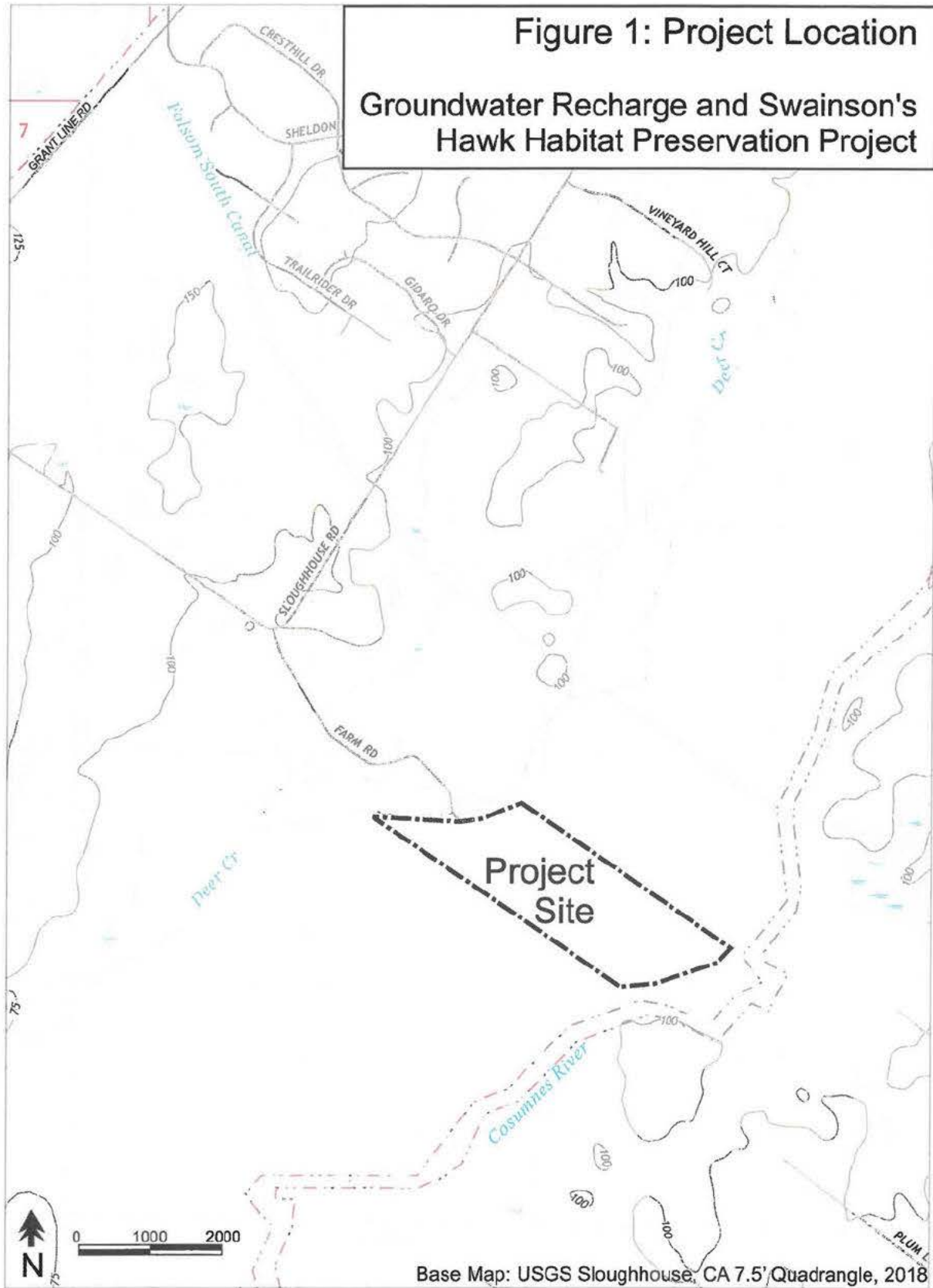
Enclosure

cc: Gary Bardini, SAFCA  
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Barry Scott, GEI  
Mick Klasson, consultant



Figure 1: Project Location

Groundwater Recharge and Swainson's Hawk Habitat Preservation Project



Base Map: USGS Sloughhouse, CA 7.5' Quadrangle, 2018



SENT BY CERTIFIED MAIL

October 2, 2019

Raymond Hitchcock  
Chairperson  
Wilton Rancheria  
9728 Kent Street  
Elk Grove, CA 95624

**Subject: NOTIFICATION PURSUANT OF PROPOSED GROUNDWATER RECHARGE AND SWAINSON'S HAWK HABITAT PRESERVATION PROJECT**

Dear Mr. Raymond Hitchcock:

This letter is an invitation to your Tribe to consult with the Sacramento Area Flood Control Agency (SAFCA) regarding the proposed Groundwater Recharge and Swainson's Hawk Habitat Preservation Project (project) in south Sacramento County. Your name was provided to us by the Native American Heritage Commission as a potentially interested Native American contact for the project area.

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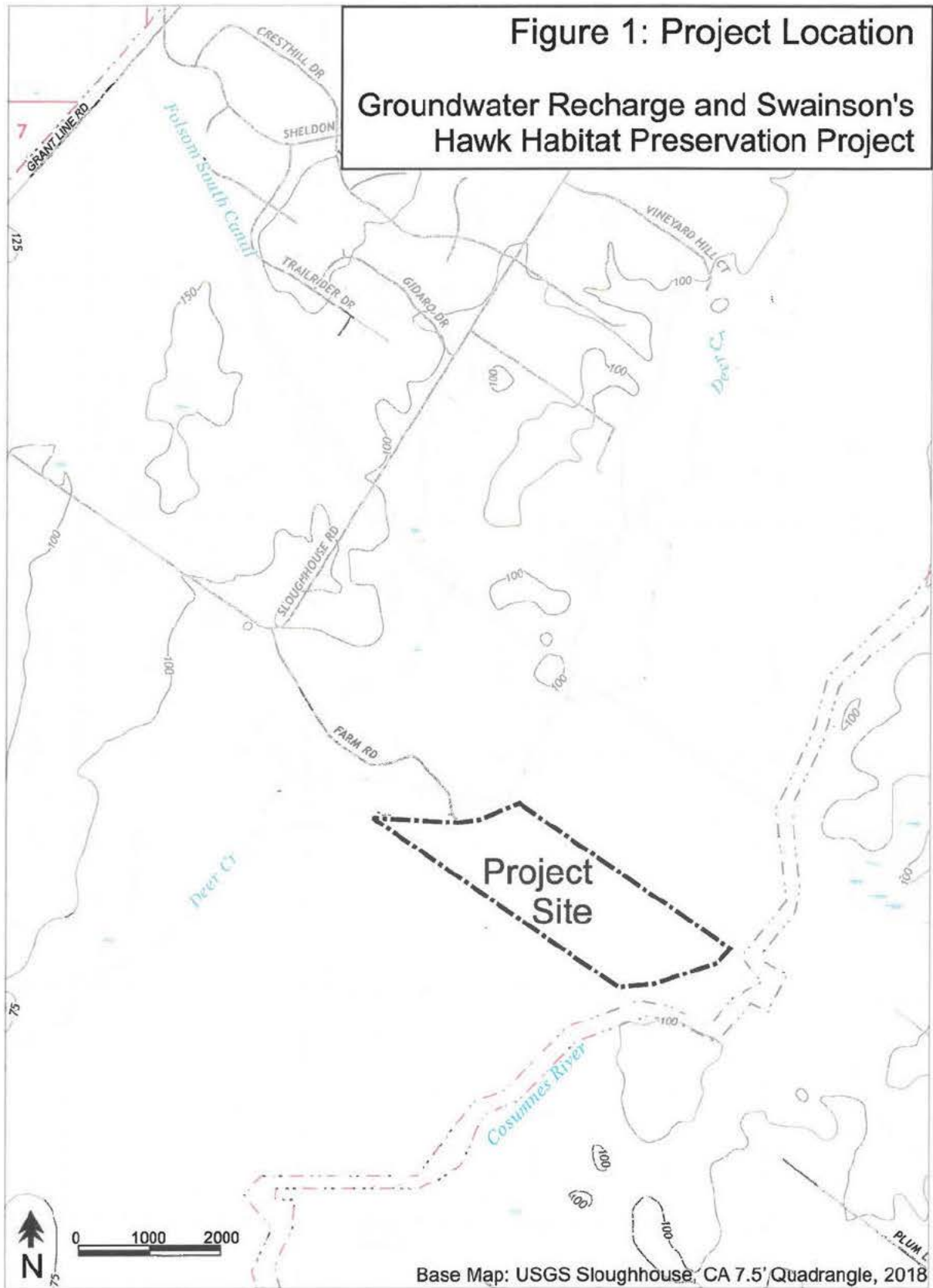


Richard M. Johnson  
Executive Director

Enclosure

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KC Sorgen, SAFCA  
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Mick Klasson, consultant

**Figure 1: Project Location**  
**Groundwater Recharge and Swainson's Hawk Habitat Preservation Project**





SENT BY CERTIFIED MAIL

October 2, 2019

Crystal Martinez-Alire  
Chairperson  
Ione Band of Miwok Indians  
P.O. Box 699  
Plymouth, CA 95669

**Subject: NOTIFICATION PURSUANT OF PROPOSED GROUNDWATER  
RECHARGE AND SWAINSON'S HAWK HABITAT PRESERVATION  
PROJECT**

Dear Ms. Crystal Martinez-Alire:

This letter is an invitation to your Tribe to consult with the Sacramento Area Flood Control Agency (SAFCA) regarding the proposed Groundwater Recharge and Swainson's Hawk Habitat Preservation Project (project) in south Sacramento County. Your name was provided to us by the Native American Heritage Commission as a potentially interested Native American contact for the project area.

The primary project goal is to increase groundwater recharge near the Cosumnes River, raising the groundwater level to support agricultural pumping and to promote river flow later in spring or summer and earlier in the fall, benefiting fall-run Chinook salmon and other aquatic species. SAFCA is applying for a grant to fund the project, which would acquire a 129-acre portion of a parcel between Deer Creek and the Cosumnes River (see attached Figure 1, Project Location) and will construct a pipeline on the site connecting to an existing 24" diameter Omoichumne-Hartnell Water District (OHWD) pipeline at the southern end of the project site. The pipeline would be operated to discharge and spread water on the site during the winter rainy season, allowing the water to infiltrate into the ground and recharge the groundwater table. The project site would be the portion of Sacramento County Assessor's Parcel No. 126-0480-001 that is already subject to a conservation easement preserving habitat for Swainson's hawk, and the project would be constructed and operated to comply with that easement.

Water for the project would be delivered via the existing OHWD pipeline, which has an intake in the Cosumnes River. Water would be spread on the project site during the months of December – March. Water diversions would be subject to annual permitting by the California State Water Resources Control Board. No new intakes would be constructed.



SAFCA, the lead agency under the California Environmental Quality Act (CEQA), is proposing to prepare a CEQA Initial Study analyzing potential environmental impacts of the proposed project, including potential impacts to tribal cultural resources and other types of cultural resources. As part of the tribal cultural resources and cultural resources review of the proposed project under CEQA, we are providing your Tribe with an opportunity to submit any information that you are willing to share about cultural resources, particularly tribal cultural resources defined in Public Resources Code Section 21074, that may be near the project site shown in Figure 1. We understand that the locations of certain types of cultural resources are sensitive, and resource locations will not be disclosed in public documents and will be kept confidential in accordance with California Government Code Section 6254.10.

This letter is an invitation to your Tribe to provide cultural resources information to SAFCA so that any such information can be used in a CEQA impact analysis and so that means to avoid or protect any identified cultural resources can be considered. If your Tribe would like to provide information to SAFCA, please contact us within 30 calendar days of receipt of this letter.

Please contact SAFCA's Director of Planning Gary Bardini by telephone at (916) 874-7606 or email at [bardinig@sacounty.net](mailto:bardinig@sacounty.net) if you have any questions, would like additional information, or if you can provide information about Native American cultural resources in the project area.

Sincerely,

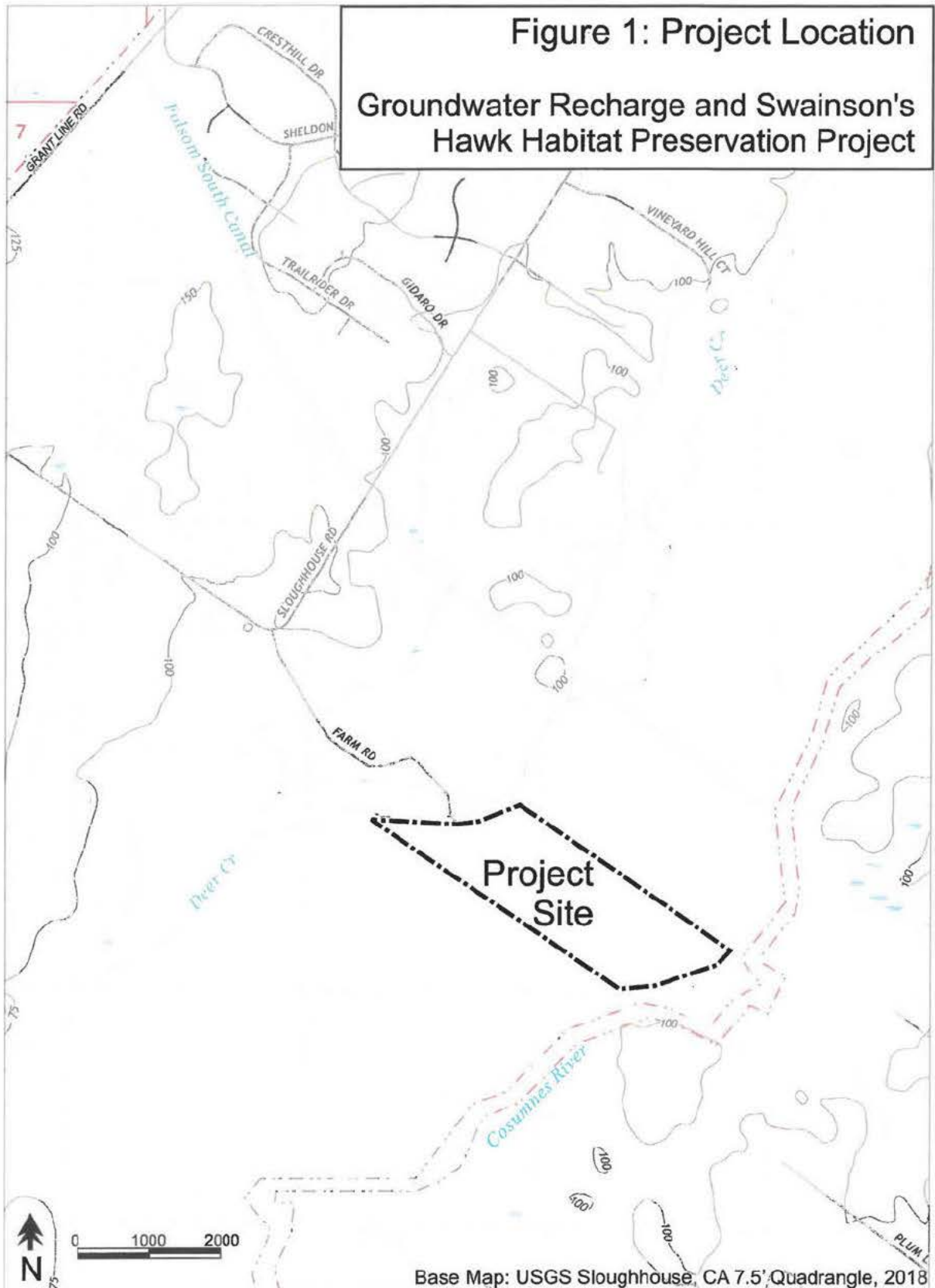


Richard M. Johnson  
Executive Director

Enclosure

cc: Gary Bardini, SAFCA  
KC Sorgen, SAFCA  
Barry Scott, GEI  
Mick Klasson, consultant

**Figure 1: Project Location**  
**Groundwater Recharge and Swainson's Hawk Habitat Preservation Project**



**From:** [Gilchrist, M. Holly](#)  
**To:** [Anna Starkey](#)  
**Cc:** [Barry Scott \(bscott@geiconsultants.com\)](#); [Mick Klasson](#); [Bardini, Gary](#); [Sorgen, KC](#); [Campbell, Jason](#)  
**Subject:** RE: AB 52 Consultation for the Proposed Groundwater Recharge and Swainson's Hawk Habitat Preservation Project  
**Date:** Friday, November 01, 2019 10:16:11 AM  
**Attachments:** [NCIC cultural resources record search SAC-19-189.pdf](#)  
[Figure 1 Project Site on 2018 Sloughhouse USGS Quad.pdf](#)

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Dear Ms. Starkey:

Please accept this email as acknowledgement of United Auburn Indian Community's (UAIC's) notice to the Sacramento Area Flood Control Agency (SAFCA) that UAIC would like to initiate consultation under Assembly Bill 52 for the proposed Groundwater Recharge and Swainson's Hawk Habitat Preservation Project. SAFCA received an email October 23, 2019 from Anna Starkey requesting consultation. This letter is intended to initiate consultation with UAIC in accordance with California Public Resources Code (PRC) Section 21080.3.1(e).

SAFCA understands that UAIC, as provided in PRC Section 21080.3.2(a), would like to discuss topics including all existing cultural resource assessments; requests for and results of records searches; GIS SHP files for the proposed project's Area of Potential Effect (APE); and a possible site visit to avoid impacts on Tribal Cultural Resources (TCRs) if any are

The type of environmental review currently being undertaken is a California Environmental Quality Act (CEQA) Initial Study. If the Initial Study does not reveal substantial evidence that the project may have a significant effect, or if potentially significant impacts can be avoided or mitigated, a Negative Declaration or Mitigated Negative Declaration will be prepared. If there is substantial evidence that any aspect of the project may cause a significant effect on the environment, an Environmental Impact Report will be prepared.

The Project comprises acquiring a 129-acre parcel between Deer Creek and the Cosumnes River and constructing a pipeline on the site connecting to an existing 24" diameter Omoichumne-Hartnell Water District (OHWD) pipeline at the southern end of the project site. The pipeline would be operated to discharge and spread water on the site during the winter rainy season, allowing the water to infiltrate into the ground and recharge the groundwater table. Although formal evaluation of alternatives may not be required if a Negative Declaration or Mitigated Negative Declaration is prepared, the primary ground-disturbing activity is installation of the water pipeline, and the alignment can be selected as needed to avoid TCRs or other sensitive resources found on the site.

We do not presently have GIS SHP files for the project site. However, a site map is attached. A cultural resources record search has also been conducted and is attached.

Please let us know if you would like to meet to discuss the proposed project and the documents you requested including, locations of any known TCRs, . If you would like to meet and or schedule a site visit, please contact Barry Scott at (916) 213-2767 or [bscott@geiconsultants.com](mailto:bscott@geiconsultants.com). Thank you.

Holly

**M. Holly Gilchrist**

Agency Counsel

SAFCA

1007 7<sup>th</sup> Street, 7<sup>th</sup> Floor

Sacramento, CA 95814

(916) 874-8730 direct

(916) 642-6018 cell

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**From:** Anna Starkey <astarkey@auburnrancheria.com>

**Sent:** Wednesday, October 23, 2019 2:54 PM

**To:** Gilchrist. M. Holly <gilchristh@SacCounty.NET>

**Subject:** AB 52 Consultation for the Proposed Groundwater Recharge and Swainson's Hawk Habitat Preservation Project

**EXTERNAL EMAIL:** If unknown sender, **do not** click links/attachments.

Dear M. Holly Gilchrist,

Thank you for your letter received on 10/7/2019. I am contacting you because the United Auburn Indian Community's Preservation Department has identified tribal cultural resources in or near the project area.

We request:

- Consultation for this project;
- All existing cultural resource assessments;
- Requests for and results of records searches;
- GIS SHP files for the proposed project's APE;
- A possible site visit.

Thank you for involving UAIC in the planning process at an early stage. We ask that you make this correspondence a part of the project record and we look forward to working with you to ensure that tribal cultural resources are protected.

Thank you,  
Anna M. Starkey

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**From:** [Bardini, Gary](#)  
**To:** [Mick Klasson](#)  
**Cc:** [Scott, Barry](#); [Tim Washburn](#)  
**Subject:** FW: Hawk Habitat Preservation Project  
**Date:** Sunday, October 27, 2019 6:39:51 PM

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Mick,

Can you schedule a meeting with the Wilton Rancheria folks and include Barry and me. Thx.

-g

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**From:** Mariah Mayberry <mmayberry@wiltonrancheria-nsn.gov>  
**Sent:** Thursday, October 24, 2019 10:07 AM  
**To:** Bardini, Gary <BardiniG@saccounty.net>  
**Cc:** Cultural Resource Department Inbox <crd@wiltonrancheria-nsn.gov>; Ralph T. Hatch <rhatch@wiltonrancheria-nsn.gov>  
**Subject:** Hawk Habitat Preservation Project

**EXTERNAL EMAIL:** If unknown sender, **do not** click links/attachments.

Good morning,

Wilton Rancheria would like to be involved with this project. Our Director Ralph Hatch would like to set up a meeting to discuss the participation.

Please let us know what a good day and time is for you.

Thank you

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