Initial Study/Mitigated Negative Declaration
Elk Grove Great Nature Park Project

Prepared for:

Cosumnes Community Services District

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
ADA	Americans with Disabilities Act
APN	Assessor's Parcel Number
BACT	Best Available Control Technology
BMP	best management practice
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Board
CCSD	Cosumnes Community Services District
CEQA	California Environmental Quality Act
City	City of Elk Grove
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
EGWD	Elk Grove Water District
EOP	Emergency Operations Plan
EV	electric vehicle
FHSZ	fire hazard severity zone
GHG	greenhouse gas
IS	Initial Study
MND	Mitigated Negative Declaration
MT	metric ton
MTP	Metropolitan Transportation Plan
NAAQS	National Ambient Air Quality Standards
NO_x	oxides of nitrogen
O_3	ozone
PM_{10}	coarse particulate matter
$PM_{2.5}$	fine particulate matter
project	Elk Grove Great Nature Park
ROG	reactive organic gas
SAP	Sustainability Action Plan
SCS	Sustainable Communities Strategy
sf	square feet
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMUD	Sacramento Municipal Utility District
SVAB	Sacramento Valley Air Basin
TAC	toxic air contaminant
VMT	vehicle miles traveled

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1 Introduction

1.1 Project Overview and Location

The Elk Grove Great Nature Park (project) is a proposed 2.5-acre park to be located at 8820 Elk Grove Boulevard in the City of Elk Grove (City), as shown on Figure 1, Regional Location. The project site is located within two Assessor's Parcel Number (APN) 125-0120-021 ("northern portion") and APN 125-0120-025 ("southern portion"). The project site is located at the southeast corner of Elk Grove Boulevard and Williamson Drive behind the Cosumnes Community Services District (CCSD) office building and contains an existing surface parking lot, trailer, undeveloped grassland, oak trees, and non-accessible natural wetlands. The southwest corner of the site, in the southern portion, includes the existing Baker Park, which would remain largely unchanged except for improvements to a small lawn area. The proposed project would preserve the existing wetlands and add new trees, Americans with Disabilities Act (ADA)-compliant accessible pathways, ramps, and bridges, rain gardens to capture stormwater runoff, new bicycle parking spaces, solar panels over parking areas, and a children's nature play area and new gardens for urban agriculture and planting demonstrations. A future phase of the project includes a small Nature Center building that would replace the existing trailer and allow for education, training, events, and community activities. Existing parking areas would be reconfigured.

The project site is also near several organizations that provide education, therapy, recreation, and training for kids and adults, including the California Montessori Project–Elk Grove, Jessie Baker School, and Elk Grove Adult Community Training.

1.2 California Environmental Quality Act Compliance

This Initial Study (IS) has been prepared per the requirements of the California Environmental Quality Act (CEQA) of 1970 (California Public Resources Code Section 21000 et seq.), and the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000 et seq.). The CCSD is the lead agency for the proposed project and would approve the project and adopt the Mitigated Negative Declaration (MND).

1.3 Public Review Process

The IS and proposed MND will be circulated for public review for a period of 30 days, pursuant to CEQA Guidelines Section 15073(a). The CCSD will provide public notice at the beginning of the public review period.

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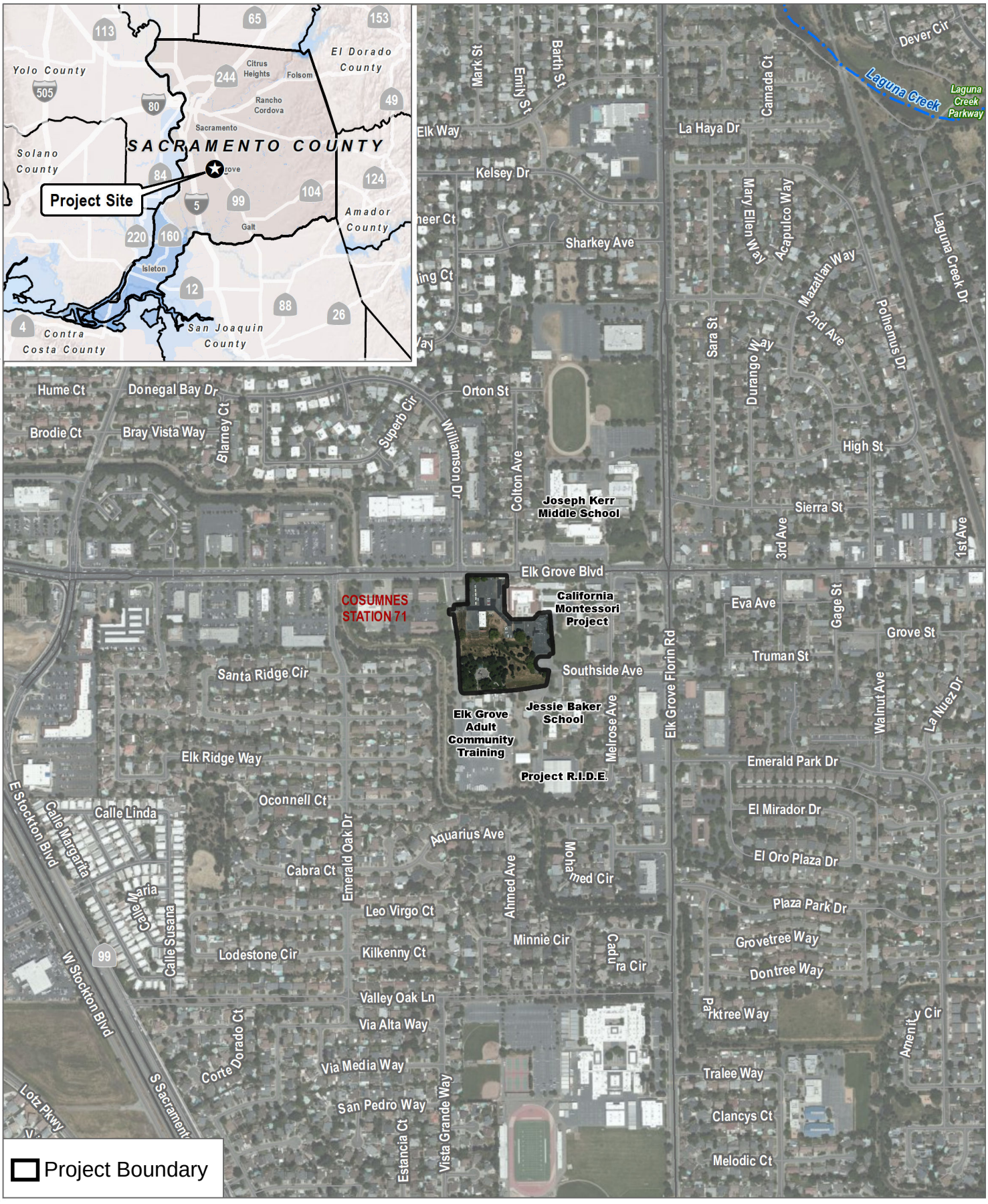

SOURCE: Bing Imagery 2021, Sacramento County 2020, NHD 2020, Open Street Maps 2020

FIGURE 1

Regional Location

Elk Grove Nature Park Project

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2 Summary of Findings

2.1 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project. All of the impacts can be reduced to a less-than-significant level with mitigation measures identified in the following checklist. The environmental factors checked below would require mitigation measures be provided.

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

2.2 Determination
(To be completed by the Lead Agency)

On the basis of this initial evaluation:

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

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

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

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

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

Signature

November 8, 2021

Date

3 Initial Study Checklist

1. **Project title:**

   Elk Grove Nature Park

2. **Lead agency name and address:**

   Cosumnes Community Services District
   8820 Elk Grove Boulevard
   Elk Grove, California 95624

3. **Contact person and phone number:**

   Christine Manitta
   916.405.5354

4. **Project location:**

   Southeast corner of Elk Grove Boulevard and Williamson Drive (8820 Elk Grove Boulevard)
   APNs: 125-0120-021, -025

5. **Project sponsor's name and address:**

   Cosumnes Community Services District
   8820 Elk Grove Boulevard
   Elk Grove, California 95624

6. **General plan designation:**

   APN 125-0120-021: PS; Public Services
   APN 125-0120-025: P/OS; Parks and Open Space

7. **Zoning:**

   APN 125-0120-021: PS; Public Services
   APN 125-0120-025: PR; Parks and Recreation

8. **Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):**

   None

9. **Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?**

The CCSD mailed letters to 12 separate tribes pursuant to Assembly Bill 52 and received confirmation of receipt on October 15, 2021. California tribes have 30 days to request consultation. The United Auburn Indian Community has indicated that they are currently reviewing the project and have not yet requested consultation.

10. **Description of Project**

The proposed project would preserve the existing on-site wetlands and add approximately 22 new trees, 20,480 square feet (sf) of ADA-compliant accessible pathways, ramps, and bridges, 7,290 sf of rain gardens to capture stormwater runoff from adjacent parking lots and impervious surfaces, solar panels over parking areas and approximately 32 new bicycle parking spaces. The project would also include a children's nature play area and new gardens for urban agriculture and planting demonstrations.

A proposed future Nature Center building would replace the existing trailer and allow for education, training, events, and community activities. A small parking lot with 8 vehicle spaces would be located adjacent to the Nature Center.

Project Location and Site Characteristics

As shown on Figure 1, Regional Location, the project site (APNs 125-0120-021, -025) is located in the central portion of the City of Elk Grove within the CCSD boundaries, at the southeast corner of Elk Grove Boulevard and Williamson Drive. The project site includes an existing paved surface parking lot associated with the CCSD offices, an old trailer, non-native annual grassland with scattered valley oak and non-native ornamental trees, and the existing Baker Park which is considered a universally compliant park with accessible pathways and a specially designed playground that provides various play opportunities for children with disabilities.

The project site is mostly flat with an elevation range of about 30 to 35 feet above mean sea level. Stormwater runoff currently flows to an existing drainage ditch located in the western area of the site, which channels water into a seasonal wetland that follows the historic alignment of Elk Grove Creek.

Surrounding Land Uses and Setting

The City of Elk Grove's adopted General Plan designates the northern portion of the project site for Public Services and the southern portion for Parks and Open Space. The northern portion of the site is zoned Public Services while the southern portion is zoned Parks and Recreation. The surrounding area is generally developed with public services, low-density residential, and general commercial uses (City of Elk Grove 2019). Neighboring land uses include the following and also shown on Figure 2:

- North of the site across Elk Grove Boulevard is land zoned for General Commercial, Medium Density Residential, and Business and Professional Office. The land is fully developed with stores, offices, and single-family homes.

- Northeast of the site is the existing CCSD Office building and California Montessori Project–Elk Grove on land zoned for Public Services.
- South of the site is land zoned for Public Services and developed with community organizations including the Jessie Baker School (serving children with special needs), Elk Grove Adult Community Training (education and training for adults with developmental disabilities), and Project RIDE (therapeutic recreational horseback instruction).
- East of the site is land zoned for Low Density Residential and developed with one- to two-story homes and the Elk Grove Congregational Church.
- West of the site across from Williamson Drive is land zoned for General Commercial and Low Density Residential. The commercial area includes offices and Cosumnes Fire Station #71. The residential area includes one- to two-story single-family homes.

Project Components

New project components are described below and shown in Figure 3, Concept Plan.

Landscaping Features and Lighting

Wetlands and Water Features

One of the primary goals of the project would be to protect, preserve and enhance the existing wetlands on the site. Access to these 0.04 acres of wetland areas would be limited, but a total of four to six boardwalks and overlooks would allow pedestrians to access and view the surrounding wetland habitat without disturbance of any natural features. An existing drainage ditch parallel to Williamson Drive would also be preserved and would be surrounded by new stormwater management features (i.e., swales and rain gardens). Transitions between the more manicured spaces such as the play and turf areas and the natural wetlands would be landscaped with plants similar in aesthetic and native environment to the existing wetland plants.

Rain Gardens and Swales

The proposed project would include new rain gardens and stormwater swales near impervious areas. The proposed 7,290 sf of rain gardens would capture stormwater runoff from adjacent parking lots and impervious areas. Rain gardens would be located centrally within the larger CCSD parking area and at the northeastern and southern project perimeters. One rain garden would be located at the smaller, 8-space parking lot for the proposed Nature Center. Rain gardens would surround the Nature Center building to capture runoff from the roof and the adjacent open plaza spaces. The rain gardens around the Nature Center and associated parking lot would be constructed during a future phase of the project when the Nature Center building is to be constructed. The proposed rain gardens would prevent excessive or polluted stormwater runoff from entering the City's stormwater system and would allow for groundwater percolation. The proposed stormwater swales would surround the perimeter of the project site to capture runoff from adjacent streets and parking lot areas. The existing CCSD parking lot would be reconfigured with new landscaping median stormwater swales that would capture runoff water from the asphalt. These new stormwater management features would be vegetated with flood tolerant, erosion-resistant plants.

Trees

The project site currently supports valley oak trees and several non-native ornamental trees. The proposed project would preserve all current trees on site. The project would also add approximately 22 new trees to the existing canopy, consisting of native oaks and other native species.

Gardens and Open Space Areas

The proposed project would include approximately 0.75 acres of new gardens including stormwater gardens (discussed above) and 1.5 acres of preserved natural open space areas. New planting demonstration gardens would be used for hands-on education and community activities. A new urban garden would serve children and adults with disabilities attending the nearby facilities. Open space areas would act as natural play areas for nearby students and the general public, with a focus on disability inclusion. These natural play areas would consist of customized play events that connect users with disabilities to the natural world. Play pieces or equipment would be low impact and incorporate the use of natural materials where possible.

Baker Park

The project site includes the existing Baker Park, a universally compliant park with accessible sidewalks and play area. The proposed project would not substantially modify Baker Park. The only changes would include the conversion of some turf areas to rain gardens and the addition of new walkways that would connect to the central play area at Baker Park and facilitate access to the rest of the site.

Nature Center

The new Nature Center is envisioned to be a 4,000 to 5,000 sf single-story building used for education, training, events, and community activities. The Nature Center would include an education center and display room, a community room, and bathrooms. This facility would provide an opportunity for specified programming with the adjacent community entities and organizations. The hours of operation are anticipated to be 8 a.m. to 8 p.m. on weekdays and 8 a.m. to 5 p.m. on the weekends. This component of the project would be constructed in the future once funding is available and would replace an old trailer currently used for furniture storage.

The Nature Center would also include an open plaza space with seating and picnic tables for an outdoor classroom setting surrounding the building that would overlook the park and wetlands. An adjacent lawn area would be used for event space and outdoor gatherings. The Nature Center would also include an adjacent parking area to the west which currently has 20 existing spaces but would have 12 spaces removed for a total of 8 spaces.

Lighting

Currently, there are only two 15-foot overhead lighting structures located south of the CCSD building but no lights located within the rest of the parking areas. The proposed project would include additional pathway lighting and approximately 12 parking lot lights for security and safety. All lighting would use LED fixtures in compliance with Measure BD-2 of the CCSD Climate Action Plan/Sustainability Action Plan (CAP/SAP), which requires energy efficient lighting to reduce GHG emissions.

SOURCE: Bing Imagery 2021, Sacramento County 2020, NHD 2020, Open Street Maps 2020

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0 400 800 Feet

FIGURE 2

Project Site

Elk Grove Nature Park Project

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SOURCE: CCSD 2021

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FIGURE 3

Concept Plan

Elk Grove Nature Park Project

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Project Access

Pedestrian and Bicycle Circulation

The proposed project would add 20,480 sf of ADA-compliant accessible pathways/boardwalks, ramps, and bridges to provide access throughout the entire site. The network of pedestrian spaces would bring users closer to the existing natural areas of the site. Materials for paving would include permeable paving and decorative nature themed concrete paving and recycled timber materials for boardwalks. In addition, amenities such as benches and bike racks would be placed along the pathways and in gathering areas. These new pathways would improve pedestrian and bicycle access throughout the site by connecting adjacent streets, parking lots, and surrounding uses. The existing CCSD parking lot would be reconfigured to add new walkways for safe pedestrian travel to and from Elk Grove Boulevard and the park. Pedestrian and bicycle access would also be available from Williamson Drive to the west, near the Elk Grove Adult Community Training building to the south, and near the Jessie Baker School to the east. The new pathways would connect to existing trails/sidewalks within Baker Park.

Parking

The existing CCSD parking lot adjacent to Elk Grove Boulevard would be reconfigured, and it is anticipated approximately 38 spaces would be removed leaving approximately 70 spaces on the west side of the CCSD office building. New solar panel covers would be added over the remaining spaces. The parking area adjacent to the proposed Nature Center would have 12 spaces removed for a total of 8 spaces. The parking area to the south of the CCSD office building will be improved with curb and gutter, pedestrian crossings and additional planter areas, reducing this parking area to 74 total parking spaces, down from the current number of 79. The project would also include 32 new bicycle parking spaces. At this time it assumed the parking areas would be accessed via existing entryways off Elk Grove Boulevard and Williamson Drive.

Utilities

Water

Potable water and irrigation water would be provided by the Elk Grove Water District. Potable water would serve the Nature Center. The park would have approximately 6,000 sf of turf and approximately one acre of low water-use landscaping that would be irrigated. The source of irrigation water would be an existing service which currently serves the Administration Building. Existing potable water connections at Admin Building and at existing Baker Park would be utilized.

Wastewater

Wastewater from the proposed project would connect to the Sacramento Area Sewer District sewer system. The project would connect to existing pipes located on Elk Grove Boulevard in front of the existing CCSD building.

Stormwater

Stormwater runoff from impervious areas of the site would be captured by rain gardens, swales, and the existing drainage ditch and wetland areas. Any stormwater not captured by the previously mentioned features would overflow into a ground-level stormwater grate near the pedestrian crosswalk on Williamson Drive that marks the entrance to the City's storm drain system.

Sustainability Features

The project would include the following sustainability features:

- Addition of a 300-kilowatt solar panel system over the CCSD parking area with 960 panels producing 380 watts each.
- Compliance with current Title 24, Part 6, of the California Code of Regulations energy efficiency standards at the time of construction of the Nature Center.
- Compliance with current Title 24, Part 11, of the California State Building Code "Green Building Standards Code" in effect at the time of construction of the Nature Center.
- Compliance with all state regulations related to solid waste generation, storage, and disposal, including the California Integrated Waste Management Act, as amended. During construction, all waste generated would be recycled to the maximum extent possible.
- Compliance with the CCSD CAP/SAP adopted in October 2020, and subsequent climate action policies adopted in February 2021 (CCSD 2020, 2021). This includes the following:
    - Measure BD-1: Energy-Efficient Buildings
    - Measure BD-2: Improve Lighting Efficiency
    - Measure BD-3: Limit Natural Gas Use
    - Measure BD-4: Zero Net Energy
    - Measure BD-5: Water Conservation in Facilities
    - Measure RE-1: Renewable Energy Production Plan
    - Measure LP-1: Provide Bicycle Parking
    - Measure LP-2: Bicycle and Pedestrian Infrastructure Improvement
    - Measure LP-3: Electric Vehicle Charging Infrastructure
    - Measure LP-5: Cool Community Strategies
    - Measure LM-2: Low-maintenance Nature Gardens
    - Measure LM-4: Water-Efficient Irrigation Practices
    - Measure LM-5: Implement Landscaping Guidelines
    - Measure LM-7: Recycled Water
    - Measure SW-3: Construction Waste Diversion

The above measures are explained in further detail within the environmental topics in Section 3, Initial Study Checklist.

Construction

Project construction of the park is anticipated to take up to 7 years to complete the proposed improvements, including the addition of new stormwater management features, reconfiguration of the existing parking areas, and implementation of the new pedestrian circulation system consisting of ADA-compliant accessible pathways/boardwalks, ramps, and bridges. The proposed Nature Center and supporting parking lot would not be constructed at this time due to funding. It is anticipated this component would be constructed within the next 10 to 20 years. All construction equipment would be staged on-site when in-use for that particular phase of construction (e.g., site clearing, grading, trenching for utilities, building erection). Site grading and earthwork would involve less than 100 cubic yards of soil imported/exported.

Project construction would involve four phases. Each phase would be completed prior to the start of the following phase and would include permitting, design, and construction.

- Phase 1 would add improvements outside of the current wetland zone, including walkways and a small landscape area adjacent to the CCSD parking lot with seating and bike parking. New pathways would be added but would not yet cross the existing wetland features (1 year).
- Phase 2 would reconfigure the existing parking lot adjacent to Elk Grove Boulevard and add new stormwater management features, including rain gardens and median landscape swales. A new walkway would cross the parking lot and connect to the park perimeter (2 years).
- Phase 3 would add new pathways, ramps, and bridges to cross over the wetland areas and connect the paths constructed in Phase 1 and Phase 2. An existing trailer would be removed for the proposed Nature Center (3–4 years).
- Phase 4 would add the Nature Center and supporting parking lot (10–20 years).

Project Entitlements and Required Approvals

The CCSD, as lead agency will require the following project approvals:

- Adoption of the Mitigated Negative Declaration
- Approval of Capital Improvement Plan and project funding
- Approval to Award Project

3.1 Aesthetics

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

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

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

Scenic vistas are defined as an expansive view of highly valued landscape features (e.g., mountain range, lake, or coastline) observable from a publicly accessible vantage point. In the project vicinity, publicly accessible vantage points are limited to public roads (Williamson Drive and Elk Grove Boulevard) and the existing Baker Park, which is a public park. There are no officially designated scenic vistas within the City (Elk Grove 2018). Therefore, the project would have **no impact** on scenic vistas.

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

There are no officially designated scenic highways within the City (City of Elk Grove 2018). According to the California Department of Transportation (Caltrans), the nearest officially designated state scenic highway is Route 160, which is located approximately 7.7 miles west of the project site (Caltrans 2018). Due to the intervening urban environment and natural topography located between the project site and this state scenic highway, development of the project would occur outside of the viewshed of this highway. Therefore, there would be **no impact** associated with damaging scenic resources within a state scenic highway.

c) In non-urbanized areas, would the project 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?

The project site is located in the City of Elk Grove within a developed area. The area surrounding the project site is developed with a mix of uses, as shown on Figure 2, and would be considered an urbanized area. For the purposes of this analysis, a substantial degradation of the existing visual character or quality of the site would occur if the project would conflict with the underlying zoning or any other CCSD regulations that govern scenic quality. The project site is designated and zoned as "Public Services" and "Parks and Open Space"/"Parks and Recreation" on the City's General Plan Land Use Map and Zoning Map (City of Elk Grove 2018). Thus, proposed development of the site with park improvements would be consistent with the underlying land use designation and zoning. The project would not conflict with any goals and policies contained in the City's General Plan, Chapter 3, Community and Resource Protection, specific to ensuring future development maintains the City's scenic resources. The proposed project would introduce new features to the site such as ADA-compliant accessible pathways, ramps, and bridges. The project component with the most potential to impact views would be the proposed Nature Center, which would not be constructed at this time due to funding but is anticipated to be constructed within the next 10 to 20 years. Nevertheless, the Nature Center is envisioned to be a 4,000 to 5,000 sf single-story building, visually consistent with the rest of the park. New project features would not be inappropriate in size or mass such

that they would significantly obstruct any views. While there would be a change in the visual character of the site from undeveloped to a developed park, there would be no conflict with applicable zoning or other regulations and thus there would be **no impact.**

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

The project would include pathway lighting and parking lot lighting for security and safety. These new sources of light would be minimal and the project would be required to comply with the City's lighting and glare standards (City of Elk Grove Municipal Code Chapter 25.56), which requires the following:

- Parking lots, trash enclosures/areas, public phones, shall be illuminated with a minimum maintained one foot-candle (fc) of light and an average not to exceed four fc of light.
- All outdoor lighting shall be constructed with full shielding to reduce glare so that the light source is not visible from within any residential dwelling unit.
- Exterior doors of nonresidential structures shall be illuminated during the hours of darkness with a minimum maintained one fc of light.

Glare occurs when light is reflected off of surfaces and causes a nuisance to surrounding sensitive receptors. Glare can result from sunlight or from artificial light reflecting off building exteriors, such as glass windows or other highly reflective surface materials. While specific design features of the proposed Nature Center are currently unknown, it is anticipated that the building would use low-reflective glass and exterior materials and colors that absorb, rather than reflect, light in order to reduce potential glare impacts. In addition, the proposed park does not include any elements that would create a source of glare.

The project would adhere to the City's lighting requirements and would use building materials that would minimize glare; therefore, impacts associated with an increase in light and glare would be **less than significant.**

Mitigation Measures

No mitigation measures are required.

3.2 Agriculture and Forestry Resources

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
II. AGRICULTURE AND FORESTRY RESOURCES – In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

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

The California Department of Conservation (DOC 2016) has designated the site as "Urban and Built-Up Land" (DOC 2016). The site does not contain any land identified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (DOC 2016). Thus, there would be **no impact** related to converting Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use.

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

The project site is not zoned for agricultural use is not in use for agriculture and is not under a Williamson Act contract. Therefore, there would be **no impact** related to conflict with existing zoning or a Williamson Act Contract.

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

The project site is zoned "Public Services" and "Parks and Services." No portion of the site is considered forest land[1] as defined in California Public Resources Code Section 12220(g). Timberland[2] (as defined by California Public Resources Code Section 4526) or timberland-zoned timberland production[3] (as defined by Section 51104(g) of the Government Code) is not present on site, nor are there any active or potential commercial timber operations present in the area. Therefore, the project would not conflict with lands zoned for forest land, timberland, or timberland production and there would be **no impact**.

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

Refer to answer provided in 'c' above.

e) Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

Refer to answers provided in 'a', 'b', and 'c' above.

Mitigation Measures

No mitigation measures are required.

3.3 Air Quality

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
III. AIR QUALITY – Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐

1 "Forest land" is land that can support 10% native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.

2 "Timberland" means land, other than land owned by the federal government and land designated by the board as experimental forest land, which is 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. Commercial species shall be determined by the board on a district basis.

3 "Timberland production zone" or "TPZ" means an area, which is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Ambient air quality is generally affected by climatological conditions, the topography of the air basin, the type and amounts of pollutants emitted, and, for some pollutants, sunlight. The project site is located within the Sacramento Valley Air Basin (SVAB). Topographical and climatic factors in the SVAB create the potential for high concentrations of regional and local air pollutants.

The SVAB includes Sacramento, Shasta, Tehama, Butte, Glenn, Colusa, Sutter, Yuba, Yolo, and portions of Solano and Placer Counties. The SVAB extends from south of Sacramento to north of Redding and is bounded on the west by the Coast Ranges and on the north and east by the Cascade Range and Sierra Nevada. The San Joaquin Valley Air Basin is located to the south.

The Sacramento Metropolitan Air Quality Management District (SMAQMD) is the designated air quality management district for the City. SMAQMD has established significance thresholds for project construction and operational emissions within the City. Air pollutant emissions during proposed project construction and operation were modeled using California Emissions Estimator Model (CalEEMod) Version 2020.4.0. The air quality emissions modeling is included in Appendix A.

The significance criteria used to evaluate the project impacts are based on Appendix G of the CEQA Guidelines, the SMAQMD thresholds, the thresholds adopted by the City in applicable general plans and previous environmental documents, and professional judgment. A significant impact related to air quality would occur if the project would:

- conflict with or obstruct implementation of an applicable air quality plan;
- result in short-term (construction) emissions of NOx above 85 pounds per day, or PM_{10} above 80 pounds per day or $PM_{2.5}$ above 82 pounds per day with all feasible best available control technology (BACT) or best management practices (BMPs) implemented;
- result in long-term (operational) emissions of NOx or ROG above 65 pounds per day, or PM_{10} above 80 pounds per day or PM2.5 above 82 pounds per day with all feasible best available control technology (BACT) or best management practices (BMPs) implemented;
- result in CO concentrations that exceed the 1-hour state ambient air quality standard (i.e., 20.0 ppm) or the 8-hour state ambient standard (i.e., 9.0 ppm);
- result in a cumulatively considerable net increase of any criteria pollutant for which the project area is in non-attainment under an applicable federal or state ambient air quality standard (including the release of emissions that exceed quantitative thresholds for ozone precursors); or
- create a lifetime cancer risk from TAC exposures exceeding 10 in 1 million for stationary sources, or substantially increase the lifetime cancer risk as a result of increased exposure to TACs from mobile sources.

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

The project site is under the jurisdiction of the SMAQMD within the SVAB. The SVAB is designated nonattainment for both national and California ozone standards. Accordingly, the SMAQMD, along with other local air districts in the SVAB, is required to comply with and implement the State Implementation Plan to demonstrate when and how the region can attain the federal ozone (O_3) standards. As such, the SMAQMD, along with the other air districts in the region, prepared the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan (2017 State Implementation Plan Revisions). The Ozone Attainment Plan addresses attainment of the federal 8-hour O_3 standard, while the 2015 Triennial Report and Air Quality Plan Revision address attainment of the California 1-hour and 8-hour O_3 standards (SMAQMD 2016). These are the latest plans adopted by the SMAQMD in coordination with the air quality management districts and air pollution control districts of El Dorado, Sacramento, Solano, Sutter, and Yolo counties, and they incorporate land use assumptions and travel demand modeling provided by the Sacramento Area Council of Governments. The purpose of a consistency finding is to determine if a project is inconsistent with the assumptions and objectives of the regional air quality plans, and thus if it would interfere with the region's ability to comply with federal and state air quality standards. In general, projects are considered consistent with, and would not conflict with or obstruct implementation of the air quality plan if the growth in socioeconomic factors is consistent with the underlying regional plans used to develop the air quality management plan.

Demographic growth forecasts for various socioeconomic categories (e.g., population, housing, employment by industry) were developed by the Sacramento Area Council of Governments for its Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) (SACOG 2019) based on General Plans for cities and counties in the SVAB. The air quality management plans rely on the land use and population projections provided in the MTP/SCS, which is generally consistent with the local plans; therefore, the air quality management plans are generally consistent with local government plans.

Because the proposed project would not generate population growth that was not accounted for in regional plans such as the Sacramento Area Council of Governments' MTP/SCS, impacts relating to the project's potential to conflict with or obstruct implementation of the applicable air quality management plan would be **less than significant.**

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

Construction

Construction of the proposed project would result in a temporary addition of pollutants to the local air shed caused by soil disturbance, fugitive dust emissions, and combustion pollutants from on-site construction equipment, off-site trucks hauling demolition debris and excavated earth materials, and construction workers travelling to and from the site. Construction emissions can vary substantially from day to day depending on the level of activity and the specific type of operation, and, for dust, the prevailing weather conditions. Therefore, an increment of day-to-day variability exists. For purposes of estimating project emissions, it is assumed that all phases of construction activity would occur continuously. Predicted construction emissions for the worst-case day are presented in Table 3.3-1 and compared to the SMAQMD thresholds. A detailed depiction of the construction schedule—including information regarding phasing,

equipment used during each phase, haul trucks, vendor trucks, and worker vehicles—is contained in the CalEEMod outputs, provided in Appendix A.

Table 3.3-1. Estimated Maximum Daily Construction Emissions

Year	NO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day		
2022	17.38	4.05	2.26
2023	14.78	1.16	0.74
Maximum Daily	**17.38**	**4.05**	**2.26**
Pollutant Threshold	*85*	*80*	*82*
Threshold Exceeded?	**No**	**No**	**No**

Source: See Appendix A for detailed results.
NO_x = oxides of nitrogen; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter
Notes: These estimates reflect implementation of all feasible BACT/BMPs.
The values shown are the maximum summer or winter daily emissions results from CalEEMod.

As noted above, all construction projects in the SMAQMD jurisdiction are required to implement SMAQMD's Best Available Control Technologies (BACT) and best management practices (BMPs) in order to reduce fugitive dust emissions (SMAQMD 2009). As shown in Table 3.3-1, daily construction emissions would not exceed the SMAQMD significance thresholds for oxides of nitrogen (NO_x), coarse particulate matter (PM_{10}), or fine particulate matter ($PM_{2.5}$) during construction in all construction years. Therefore, construction impacts of the proposed project would be **less than significant** and no mitigation measures are required.

Operations

Following the completion of construction activities, the proposed project would generate criteria pollutant emissions from vehicular traffic, area sources (consumer products, architectural coatings, landscaping equipment), and energy sources (natural gas appliances, space and water heating assumed for the Nature Center). Default trip characteristics were assumed in the modeling. The proposed project would also be required to comply with the state's 2019 Title 24 standards which CalEEMod assumes. Area sources include gasoline-powered landscape maintenance equipment, consumer products, and architectural coatings for the Nature Center. CalEEMod was used to estimate daily emissions from operational sources without the application of any mitigation measures. The estimated daily emissions from project operation are shown in Table 3.3-2.

Table 3.3-2. Estimated Unmitigated Maximum Daily Operational Emissions

Source	ROG	NO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day			
Area	0.13	<0.01	<0.01	<0.01
Energy	<0.01	0.02	<0.01	<0.01
Mobile	0.01	0.01	0.02	0.01
Total	**0.14**	**0.03**	**0.02**	**0.01**
Pollutant Threshold	*65*	*65*	*80*	*82*
Threshold Exceeded?	**No**	**No**	**No**	**No**

Source: See Appendix A for detailed results.

Notes: ROG = reactive organic gases; NO_x = oxides of nitrogen; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; <0.01 = value less than reported 0.01 pounds per day.
These estimates reflect implementation of all feasible BACT/BMPs.
The values shown are the maximum summer or winter daily emissions results from CalEEMod.

As shown in Table 3.3-2, reactive organic gas (ROG), NO_x, PM_{10}, and $PM_{2.5}$ emissions would be substantially below the SMAQMD threshold of significance. The SMAQMD CEQA guidance states that operational emissions that generate above zero pounds per day of PM_{10} and $PM_{2.5}$ would result in a significant impact, unless all feasible BACT and BMPs are implemented (SMAQMD 2009). The proposed project would comply with BMP measures in its final design to reduce operational PM_{10} and $PM_{2.5}$ emissions including compliance with the California Building Energy Efficiency Standards and Green Building Code (Title 24, Parts 6 and 11). Because the project would not exceed the SMAQMD thresholds during operation, the project would result in a **less-than-significant impact**.

Health Impacts of Criteria Air Pollutants

Construction and operational emissions of the project would not exceed the SMAQMD thresholds for any criteria air pollutants, including ROG, NO_x, PM_{10}, and $PM_{2.5}$.

Health effects associated with O_3 include respiratory symptoms, worsening of lung disease leading to premature death, and damage to lung tissue (CARB 2019). ROG and NO_x are precursors to O_3, for which the SCAB is designated as nonattainment with respect to the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). Due to the lack of quantitative methods to assess this complex photochemistry, the holistic effect of a single project's emissions of O_3 precursors is speculative. However, because the project would not exceed the SMAQMD thresholds for ROG or NO_x, the project would not contribute to health effects associated with O_3.

Health effects associated with PM_{10} include premature death and hospitalization, primarily for worsening of respiratory disease (CARB 2019). Construction of the project would not exceed thresholds for PM_{10} or $PM_{2.5}$, would not contribute to exceedances of the NAAQS and CAAQS for particulate matter, and would not obstruct the SVAB from coming into attainment for these pollutants. Therefore, the project is not anticipated to result in health effects associated with PM_{10} or $PM_{2.5}$.

In summary, construction and operation of the project would not result in exceedances of the SCAQMD significance thresholds for criteria pollutants, and potential health effects associated with criteria air pollutants would be **less than significant**.

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

Air quality varies as a direct function of the amount of pollutants emitted into the atmosphere, the size and topography of the air basin, and the prevailing meteorological conditions. Air quality problems arise when the rate of pollutant emissions exceeds the rate of dispersion. People most likely to be affected by air pollution include children, older adults, athletes, and people with cardiovascular and chronic respiratory diseases. Sensitive receptors include residences, schools, playgrounds, childcare centers, athletic facilities, long-term healthcare facilities, rehabilitation centers, convalescent centers, and retirement homes.

Toxic Air Contaminants

Toxic air contaminants (TACs) are defined as substances that may cause or contribute to an increase in deaths or in serious illness, or that may pose a present or potential hazard to human health. The nearest sensitive receptors to the project site are single-family residences located adjacent to the proposed construction boundary. Health effects from carcinogenic air toxics are usually described in terms of cancer risk. The SMAQMD recommends an incremental cancer risk threshold of 10 in 1 million (SMAQMD 2009). "Incremental cancer risk" is the net increased likelihood that a person continuously exposed to concentrations of TACs resulting from a project over a 9-, 30-, and 70-year exposure period would contract cancer based on the use of standard Office of Environmental Health Hazard Assessment risk-assessment methodology (OEHHA 2015). In addition, some TACs have non-carcinogenic effects. TACs that would potentially be emitted during construction activities associated with project would be diesel particulate matter.

The project would not require the extensive operation of heavy-duty diesel construction equipment, which is subject to a California Air Resources Board (CARB) Airborne Toxics Control Measure for in-use diesel construction equipment to reduce diesel particulate matter emissions and would not involve extensive use of diesel trucks, which are also subject to a CARB Airborne Toxics Control Measure. Therefore, TACs generated during construction would not be expected to result in concentrations causing significant health risks. Furthermore, no residual TAC emissions and corresponding cancer risk are anticipated after construction, and no long-term sources of TAC emissions are anticipated during operation of the project. Thus, the project would not result in a long-term source of TAC emissions and impacts to sensitive receptors would be **less than significant**.

d) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The project involves the preservation of the existing wetlands, addition of ADA accessible pathways, ramps, and bridges, rain gardens, children's nature play area and new gardens for urban agriculture and planting demonstrations. The project would also develop a Nature Center building as part of a future phase. These land uses would not result in sources commonly associated with odors. Therefore, impacts associated with odors generated from operations would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

3.4 Biological Resources

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

The information in this section is based on a reconnaissance-level biological survey conducted on approximately 2.3 acres of the 2.5-acre project site in February 2016 by Madrone Ecological Consulting (Madrone) (included as Appendix B)[4] and an aquatic resources jurisdictional delineation conducted for the project site in August 2021 by Dudek (included as Appendix C).

[4] The reconnaissance-level biological survey referenced here and included as Appendix B was performed for the "Maintenance Shop Administration Building Property" and surrounding area. This property is also referred to as the "old trailer" in this document, which is currently used as furniture storage.

As part of the Madrone biological survey, a California Natural Diversity Database search was performed to list all recorded occurrences of special-status species within a 0.5-mile radius of the study area, which encompassed the remaining 0.2 acres of the project site not included in the study area. On February 15, 2017, a Madrone biologist conducted a site visit to determine if the study area supported potential wetlands or other waters of the U.S. or state, sensitive habitats, or special-status species. The study made the following conclusions: a seasonal wetland feature on the site may provide suitable habitat for the federally-listed vernal pool fairy shrimp (*Branchinecta lynchi*) and vernal pool tadpole shrimp (*Lepidurus packardi*); burrowing owl (*Athene cunicularia*) nesting and foraging habitat is present on the site but is of low quality; Swainson's hawk (*Buteo swainsoni*) nesting and foraging habitat is present on the site but is of low quality; native valley oaks (*Quercus lobata*) on the site may fall under the purview of the City's tree preservation ordinances; and the site does not support any elderberry shrubs (*Sambucus canadensis*) or suitable tricolored blackbird (*Agelaius tricolor*) nesting habitat. The results of the biological survey suggest 0.131 acres of potential water features, although the actual extent of wetlands would need to be determined through a jurisdictional delineation in accordance with U.S. Army Corps of Engineers guidelines. This jurisdictional delineation was completed by Dudek and is described below.

As part of the Dudek jurisdictional delineation, potential and/or historic drainages and aquatic features were investigated based on a review of U.S. Geological Survey topographic maps, aerial imagery, the National Wetland Inventory database, and the Natural Resource Conservation Service Web Soil Survey. A Dudek biologist and wetland delineator performed a formal wetlands delineation within the project site on August 11, 2021. All areas that were identified as being potentially subject to the jurisdiction of the U.S. Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Wildlife were field verified and mapped. Only one seasonal wetland swale (comprising 0.04 acres) was identified within the project site as a potential jurisdictional resource. The results of this analysis are preliminary until verified by the Sacramento District of the U.S. Army Corps of Engineers.

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

The Madrone biological survey determined that the seasonal wetland feature on the site may provide suitable habitat for the federally listed vernal pool fairy shrimp and vernal pool tadpole shrimp. However, based on the relatively limited extent of the seasonal wetland on the project site (0.04 acres) avoidance is feasible through careful project design such as implementing span bridges allowing visitors to cross the wetland feature without disturbance. During construction, the proposed project may have the potential to impact the seasonal wetland swale during grading or other ground-disturbing activities that may allow soils or other construction debris to disturb the wetland feature. Mitigation Measure BIO-1 requires that CCSD avoid all impacts to the seasonal wetland through use of appropriate setbacks for project development. Compliance with Mitigation Measure BIO-1 would ensure that impacts to any aquatic species supported by the seasonal wetland would be **less-than-significant with mitigation**.

The Madrone biological survey determined that burrowing owl nesting and foraging habitat is present on the site but is of low quality due to the urbanized environment that that surrounds the study area. The site also contains trees large enough to support raptor nests and non-native annual grasslands that provide suitable foraging habitat for raptors including Swainson's hawks, but this nesting and foraging habitat is also of low quality due to the adjacent development that essentially creates a small island in which the project site is located. Although these nesting and foraging habitats are of low quality, the proposed project would be subject to pre-construction surveys described in Mitigation Measure BIO-2 and Mitigation Measure BIO-3 to identify if there are any active burrowing owl or Swainson's hawk/other raptor nests

present on the site prior to construction, and if so, to ensure that appropriate procedures are in place to avoid impacts to these species or their habitats. With implementation of Mitigation Measures BIO-2 and BIO-3, impacts to these species would be **less-than-significant with mitigation**.

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

The project site encompasses non-native annual grassland and a seasonal wetland swale discernable from the adjacent upland areas by a change in vegetation. This wetland feature supports a dominance of hydrophytic vegetation species, including Italian rye grass (*Festuca perennis*), and Kentucky blue Grass (*Poa pratensis*) and contains hydric soils. As discussed in 'a' above, the CCSD shall avoid all impacts to the seasonal wetland during construction through the use of appropriate setbacks for project development. Compliance with Mitigation Measure BIO-1 would ensure that impacts to any vegetation supported by the seasonal wetland would be **less-than-significant with mitigation.**

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

As previously discussed, only one seasonal wetland swale (comprising 0.04 acres) was identified within the project site as a potential jurisdictional resource. The seasonal wetland swale is an isolated feature that has no apparent direct physical or hydrologic influence on any waters of the United States. It is relatively flat, with a very gradual westward slope to a culvert on the eastern edge of the property that heads under a parking lot. The presence of storm drains within the western and eastern portion of the project site and the presence of a visible outlet west of the project site at Elk Grove Creek could indicate connectivity through the storm drain system. However, based on the relatively limited extent of the seasonal wetland on the project site (0.04 acres) avoidance is feasible through careful project design such as implementing span bridges allowing visitors to cross the wetland feature without disturbance. During construction, the proposed project may have the potential to impact the seasonal wetland swale during grading or other ground-disturbing activities that may allow soils or other construction debris to disturb the wetland feature. Mitigation Measure BIO-1 requires the CCSD avoid all impacts to the seasonal wetland through use of appropriate setbacks for project development. Compliance with Mitigation Measure BIO-1 would ensure that impacts to the seasonal wetland swale would be **less-than-significant with mitigation**.

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

The project site is generally surrounded by urban development including residential, public services, and general commercial uses; therefore, the potential of the site to be used as a terrestrial corridor connecting larger open space areas is non-existent. As previously discussed, the seasonal wetland swale is an isolated feature with no apparent direct physical or hydrologic influence on any other water sources. The presence of nearby storm drains and a visible outlet could indicate connectivity through the storm drain system; however, this would not provide any migration opportunities for aquatic species. Therefore, no substantial impacts to local or regional wildlife movements are expected as a result of project implementation and impacts would be **less than significant.**

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

The City of Elk Grove has adopted regulations for the preservation and protection of existing trees in the City, detailed in Chapter 19.12 of the City's Municipal Code. According to Section 19.12.070, no person shall conduct work within the critical root zone, cut down, remove, top, or relocate any landmark trees (trees specifically identified for protection), trees of local importance (trees of specific varieties greater than six inches in diameter), secured trees (trees protected as part of the development process for residential and commercial developments), or trees on City property or in the public right-of-way unless a valid tree permit has been approved. The valley oak trees on the site may fall under the purview of the City's tree preservation ordinance as valley oaks of six inches or greater in diameter are considered trees of local importance. However, Section 19.12.080(B) states that work on trees within parks owned, leased, or operated by CCSD are exempt from tree permit requirements. Additionally, the project does not propose removal of any existing trees. The proposed project would be required to comply with standard development control measures detailed in 19.12.200 if mandated by the City. This could include pruning of retained trees per City Arborist recommendations prior to any site improvements, and requirements to locate construction equipment away from the critical root zone of the on-site trees. As such, the proposed project would not conflict with the City's tree ordinance and impacts would be **less than significant**.

f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The project site is not located within any Habitat Conservation Plan or Natural Community Conservation Plan. There would be **no impact**.

Mitigation Measures

Compliance with these mitigation measures would ensure potential impacts to the on-site seasonal wetland swale and nesting birds would be reduced to less than significant.

BIO-1: **Avoid Wetland Features.** The Cosumnes Community Services District (CCSD) shall avoid impacts to wetlands to achieve a no net loss of wetland habitat. The CCSD shall retain a qualified biologist to determine the appropriate buffer around the seasonal wetland to protect the wetland during construction. The buffer shall be based on the type of aquatic resources and the type of activities to occur in the vicinity of the water feature, including grading activities or other ground disturbance. For activities such as landscaping or planting, no buffer is needed from the wetland edge provided that soil from the plant holes is piled away from the wetland.

BIO-2: **Preconstruction Survey for Burrowing Owl.** The Cosumnes Community Services District (CCSD) shall retain a qualified biologist to conduct surveys for burrowing owls within 30 days prior to ground-disturbing activities at the project site. The survey shall cover the limits of ground disturbance and potentially suitable nesting habitat within 300 feet, to the extent feasible. If ground-disturbing activities are delayed, then additional surveys shall be conducted such that no more than 7 days elapse between the survey and ground-disturbing activities. If no potential burrowing owl nests are detected during the survey, no additional actions are needed, and ground-disturbing activities may proceed.

If non-nesting burrowing owls are observed in or adjacent to the construction footprint during the survey, construction shall be postponed until the qualified biologist can fully implement a California Department of Fish and Wildlife–approved burrow exclusion plan (to be prepared by the qualified biologist). The exclusion plan shall be conducted in accordance with the Staff Report on Burrowing Owl Mitigation (CDFW 2012). Once owls have been successfully excluded and unoccupied burrows evacuated, construction in the area may proceed.

If nesting burrowing owls are observed during the survey, construction activities within 300 feet of occupied burrows shall be delayed until young owls have fledged and are independent of the burrow, as determined by a qualified biologist. The qualified biologist may reduce the 300-foot buffer based on the type, timing, extent, and intensity of the construction activity and other factors such as site topography and vegetation cover between the construction activity and the burrow. Once all young have fledged and are no longer dependent upon the nest burrow, the same burrow exclusion procedure described above shall be implemented prior to resuming construction activities in the area.

BIO-3: **Preconstruction Nesting Bird Surveys.** If construction is proposed during the breeding season (February 1 through August 30), a preconstruction nesting bird survey shall be conducted at the project site (including a 250-foot buffer for raptors) by a qualified biologist 14 days prior to the beginning of construction activities, in order to identify any active nests in the vicinity of the project area. If no active nests are found during the preconstruction survey, no further mitigation is required.

If any active nests are found within 250 feet of disturbance areas, a temporary buffer shall be determined and flagged by the qualified biologist based on the location of the nest and planned construction activity in the vicinity of the nest. These nests shall be avoided until the chicks have fledged and the nests are no longer active, as determined by the qualified biologist.

3.5 Cultural Resources

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES – Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

A Cultural Resources Inventory Report for the proposed was prepared by Dudek archaeological staff in October 2021 (included as Appendix D). A records search was conducted for the project at the North Central Information

Center at Sonoma State University on September 21, 2021. The report searched a within a 0.5-mile radius of the project area and included a review of their collection of mapped prehistoric, historical, and built-environment resources, Department of Parks and Recreation Site Records, technical reports, historical maps, and local inventories. A Dudek archaeologist also conducted an intensive-level pedestrian survey of the entire project site or area of potential effects on September 30, 2021, using standard archaeological procedures and techniques.

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

Historical resource is a term with a defined statutory meaning (see California Public Resources Code [PRC] Section 21084.1 and CEQA Guidelines Section 15064.5(a), (b)). The term embraces any resources listed or determined to be eligible for listing in the National Register of Historic Places, as well as some California State Landmarks and Points of Historical Interest. In addition, historical resources are evaluated against the California Register of Historical Resources criteria prior to making a finding as to the project's impacts on historical resources. According to the results of the September 2021 records search, there are no known resources recorded within the project site. The project, as presently designed, would not impact known cultural resources. Based on the pedestrian survey, no prehistoric period sites, historic period sites or historic landscapes were identified on the project site. Because there are no historical resources on the project site, the proposed project would result in **no impact.**

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

Observation of the conditions within the project site indicate surface conditions are disturbed from landscaping, previous agricultural activities, and other development. No newly identified archaeological resources were recorded during the pedestrian survey. Furthermore, the North Central Information Center records search did not identify the presence of cultural resources within the proposed project site or the surrounding vicinity. The proposed project, as currently designed, appears to have a very low potential for encountering intact cultural deposits, including human remains during ground-disturbing activities. Based on these negative findings and the observed condition of the project site, no additional cultural resources efforts, including archaeological monitoring, are recommended to be necessary beyond standard protection measures for unanticipated discoveries of cultural resources and human remains detailed in Mitigation Measures CUL-1 and CUL-2. Implementation of Mitigation Measures CUL-1 and CUL-2 would ensure that project impacts to archaeological resources and human remains would be **less-than-significant with mitigation**.

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

Refer to the answer provided in 'a' above.

Mitigation Measures

Compliance with Mitigation Measures CUL-1 and CUL-2 would ensure the proper procedures are followed in the event any resources are uncovered during any site disturbing activities. Impacts would be reduced to less than significant with the following measures.

CUL-1: **Unanticipated Discovery of Cultural Resources.** In the event that archaeological resources (sites, features, or artifacts) or Tribal Cultural Resources are exposed during construction activities, all

construction work occurring within 100 feet of the find shall immediately stop until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, can evaluate the significance of the find and determine whether or not additional study is warranted. Depending upon the significance of the find under CEQA (14 CCR 15064.5(f); PRC Section 21082), the archaeologist may simply record the find and allow work to continue. If the discovery proves significant under CEQA, additional work such as preparation of an archaeological treatment plan, testing, or data recovery may be warranted.

CUL-2: **Unanticipated Discovery of Human Remains.** In accordance with Section 7050.5 of the California Health and Safety Code, if human remains are found, the County Coroner shall be immediately notified of the discovery. No further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined, within 2 working days of notification of the discovery if the potential remains are human in origin. If the County Coroner determines that the remains are, or are believed to be, Native American, he or she shall notify the Native American Heritage Commission (NAHC) in Sacramento within 24 hours. In accordance with California Public Resources Code, Section 5097.98, the NAHC must immediately notify those persons it believes to be the Most Likely Descendant (MLD) from the deceased Native American. The MLD shall complete their inspection within 48 hours of being granted access to the site. The designated Native American representative would then determine, in consultation with the property owner, the disposition of the human remains.

3.6 Energy

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

The project site is located within the City of Elk Grove and is surrounded by existing development, both residential and commercial. Sacramento Municipal Utility District (SMUD) is the utility provider which would serve the project site. SMUD receives electric power from a variety of sources. According to SMUD's 2020 Sustainability Report, 33.8% of SMUD's power came from eligible renewable energy sources in 2019, including biomass/waste, geothermal, small hydroelectric, solar, and wind sources (SMUD 2020). Notably, as discussed in Section 3.8, SMAQMD requires projects implement Tier 1 BMPs to avoid conflicting with long-term state goals. Therefore, the proposed Nature Center would be required to be designed and constructed without natural gas infrastructure.

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

The proposed project would comply with the most current Title 24 California Building Code/Code of Regulations (2019), CAL Green Code, California Green Building Standards Code, and 2019 energy standards at the time of building construction, as amended by the State of California. The project includes the construction of a future Nature Center, which would comply with all current Title 24 energy requirements. During construction activities there would be heavy equipment required to clear and grade the site and to construct the building which would use diesel and gasoline to power the equipment. Construction equipment operators would not result in the unnecessary or inefficient use of resources. In addition, during both construction and operation of the project, the CCSD or their contractor would comply with all state regulations related to solid waste generation, storage, and disposal, including the California Integrated Waste Management Act, as amended. During construction, all waste generated would be recycled to the maximum extent possible.

The project does not include the wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. Therefore, the impact would be **less than significant.**

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

The project would follow applicable energy standards and regulations during the construction phases. In addition, the project would be built and operated in accordance with all existing, applicable regulations at the time of construction. As such, impacts related to the project's potential to conflict with plans for renewable energy and energy efficiency would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

3.7 Geology and Soils

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. GEOLOGY AND SOILS – Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

a) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

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

The Alquist-Priolo Zones Special Studies Act defines active faults as those that have experienced surface displacement or movement during the last 11,000 years. According to the California Geological Survey Fault Activity Map of California, there are no known active faults located within the City of Elk Grove (CGS 2015). Therefore, there would be **no impact** related to the rupture of a known earthquake fault.

ii) Strong seismic ground shaking?

The closest known active fault traces are those of the Midland fault, more than 20 miles west of the project site (CGS 2015). The extent of ground shaking is controlled by the magnitude and intensity of the earthquake, distance from the epicenter, and local geologic conditions. The distance from active or potentially active fault zones means that the likelihood of ground shaking is low. Despite the project site's low likelihood for strong seismic ground shaking, the proposed

project would comply with the California Building Code to ensure that all structures, including the proposed Nature Center and walkways and bridges, would be constructed to resist the effects of seismic ground shaking. With the project's adherence to these existing regulations, the risks to people and structures due to strong seismic ground shaking would be **less than significant**.

iii) Seismic-related ground failure, including liquefaction?

Soil liquefaction most commonly occurs when ground shaking from an earthquake causes a sediment layer saturated with groundwater to lose strength and take on the characteristics of a fluid, thus becoming similar to quicksand. Liquefaction may also occur in the absence of a seismic event when unconsolidated soil above hardpan becomes saturated with water. The soils underlying the project site are dense and the upper 50 feet of soil are above the depth of groundwater (Elk Grove 2018). Therefore, the potential for seismic-related ground failure to affect the project, including liquefaction, would be **less than significant**.

iv) Landslides?

The project vicinity including the project site is characterized as flat. The project site is not located within an area identified as being susceptible to landslides. This condition precludes the possibility of earthquake-induced landslides inundating the project site. Therefore, **no impact** would occur in association to landslides.

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

Soil erosion, which is discussed in detail in Section 3.10, Hydrology and Water Quality, of this Initial Study, could occur during project grading and construction. The State Water Resources Control Board has adopted a National Pollutant Discharge Elimination General Permit for the Discharge of Storm Water from Small Municipal Separate Storm Sewer Systems (WQ Order No. 2003-0005-DWQ) to provide permit coverage for smaller municipalities, including the CCSD. Under this General Permit, the CCSD must develop a Stormwater Pollution Prevention Plan to control the discharge of pollutants from construction sites disturbing greater than or equal to one acre of land. However, the proposed project is anticipated to disturb less than 1 acre in size of land. With this limited amount of ground disturbance, the proposed project is not anticipated to result in substantial soil erosion during construction and would not be required to develop a Stormwater Pollution Prevention Plan. Upon completion of construction, the project site would be developed with boardwalks, sidewalks and landscaping. The proposed project would include new rain gardens and stormwater swales vegetated with flood tolerant, erosion-resistant plants to reduce impacts from soil erosion. As such, the proposed project would not result in substantial soil erosion during project construction or operation and impacts would be **less than significant**.

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

Unstable geologic units or soils are characterized by materials lacking sufficient integrity to support urban development. The area surrounding the project site supports development, which indicates that geologic conditions in the area are capable of supporting future development of the park and would not be unstable.

Potential impacts related to unstable soil including landslides, liquefaction, and lateral spreading are discussed under Item (a) above and were found to be less than significant. Subsidence or collapse can result from the removal of subsurface water, resulting in either catastrophic or gradual depression of the surface elevation of the project site. Subsidence can also occur as a result of differential (i.e., unequal) settlement. The project would not involve any dewatering activities that could cause subsidence or collapse. The project site is also not subject to expansive soils (discussed in detail in item 'd' below) that would cause differential settlement due to dewatering. Impacts would be **less than significant**.

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

Expansive soils shrink and swell as a result of moisture change. These volume changes can result in damage over time to building foundations, underground utilities, and other subsurface facilities if they are not designed and constructed appropriately to resist the damage associated with changing soil conditions. Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3%; moderate if 3% to 6%; high if 6% to 9%; and very high if more than 9% (NRCS 2019). The project site's underlying soil is comprised of San Joaquin silt loam, which has a linear extensibility rating of 2.4% (NRCS 2021). Therefore, the project site contains soils with a low shrink-swell potential which would not create substantial direct or indirect risks to life or property. Impacts would be **less than significant.**

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

No septic tanks or alternative wastewater disposal systems are proposed; therefore, the project would have **no impact** related to septic tanks or alternative wastewater disposal systems.

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

There are no known paleontological resources in the City; however, the geological formations present in the City and surrounding region are considered sensitive for paleontological resources, and excavation and grading during construction could affect previously undiscovered fossils (City of Elk Grove 2018). Per state law, in the event that paleontological resources or unique geologic features are encountered during construction, all earthwork within a 50 meter (164 foot) radius of the find shall be stopped, the City of Elk Grove notified, and a paleontologist retained to assess the potential resource. Compliance with state law regarding paleontological resources would ensure that the project impact is **less than significant.**

Mitigation Measures

No mitigation measures are required.

3.8 Greenhouse Gas Emissions

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

Greenhouse gases (GHGs) are gases that absorb infrared radiation in the atmosphere. The greenhouse effect is a natural process that contributes to regulating the Earth's temperature. Global climate change concerns are focused on whether human activities are leading to an enhancement of the greenhouse effect. Principal GHGs include carbon dioxide, methane, nitrous oxide, O_3, and water vapor. Climate change is already affecting California: average temperatures have increased, leading to more extreme hot days and fewer cold nights; shifts in the water cycle have been observed, with less winter precipitation falling as snow, and both snowmelt and rainwater running off earlier in the year; sea levels have risen; and wildland fires are becoming more frequent and intense due to dry seasons that start earlier and end later (CAT 2010).

The effect each GHG has on climate change is measured as a combination of the mass of its emissions and the potential of a gas or aerosol to trap heat in the atmosphere, known as its global warming potential, which varies among GHGs. Total GHG emissions are expressed as a function of how much warming would be caused by the same mass of carbon dioxide (CO_2). Thus, GHG emissions are typically measured in terms of pounds or tons of CO_2 equivalent (CO_2e).[5]

Addressing GHG generation impacts requires an agency to make a determination as to what constitutes a significant impact. Governor's Office of Planning and Research's Guidance does not include a quantitative threshold of significance to use for assessing a proposed development's GHG emissions under CEQA. Moreover, CARB has not established such a threshold or recommended a method for setting a threshold for proposed development-level analysis.

In April 2020, SMAQMD adopted an update to their land development project operational GHG threshold, which requires a project to demonstrate consistency with CARB's 2017 Climate Change Scoping Plan. The Sacramento County Board of Supervisors adopted the updated GHG threshold in December 2020. SMAQMD's technical support document, "Greenhouse Gas Thresholds for Sacramento County", identifies operational measures that should be applied to a project to demonstrate consistency. All projects must implement Tier 1 BMPs to demonstrate consistency with the Climate Change Scoping Plan. After implementation of Tier 1 BMPs, project emissions are

[5] The CO_2E for a gas is derived by multiplying the mass of the gas by the associated global warming potential (GWP), such that metric tons of CO_2E = (metric tons of a GHG) × (GWP of the GHG). CalEEMod assumes that the GWP for CH_4 is 25, which means that emissions of 1 metric ton of CH_4 are equivalent to emissions of 25 metric tons of CO_2, and the GWP for N_2O is 298, based on the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report.

compared to the operational land use screening levels table (equivalent to 1,100 metric tons [MT] of CO_2e per year). If a project's operational emissions are less than or equal to 1,100 MT CO_2e per year after implementation of Tier 1 BMPs, the project will result in a less than cumulatively considerable contribution and has no further action. Tier 1 Best Management Practices include the following:

- BMP 1 – no natural gas: projects shall be designed and constructed without natural gas infrastructure.
- BMP 2 – electric vehicle (EV) Ready: projects shall meet the current CALGreen Tier 2 standards.
  - EV Capable requires the installation of "raceway" (the enclosed conduit that forms the physical pathway for electrical wiring to protect it from damage) and adequate panel capacity to accommodate future installation of a dedicated branch circuit and charging station(s)
  - EV Ready requires all EV Capable improvements plus installation of dedicated branch circuit(s) (electrical pre-wiring), circuit breakers, and other electrical components, including a receptacle (240-volt outlet) or blank cover needed to support future installation of one or more charging stations

Projects that implement BMP 1 and BMP 2 can use the screening criteria for operation emissions. Projects that do not exceed 1,100 MT CO_2e are then screened out of further requirements. For projects that exceed 1,100 MT CO_2e per year, then compliance with BMP 3 is also required:

- BMP 3 – Reduce applicable project VMT by 15% residential and 15% worker relative to Sacramento County targets, and no net increase in retail VMT. In areas with above-average existing VMT, commit to provide electrical capacity for 100% electric vehicles.

Therefore, this assessment uses SMAQMD's GHG construction and operational emissions thresholds of 1,100 per year to evaluate whether the project would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

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

Construction

Construction of the proposed project would result in GHG emissions that are primarily associated with use of off-road construction equipment and off-site sources including haul trucks, vendor trucks, and worker vehicles. CalEEMod was used to calculate the annual GHG emissions based on the construction scenario as analyzed in Section 3.3, Air Quality. It was assumed that construction would begin in in 2022. Emissions from on-site and off-site sources are combined for the purposes of this analysis and are presented below in Table 3.8-1.

Table 3.8-1. Estimated Annual Construction GHG Emissions

Year	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
2022	173.61	0.03	<0.01	175.46
2023	175.24	0.03	<0.01	177.10

Table 3.8-1. Estimated Annual Construction GHG Emissions

Year	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
			Total Project Emissions	**352.56**
			SMAQMD GHG Threshold	1,100
			Threshold Exceeded?	No

Source: See Appendix A for detailed results.
Notes: MT = metric tons; CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent; <0.01 = value less than reported 0.01 metric tons per year.

As shown in Table 3.8-1, total construction GHG emissions would be approximately 353 MT CO_2e as a result of construction-related activities. Construction GHG emissions are a one-time release and are typically considered separate from operational emissions, as global climate change is inherently a cumulative effect that occurs over a long period of time and is quantified on a yearly basis. As previously discussed, the SMAQMD identifies a GHG emission threshold for construction-related emissions of 1,100 MT CO_2e per year. Table 3.8-1 indicates that the project would not exceed the SMAQMD GHG threshold. Therefore, the project's construction-related GHG emissions would represent a **less-than-significant impact**.

Operation

Following the completion of construction activities, the project would generate GHG emissions from mobile sources (vehicle trips), area sources (landscaping equipment), energy sources (electricity consumption), solid waste generation, water supply, and wastewater treatment. The estimated annual operational project-generated GHG emissions from these sources are shown in Table 3.8-2.

Table 3.8-2. Estimated Annual Operational GHG Emissions

Emission Source	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
Area Sources	<0.01	0.00	0.00	<0.01
Energy	14.75	<0.01	<0.01	14.83
Mobile	1.38	<0.01	<0.01	1.41
Solid Waste	5.83	0.34	0.00	14.44
Water Supply and Wastewater	3.02	<0.01	<0.01	3.29
			Total	**33.97**
			SMAQMD GHG Threshold	*1,100*
			Threshold Exceeded?	No

Source: See Appendix A for detailed results.
Notes: MT = metric tons; CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent; <0.01 = value less than reported 0.01 metric tons per year.

Table 3.8-2 indicates that the GHG emissions associated with operation of the project would be 34 MT CO_2e per year, which is well below SMAQMD's GHG threshold of 1,100 MT CO_2e per year. Therefore, the project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment and this would represent a cumulatively **less than significant** GHG impact.

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

The CCSD adopted a CAP/SAP in October 2020. The plan recommends numerous emission reduction, sustainability, and adaptation measures that can be taken by the CCSD to reduce its GHGs, conserve natural resources, preserve biodiversity, reduce pollution, and adapt to climate change. Some of measures within the CAP/SAP that would be applicable to the proposed project includes designing all new facilities to be all electric to meet CALGreen standards; provide EV charging infrastructure at all new and existing CCSD-owned facilities; transition the vehicle fleet to EV or zero emission vehicles models by replacement at end of fossil fueled vehicle service life or sooner as feasible; and increasing the urban forest and biomass planting, minimize water use, reduce stormwater runoff, preserve and increase wildlife habitat, reduce green waste and support low impact landscape maintenance practices. Furthermore, the SMAQMD requires projects commit to Tier 1 BMPs (no natural gas and EV ready). With implementation of Tier 1 BMPs and emissions below the 1,100 MT CO_2e per year threshold, projects would avoid conflicting with long-term state goals established by Assembly Bill 32 and Senate Bill 32 and would help maintain a trajectory to meet the 2050 state target identified in Executive Order S-3-05. As such, the project would not conflict with any applicable plan, policy, or regulation adopted for the purposes of reducing the emissions of GHGs. The project's impact would be less than significant.

Mitigation Measures

No mitigation measures are required.

3.9 Hazards and Hazardous Materials

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. HAZARDS AND HAZARDOUS MATERIALS – Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

A search of the Department of Toxic Substances Control (DTSC) Envirostor database was completed and there are several leaking underground storage tank cleanup sites listed as close as 0.03 miles from the project site (DTSC 2021). However, these cleanups have all been completed and no further action is required. The project site is not included in or near any identified hazardous sites.

The closest schools to the project site are the California Montessori Project–Elk Grove Campus (0.06 miles northeast) and the Jessie Baker School (0.06 miles southeast). The nearest public airport is Franklin Field located approximately 7.5 miles southwest of the site.

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

Construction of the project would involve temporary use of hazardous materials, including fuel for construction equipment, and possibly paints, solvents and sealants. Storage, handling, and use of these materials would occur in accordance with state law and standard construction best management practices to minimize the potential for spill or release and ensure that any such spill or release would be controlled on site. This would include storing all hazardous materials inside buildings or under other cover, vehicle specifications for hazardous material transport and disposal, procedures for safe storage, and training requirements for those handling hazardous materials. Project construction contractors are required by state law to implement and comply with existing hazardous material regulations. Because these regulations are specifically designed to protect the public health through procedures for transporting, storing, and handling hazardous materials; improved technology in the equipment used to transport these materials;

and quicker, more coordinated response times to emergencies, impacts related to the creation of significant hazards to the public through routine transport, use, disposal, and risk of upset during construction would be **less than significant**.

It is anticipated that hazardous materials used during long-term operation of the project could include building maintenance and cleaning chemicals, as well as other landscaping fertilizers. These materials are commonly used across all types of land uses, and the project is not expected to present any significant risks associated with their use. During operation, the project would be required to use, store, and transport hazardous materials in compliance with applicable federal, state, and local regulations during project operation. Therefore, impacts related to the creation of significant hazards to the public through routine transport, use, disposal, and risk of upset during project operations would be **less than significant**.

b) Would the project 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?

Refer to the answer provided in 'a' above.

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

The closest schools to the project site are the California Montessori Project–Elk Grove Campus (0.06 miles northeast) and the Jessie Baker School (0.06 miles southeast). As discussed above in items 'a' and 'b' the proposed project would not create any significant hazards related to transport, use, disposal, or upset and accident conditions involving hazardous materials or their release into the environment. Therefore, impacts to schools would be **less than significant**.

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

Pursuant to Government Code Section 65962.5, the State of California Hazardous Waste and Substances Site List (also known as the "Cortese List") is a planning document used by state and local agencies and developers to comply with CEQA requirements in providing information about the location of hazardous materials sites. The project site is not included on the Cortese List. In addition, according to the Department of Toxic Substances Control EnviroStor database, there are several leaking underground storage tank cleanup sites close to the project site but these cleanups have all been completed and no further action is required. Thus, there would be **no impact**.

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?

The closest public airport is Franklin Field located approximately 7.5 miles southwest of the site. The project site is not located within an airport land use plan and is not within two miles of a public airport or public use airport. There would be **no impact**.

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

The project would not interfere with any adopted emergency or evacuation plans. The City's 2018 Emergency Operations Plan (EOP) serves as the legal and conceptual framework for emergency management in the City and is intended to facilitate interagency coordination for emergency operations, including coordination with the CCSD (City of Elk Grove 2018). The EOP addresses planned responses to emergency situations associated with large-scale disasters and establishes the primary responsibilities of each department and agency during such emergencies. The project would be consistent with allowed uses and would not involve any operations or activities that would interfere with the EOP. It is anticipated that the project site would continue to be accessed via existing entryways off of Elk Grove Boulevard and Williamson Drive, and the project would be subject to approval of improvement plans for the parking lot reconfiguration. Therefore, the project would have **no impact** related to implementation of emergency or evacuation plans.

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

The project site is in a Local Responsibility Area and is not designed very high fire hazard severity zone (FHSZ) (CAL FIRE 2008). There are no moderate, high, or very high FHSZs in Elk Grove, and the City is not within a State Responsibility Area.

The area surrounding the project site is developed with a mix of urban land uses. According to the City's General Plan Environmental Impact Report, the risk of wildland fires is low within the City, except in areas that adjoin open grasslands to the south of the City. The proposed project is within central Elk Grove and does not adjoin any open grasslands or large swaths of vegetation that pose a wildfire hazard. Thus, there would be **no impact** related to wildfire hazards.

Mitigation Measures

No mitigation measures are required.

3.10 Hydrology and Water Quality

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
X. HYDROLOGY AND WATER QUALITY – Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐

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

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

The project site is currently undeveloped and the project would allow for future development of impervious surfaces such as the proposed Nature Center and sidewalks. As discussed in Section 3.7, Geology and Soils, of this Initial Study, the proposed project would not result in a substantial amount of soil erosion during construction or operation. The project is anticipated to disturb less than one acre in size of land. With this limited amount of ground disturbance, the project is not anticipated to result in substantial soil erosion during construction that would cause polluted runoff to enter the stormwater system and violate any water standards or otherwise degrade water quality. While the project would introduce new impervious cover, there would be rain gardens and stormwater swales vegetated with flood tolerant, erosion-resistant plants to capture runoff from the project site and surrounding areas and allow for groundwater percolation. As such, the proposed project would not violate any water standards or otherwise degrade water quality and impacts would be **less than significant**.

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

Implementation of the proposed project would result in the development of impervious surfaces that could interfere with on-site groundwater recharge. The project is located within the Sacramento Valley Groundwater Basin and the South American Subbasin (SCGA 2021). However, recharge areas in the County typically occur in areas along rivers, streambed, and other areas of high soil permeability (SCGA 2021, Figure 2.2-44). Urban areas such as the larger project area are classified as "very poor" recharge areas. Nevertheless, the proposed project would include rain gardens and stormwater swales that would collect runoff water from nearby impervious surfaces and allow for groundwater percolation. Development associated with the project would also be required to comply with CALGreen standards for water efficiency and therefore would not impede sustainable management of groundwater resources. Therefore, impacts related to groundwater would be **less than significant**.

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

i) result in substantial erosion or siltation on or off site;

ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site;

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

iv) impede or redirect flood flows?

As discussed previously, the proposed project would introduce new impervious areas that could affect current site drainage patterns. However, the project would include rain gardens and stormwater swales that would collect runoff water from nearby impervious surfaces so that there would be no flooding on- or off-site and these stormwater features would ensure the capacity of the existing stormwater infrastructure would not be adversely affected. The proposed project would disturb less than an acre of land which would not result in substantial soil erosion or provide additional sources of polluted runoff. According to the Federal Emergency Management Agency National Flood Hazard Layer Viewer, the project site is located within flood hazard zone X, which is an area of minimal flood hazard (FEMA 2021). The project would therefore have no impact on any flood flows. The project would also leave the existing seasonal wetland on the site undisturbed. Overall, there would be a **less-than-significant impact** related to alteration of the existing drainage pattern of the site.

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

As discussed previously, the project site is within an area of minimal flood hazard. There are no dams or levees in the vicinity of the project site. The project would not expose people or structures to significant loss related to flooding. The project site is physically removed from any large body of water and is not subject to inundation by seiche, tsunami, or mudflow. Therefore, the project would have **no impact** related to flooding or other water-related hazards.

e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The proposed project would not conflict or obstruct implementation of the South American Subbasin Groundwater Sustainability Plan (SCGA 2021). As discussed previously, the project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge. Urban areas such as the project area are not considered important recharge areas contributing to groundwater supply, and development associated with the project would be required to comply with CALGreen standards for water efficiency. Therefore, the project would not impede sustainable management of groundwater resources. There would be **no impact**.

Mitigation Measures

No mitigation measures are required.

3.11 Land Use and Planning

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

The City's General Plan designates the project site for Public Services and Parks and Recreation uses (City of Elk Grove 2019) and the site is also zoned Public Services and Parks and Recreation, per the City's Zoning Code (Title 23 of the Elk Grove Municipal Code). Chapter 23.24.020 of the Municipal Code states that the Park and Recreation district is intended for existing and future park facilities, and Public Services is applied to land and facilities owned or leased by public agencies, including the CCSD.

a) Would the project physically divide an established community?

The physical division of an established community is typically associated with the construction of a linear feature, such as a major highway or railroad tracks, which would impair mobility within an existing community or between a community and an outlying area. The proposed project would be constructed on what is currently an area containing undeveloped land, CCSD parking areas, an old trailer, and Baker Park. The proposed project does not include any features that would physically divide an established community, and the proposed use would be consistent with the land uses of the surrounding area. The project would therefore have **no impact** related to the physical division of an established community.

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

As stated above, the City's General Plan designates the project site for Public Services and Parks and Recreation uses and the site is zoned Public Services and Parks and Recreation, per the City's Zoning Code. The proposed project would be consistent with Chapter 23.24.020 of the Municipal Code which states that the Park and Recreation district is intended for existing and future park facilities, and Public Services is applied to land and facilities owned or leased by public agencies, including the CCSD. The project would consist of a children's nature play area, a new Nature Center building, new gardens and trees, ADA-compliant accessible pathways, ramps, and bridges, rain gardens to capture stormwater runoff from adjacent parking lots and hard surfaces, and new bicycle parking spaces, all of which are consistent with the permitted uses. As such, the project would be consistent with the City's General Plan and Zoning Code.

Additionally, the project would comply with related plans including the CCSD CAP/SAP for reducing greenhouse gas emissions, the applicable California Building Code for geology and soils impacts, and CALGreen standards to ensure energy and water efficiency and sustainable construction practices. Accordingly, the project would have **no impact** regarding potential conflicts with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

Mitigation Measures

No mitigation measures are required.

3.12 Mineral Resources

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

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

The California Department of Conservation provides maps that classify lands according to the significance of mineral resource deposits within the area. The California Department of Conservation designates the project site as being within Mineral Resource Zone 3 (MRZ-3), which describes areas containing mineral deposits, the significance of which cannot be evaluated from available data (DOC 1999). According to the

City's General Plan, there are no known mineral resources within the City, which includes the project site (City of Elk Grove 2019). Accordingly, the proposed project would have **no impacts** related to the loss of availability of mineral resources.

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

Refer to answer provided in 'a' above.

Mitigation Measures

No mitigation measures are required.

3.13 Noise

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

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

The City of Elk Grove noise ordinance (Chapter 6.32 of the Municipal Code) states that is unlawful for any person to create any noise in exterior areas that results in the exposure of sensitive receptors on any day of the week to noise levels that exceed the levels shown in Table 3.13-1, below.

Table 3.13-1. Exterior Noise Standards for Sensitive Receptors

Noise Source	7:00 am to 10:00 pm	10:00 pm to 7:00 am
Stationary noise sources, generally	55 dBA	45 dBA
Stationary noise sources which are tonal, impulsive, repetitive, or consist primarily of speech or music	50 dBA	40 dBA

Section 6.32.100 of the Municipal Code exempts construction activities from the noise ordinance if these activities only occur during the less noise-sensitive hours between 7.00 a.m. and 7:00 p.m. on any day of the week when located in close proximity to residential uses. If not in close proximity to residential uses, construction activities may occur between 6:00 a.m. and 8:00 p.m. Residential uses exist as close as 0.04 miles west of the proposed project site. Therefore, the proposed project would be required to limit construction to the hours between 7:00 a.m. and 7:00 p.m. Monday through Sunday, which would not conflict with the City's noise ordinance.

The proposed project would result in the development of a new park. Project components do not include any activities that would generate substantial amounts of noise. New pathways and open space areas would allow for quiet recreational activities. The park may be used for planting demonstrations and other community activities but these activities would not substantially increase ambient noise levels. The proposed project is not anticipated to host any programming or large-scale events that could potentially disrupt nearby residential areas. The park would provide passive natural play areas, using natural materials rather than traditional active playground equipment. As such, the proposed project is not anticipated to result in an increase in ambient noise levels in excess of the City's noise ordinance and impacts would be **less than significant**.

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

The proposed project may result in an increase in groundborne vibration or noise levels during project construction. However, the proposed project would not include any heavy construction equipment such as bulldozers which are associated with an increase in vibration disturbance to sensitive receptors. For reference, groundborne vibration levels for various types of construction equipment are included below in Table 3.13-2. Vibration levels are represented in terms of peak particle velocity.

Table 3.13-2. Representative Vibration Levels for Construction Equipment

Equipment	PPV at 25 feet (inches per second)[1,2]
Hoe Ram	0.089
Large Bulldozer	0.089
Caisson Drilling	0.089
Heavy-Duty Trucks (Loaded)	0.076
Jackhammer	0.035
Small Bulldozer	0.003

Source: FTA 2018.

1 Where peak particle velocity (PPV) is the peak particle velocity.

2 Vibration levels can be approximated at other locations and distances using the above reference levels and the following equation: $PPV_{equip} = PPV_{ref} (25/D)^{1.5}$ (in/sec); where "PPV ref" is the given value in the above table, "D" is the distance for the equipment to the new receiver in feet.

Construction activities on the project site may result in varying degrees of temporary ground vibration, depending on the specific construction equipment used and operations involved. Caltrans has collected groundborne vibration information related to construction activities (Caltrans 2020) that indicate continuous vibrations with a peak particle velocity of approximately 0.2 inches per second is considered annoying. The closest residential uses are located approximately 0.04 miles or 225 feet west of the project site. Even if the project were to use the equipment in Table 3.13-2 with the highest vibration levels, vibration levels at the nearest sensitive receptors would only be approximately 0.003 inches per second, far less than the Caltrans standard for what is considered annoying. Therefore, any vibration impacts from the proposed project would be **less than significant**.

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

The closest airport is Franklin Field, which is located 7.5 miles southwest of the project site. The project site is not located within an airport land use plan and is not within two miles of a public airport or public use airport. Thus, the project would not expose people within the project area to excessive noise from airports or airstrips. There would be **no impact**.

Mitigation Measures

No mitigation measures are required.

3.14 Population and Housing

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

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

The proposed project consists of a new park with landscaping, gardens, pathways, and a future Nature Center building. The project does not include any homes or infrastructure improvements that would service a new residential population and would not induce substantial unplanned population growth resulting in the need to construct new homes and provide new services for this population. In addition, the project would not displace people or housing because the site does not currently provide any housing.

For these reasons, the project would not directly or indirectly induce substantial unplanned population growth and would have **no impact.**

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

The project site does not currently support any permanent housing or residential uses. No housing or residents would be displaced by the project; therefore, the proposed project would result in **no impact**.

Mitigation Measures

No mitigation measures are required.

3.15 Public Services

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. PUBLIC SERVICES				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered 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?

Fire protection services in the City are provided by the Cosumnes Fire Department, which is part of the CCSD (Elk Grove 2018). Services include fire suppression, emergency medical services, technical rescue, and arson and explosion investigations in a 157-square-mile services area covering the cities of Elk Grove, Galt, and a portion of unincorporated southern Sacramento County. The Cosumnes Fire Department has over 180 personnel and operates out of eight fire stations and three facilities. The nearest fire station to the project site is Fire Station 71, located at 8760 Elk Grove Boulevard, which is approximately 500 feet to the west of the site. The project would not result in a substantial increase in the amount of calls to the project site because there are no proposed uses or project components that are associated with the need for additional fire or emergency medical services. Additionally, the project would not result in a population increase that would require new fire facilities to serve new City residents. The proposed Nature Center building would be constructed in accordance with most recent California Fire Code and City building standards, which includes fire protection requirements such as inclusion of sprinklers to reduce fire hazards. The project site is already well-served by a fire station located only 500 feet away and project uses would not impact fire response times. Therefore, **no impact** on fire protection services would result with project implementation.

Police Protection?

Police protection services within the City are provided by the Elk Grove Police Department. The Elk Grove Police Department operates primarily out of two facilities located in the City Hall complex at 8380 and 8400 Laguna Palms Way (Elk Grove 2018). This complex is located approximately 1.3 miles northwest of the project site. Similar to the discussion for fire protection services above, the proposed project does not include any uses that would result in a substantial increase in calls for police services. The project site also would not result in a population increase that would require new police facilities to serve new City residents. Therefore, **no impact** on police protection services would result with project implementation.

Schools?

The proposed project does not include any residential uses or other components that would induce population growth; therefore, the project would not result in a population increase that would require new schools to serve new City residents. For this reason, **no impact** on schools would result with project implementation.

Parks or Other Public Facilities?

As discussed previously, the proposed project would not induce substantial population growth. The project would introduce a new park and improve connectivity to the existing Baker Park and would include a new Nature Center envisioned for education, training, and other community activities. Therefore, the project would not generate a need for new or physically altered parks or other public facilities. There would be **no impact** on parks or other public facilities.

Mitigation Measures

No mitigation measures are required.

3.16 Recreation

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

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?

The closest existing park to the project site is Baker Park, which is included within the project site. The proposed project would increase connectivity to Baker Park by providing new pathways and public access through creating a more inviting environment for people to experience. The project would draw more people to the area but would not cause or accelerate physical deterioration of the play areas provided at Baker Park, as the proposed project itself would increase the City and CCSD's park inventory. The project would not induce population growth within the City that would create an increase in use of recreation facilities, such that physical deterioration of the facilities would occur or be accelerated. Therefore, impacts to recreational facilities would be **less than significant**.

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?

The project proposes a new park, Nature Center, and improvements to the existing Baker Park. Thus, the project would increase and improve recreational services available in the community. Environmental impacts that would occur as a result of the project are analyzed throughout this MND. Therefore, impacts would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

3.17 Transportation

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

On September 27, 2013, Governor Brown signed Senate Bill 743, which eliminated level of service, and other similar measures of vehicle capacity or traffic congestion as a basis for determining impacts under CEQA. The Governor's Office of Planning and Research has issued final guidance recommending the elimination of auto delay and level of service for CEQA purposes and the use of vehicle miles traveled (VMT) as the preferred CEQA transportation metric. The City's General Plan includes a VMT policy that establishes significance thresholds for CEQA analysis of future projects. Policy MOB-1-1 (Elk Grove 2019, p. 6-7) requires that development projects shall demonstrate that the VMT produced by the project at buildout is equal to or less than the VMT limit of the project's General Plan land use designation, which incorporates a 15% reduction from 2015 conditions.

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

The proposed project would not result in any changes to the existing roadway system. The project site would continue to be accessed by two entryways off Elk Grove Boulevard and Williamson Drive. The project would reconfigure and upgrade the existing CCSD parking area but these improvement plans would not impact the general circulation system.

The proposed project would add ADA-compliant accessible pathways/boardwalks, ramps, and bridges. These new pathways would improve pedestrian and bicycle access throughout the site by connecting adjacent streets, parking lots, and surrounding uses. The existing CCSD parking lot would be reconfigured to add new walkways for safe pedestrian travel to and from Elk Grove Boulevard and the park. Pedestrian and bicycle access would also be available from Williamson Drive to the west, near the Elk Grove Adult Community Training building to the south, and near the Jessie Baker School to the east. The new pathways would connect to existing trails/sidewalks within Baker Park. The proposed project has been designed to would improve bicycle and pedestrian facilities in the area. Accordingly, there would be no conflict with the existing circulation system and **no impact** would occur.

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

The City's General Plan designates the northern portion of the project site for Public Services and the southern portion for Parks and Open Space. Parks and Open Space is exempt from evaluating VMT while Public Services uses have a VMT limit of 53.1. Although the proposed project would introduce a new park and Nature Center building, the project is not anticipated to increase VMT because it would introduce a pedestrian and bicycle amenities to the area and would reduce the current amount of parking spaces from 207 spaces to 152 spaces, a reduction of 55 spaces in total.

The Nature Center is proposed to be constructed 10 to 20 years in the future and therefore programming is currently speculative in nature; however, it is currently envisioned to provide opportunities for specified programming with the adjacent community entities and organizations such as the Jessie Baker School and Elk Grove Adult Community Training which are located within walking distance of the project site. For these reasons, the proposed project is not anticipated to result in a significant VMT increase and would not conflict or be inconsistent with CEQA Guidelines Section 15064.3(b). Impacts would be **less than significant.**

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

The proposed project does not include any design features that could be considered hazardous or incompatible with existing uses. Improvement plans for the parking lot reconfiguration would not create any hazardous geometric design features or other components that could increase hazards. As such, there would be **no impact**.

d) Would the project result in inadequate emergency access?

Vehicle access to the project site would be provided from Williamson Drive and Elk Grove Boulevard, the same as existing conditions. Buildout of the project would not result in inadequate emergency access or affect the accessibility of any roads or emergency access points. As mentioned in Section 3.9, Hazards and Hazardous Materials, the City's EOP oversees emergency management, including emergency evacuation plans in the City. The proposed project would not involve any operations or activities that would interfere with the City's EOP and adequate access is provided in the event of an emergency situation. Therefore, the project would have **no impact** related to inadequate emergency access.

Mitigation Measures

No mitigation measures are required.

3.18 Tribal Cultural Resources

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

The project is subject to compliance with Assembly Bill 52 (California Public Resources Code, Section 21074), which requires consideration of impacts to tribal cultural resources as part of the CEQA process and requires the CEQA lead agency to notify any groups (who have requested notification) and are traditionally or culturally affiliated with the geographic area of the project.

As previously described in Section 3.5, Cultural Resources, a Cultural Resources Inventory Report for the proposed project was prepared by Dudek archaeological staff (included as Appendix D). A Native American Heritage Commission Sacred Lands File search was requested but has not yet been received. A pedestrian survey of the project area did not identify any new resources.

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

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

A Native American Heritage Commission Sacred Lands File search was requested but has not yet been received. However, because an unknown tribal cultural resource could be unearthed during

construction activities, implementation of Mitigation Measure TCR-1 would ensure that if any tribal cultural resources, artifacts, cultural deposits, or human remains are found, all work shall cease and the findings shall be evaluated by qualified personnel. Mitigation Measure TCR-1 restates Mitigation Measures CUL-1 and CUL-2 provided in Section 3.5, Cultural Resources. Therefore, impacts would be **less-than-significant with mitigation.**

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

Refer to the answer provided in 'a' above.

Mitigation Measures

Implementation of Mitigation Measure TCR-1, which restates Mitigation Measures CUL-1 and CUL-2 from Section 3.5, Cultural Resources, would reduce impacts to previously undiscovered tribal cultural resources, artifacts, cultural deposits, or human remains to a less-than-significant level.

TCR-1: **Cultural Resources.** The CCSD shall comply with Mitigation Measures CUL-1 and CUL-2.

3.19 Utilities and Service Systems

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

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

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

The proposed project would be served by existing City water infrastructure, wastewater collection and treatment facilities, stormwater drainage, electric power, natural gas, and telecommunications infrastructure near the project site.

Potable water and irrigation water would be provided by the Elk Grove Water District (EGWD). The project would tie into existing potable water connections at the CCSD building and Baker Park. The proposed Nature Center would include potable water while the exterior areas of the park would have approximately 6,000 sf of turf and approximately one acre of low water-use landscaping that would be irrigated. According to the EGWD 2020 Urban Water Management Plan, the project site is within Service Area 1, which is supplied by groundwater wells. The Urban Water Management Plan states that the EGWD water supply portfolio is capable of meeting water demand during normal, dry, and multiple dry years throughout the year 2045. However, the CCSD CAP/SAP does acknowledge that a likely result of climate change is increased temperatures, which increases water demand for irrigation (CCSD 2020). However, such increases may be tempered by implementation of efficient irrigation systems and controls. The proposed project would comply with Measure LM-4 of the CAP/SAP, which commits CCSD to maintaining water-efficient irrigation practices such as using drip irrigation systems instead of sprinklers. Additionally, Measure LM-5 implements landscaping design guidelines with efficiency requirements for indoor and outdoor water fixtures, best management practices related to irrigation infrastructure and monitoring, and compliance with the statewide Model Water Efficient Landscape Ordinance. Water use in the Nature Center would comply with Measure BD-5, which promotes water conservation in CCSD facilities by establishing water efficiency standards, maintaining an inventory of water use by facility, and auditing facilities to identify potential water-saving measures. The proposed project would tie into existing water infrastructure near the site and would implement water efficient measures such that it would not contribute to the need new or expanded water facilities. Impacts related to water facilities would therefore be **less than significant**.

Wastewater from the proposed project would connect to the Sacramento Area Sewer District sewer system using existing connections in front of the CCSD building along Elk Grove Boulevard. The proposed project would cause a small increase of wastewater associated with the Nature Center. This increase in wastewater

would not be substantial and would not result in the relocation or construction of new or expanded wastewater treatment facilities. Impacts would be **less than significant.**

Development of the site would result in an increase of impervious surfaces but would include new rain gardens and stormwater swales to capture stormwater runoff. Any stormwater not captured by these features would flow into a ground-level grate near the pedestrian crosswalk on Williamson Drive that marks the entrance to the City storm drain system. As described in Section 3.10, Hydrology and Water Quality, the proposed project would not result in a substantial increase of surface runoff that would exceed the current capacity of the City stormwater system. There would be no need for new or expanded stormwater drainage infrastructure and impacts would be **less than significant.**

SMUD provides gas and electricity services in the City. As discussed in Section 3.6, Energy, the proposed project would comply with the most current Title 24 California Building Code/Code of Regulations, CALGreen Code, and energy standards at the time of building construction, as amended by the state and City. The project would not result in wasteful, inefficient, or unnecessary consumption of energy resources during construction or operation. Therefore, no new or expanded facilities would need to be built and impacts would be **less than significant**.

Telecommunications usage at the Nature Center would be minimal would not require the construction or new facilities or expansion of existing facilities. Therefore, this impact would be **less than significant.**

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

Water service would be provided by EGWD, which serves 13 square miles of the City (Elk Grove 2018). The project site is within Service Area 1 of the EGWD, which is supplied by groundwater wells and treated by the EGWD's water treatment plant (EGWD 2020). The total amount of groundwater available to Service Area 1 in 2020 was 4,077 acre-feet per year (EGWD 2020). From 2016 to 2020, the District used between 3,000 and 4,500 acre-feet per year of groundwater supplied by the 7 wells located in the EGWD's service area (EGWD 2020).

The Urban Water Management Plan states that the EGWD water supply portfolio is capable of meeting water demand during normal, dry, and multiple dry years throughout the year 2045. As discussed above in item 'a', project development would result in a minor increase in water demand, which would be further reduced through compliance with CAP/SAP measures for water efficiency. As such, the proposed project would not require EGWD to increase its existing water entitlements and it is reasonable to assume there is adequate water supply available to meet the demands associated with the project during normal, dry, and multiple dry years. For these reasons, impacts associated with water supply for the project would be **less than significant**.

c) Would the project 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?

Refer to the answer provided in 'a' above.

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

Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Republic Services provides solid waste disposal and recycling in the City. The City is served by 10 landfills, the majority of which have over 60% available remaining capacity (Elk Grove 2018). Therefore, the nearby landfills have sufficient permitted capacity to accommodate the project's disposal needs.

Assembly Bill 939 requires the City of Elk Grove to develop and implement a solid waste management program. California Public Resources Code Section 41780(a)(2) also requires cities and counties to divert 50% of solid waste produced within their respective jurisdictions through source reduction, recycling, and/or composting activities. In addition, Elk Grove Municipal Code Section 30.70.030(E) requires that all projects recycle or divert at least 65% of the materials collected at the construction site, not including excavated soil and land clearing debris. The project does not contain any uses that would generate a substantial increase in solid waste and construction debris would be disposed of in accordance with applicable regulations. Therefore, the project would have a **less-than-significant impact** regarding solid waste standards and would not exceed the capacity of local infrastructure

Mitigation Measures

No mitigation measures are required.

3.20 Wildfire

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

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☒	☐

As discussed in Section 3.9, Hazards and Hazardous Materials, the project site is not located in an area classified as a very high FHSZ or located in or near a State Responsibility Area (CAL FIRE 2008). The area surrounding the project site is developed with a mix of urban land uses.

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

As discussed in Section 3.9, Hazards and Hazardous Materials, the proposed project would not interfere with the City's EOP. The project does not include any operations or activities that would potentially interfere with or impair emergency response or evacuation plans. Fire suppression services in the project area are currently and would continue to be provided by the Cosumnes Fire Department. Therefore, the project would have **no impact** related to implementation of emergency plans.

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

The project site is in a Local Responsibility Area and is not designated as a very high FHSZ (CAL FIRE 2008). The area surrounding the project site is developed with a mix of urban land uses. According to the City's General Plan Environmental Impact Report, the risk of wildland fires is low within the City, except in areas that adjoin open grasslands to the south of the City. The proposed project is within central Elk Grove and does not adjoin any open grasslands or large swaths of vegetation that pose a wildfire hazard. The project site is also flat and does not include any other features that would exacerbate wildfire risks. Therefore, impacts related to wildfire risks would be **less than significant**.

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

As described in Section 3.9, Hazards and Hazardous Materials, wildfire risk at the Project site is low, as the site is not within a very high FHSZ designated by CAL FIRE and most of the area surrounding the project site is already developed with urban uses. The project would require electrical wiring and utility extensions; however, this would not exacerbate fire risk as the project site is located in an area that is already served by existing utilities. Therefore, the project would have a **less-than-significant impact** regarding fire risk associated with new infrastructure.

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

The project site is relatively flat and located within an urbanized area that does not contain a significant risk of flooding, landslides, slope instability, or drainage changes. As noted in Section 3.7, Geology and Soils and Section 3.10, Hydrology and Water Quality, the project would have a **less-than-significant impact** regarding landslides and flooding, and would not expose people or structures to significant risks in the event of a post-fire situation.

Mitigation Measures

No mitigation measures are required.

3.21 Mandatory Findings of Significance

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

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?

To ensure that the project does not 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, or reduce the number or restrict the range of a rare or endangered plant or animal, Mitigation Measures BIO-1 through BIO-3 are required to ensure project construction and operation would not degrade the environment or adversely impact protected species as well as their habitat.

To ensure that cultural and tribal cultural resources impacts are less than significant, Mitigation Measures CUL-1 and CUL-2 are required to ensure the proper protocol is followed in the event any cultural resources or human remains are unearthed during construction. Thus, impacts would be **less than significant with mitigation**.

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)?

The analysis provided throughout this IS/MND demonstrates that the project's contribution to any existing cumulative impacts would be reduced to less-than-significant levels through mitigation and any contribution to an existing cumulative impact would be very small and would not be considered cumulatively considerable. Therefore, the project's cumulative impact would be **less than significant** and would not require mitigation.

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

The analysis provided throughout this IS/MND identifies project impacts that may be potentially significant and identifies mitigation measures that would reduce each impact to a less-than-significant level. Impacts from the project that would cause substantial adverse effects on human beings, such as air quality, greenhouse gases, wildfire, or hazards and hazardous materials, would all be less than significant both with mitigation and without as identified in this IS/MND. As such, the impact is **less than significant.**

4 References and Preparers

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4.2 List of Preparers

Cosumnes Community Services District

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Dudek

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Appendix A

Air Quality and Greenhouse Gas Model Outputs

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Elk Grove Great Nature Park Project

Sacramento Metropolitan AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	2.42	Acre	2.42	105,284.52	0
Government (Civic Center)	5.00	1000sqft	0.11	5,000.00	0
Other Non-Asphalt Surfaces	20.48	1000sqft	0.47	20,480.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2032
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	357.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Elk Grove Great Nature Park Project

Land Use - 7,290 sf of rain gardens, 0.75 acres of new gardens, and 1.5 acres of open space areas. 20,480 sf of pedestrian facilities.

Construction Phase - Defualt schedule assumed.

Off-road Equipment - Defualt equipment assumed.

Off-road Equipment - Defualt equipment assumed.

Off-road Equipment - Defualt equipment assumed.

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Off-road Equipment - Defualt equipment assumed.

Off-road Equipment - Defualt equipment assumed.

Off-road Equipment - Defualt equipment assumed.

Grading - 100 cy export

Demolition - 38 parking spaces removed.

Trips and VMT - Default trips

Vehicle Trips - Assume trips only for park.

Construction Off-road Equipment Mitigation - Water two times daily.

Water Mitigation - Use of water efficient irrigation.

Table Name	Column Name	Default Value	New Value
tblGrading	MaterialExported	0.00	100.00
tblTripsAndVMT	HaulingTripNumber	13.00	12.00
tblVehicleTrips	WD_TR	33.98	0.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1286	1.0484	0.9986	2.0200e-003	0.0545	0.0477	0.1021	0.0185	0.0454	0.0639	0.0000	173.6179	173.6179	0.0296	3.7100e-003	175.4618
2023	0.1446	0.9270	1.0093	2.0400e-003	0.0319	0.0395	0.0714	8.6400e-003	0.0378	0.0464	0.0000	175.2427	175.2427	0.0271	3.9600e-003	177.1013
Maximum	**0.1446**	**1.0484**	**1.0093**	**2.0400e-003**	**0.0545**	**0.0477**	**0.1021**	**0.0185**	**0.0454**	**0.0639**	**0.0000**	**175.2427**	**175.2427**	**0.0296**	**3.9600e-003**	**177.1013**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1286	1.0484	0.9986	2.0200e-003	0.0398	0.0477	0.0875	0.0125	0.0454	0.0579	0.0000	173.6177	173.6177	0.0296	3.7100e-003	175.4617
2023	0.1446	0.9270	1.0093	2.0400e-003	0.0319	0.0395	0.0714	8.6400e-003	0.0378	0.0464	0.0000	175.2425	175.2425	0.0271	3.9600e-003	177.1011
Maximum	**0.1446**	**1.0484**	**1.0093**	**2.0400e-003**	**0.0398**	**0.0477**	**0.0875**	**0.0125**	**0.0454**	**0.0579**	**0.0000**	**175.2425**	**175.2425**	**0.0296**	**3.9600e-003**	**177.1011**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	16.97	0.00	8.44	22.23	0.00	5.47	0.00	0.00	0.00	0.00	0.00	0.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0245	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.9000e-004	6.9000e-004	0.0000	0.0000	7.4000e-004
Energy	3.5000e-004	3.1800e-003	2.6700e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	14.7485	14.7485	1.1100e-003	1.9000e-004	14.8327
Mobile	8.6000e-004	9.4000e-004	7.4200e-003	1.0000e-005	1.9000e-003	1.0000e-005	1.9100e-003	5.1000e-004	1.0000e-005	5.2000e-004	0.0000	1.3830	1.3830	1.0000e-004	7.0000e-005	1.4075
Waste						0.0000	0.0000		0.0000	0.0000	5.8279	0.0000	5.8279	0.3444	0.0000	14.4383
Water						0.0000	0.0000		0.0000	0.0000	0.3514	2.7883	3.1397	1.4700e-003	8.0000e-004	3.4134
Total	**0.0257**	**4.1200e-003**	**0.0104**	**3.0000e-005**	**1.9000e-003**	**2.5000e-004**	**2.1500e-003**	**5.1000e-004**	**2.5000e-004**	**7.6000e-004**	**6.1793**	**18.9205**	**25.0998**	**0.3471**	**1.0600e-003**	**34.0927**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0245	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.9000e-004	6.9000e-004	0.0000	0.0000	7.4000e-004
Energy	3.5000e-004	3.1800e-003	2.6700e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	14.7485	14.7485	1.1100e-003	1.9000e-004	14.8327
Mobile	8.6000e-004	9.4000e-004	7.4200e-003	1.0000e-005	1.9000e-003	1.0000e-005	1.9100e-003	5.1000e-004	1.0000e-005	5.2000e-004	0.0000	1.3830	1.3830	1.0000e-004	7.0000e-005	1.4075
Waste						0.0000	0.0000		0.0000	0.0000	5.8279	0.0000	5.8279	0.3444	0.0000	14.4383
Water						0.0000	0.0000		0.0000	0.0000	0.3514	2.6673	3.0187	1.4600e-003	7.9000e-004	3.2917
Total	**0.0257**	**4.1200e-003**	**0.0104**	**3.0000e-005**	**1.9000e-003**	**2.5000e-004**	**2.1500e-003**	**5.1000e-004**	**2.5000e-004**	**7.6000e-004**	**6.1793**	**18.7994**	**24.9787**	**0.3471**	**1.0500e-003**	**33.9709**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.64**	**0.48**	**0.00**	**0.94**	**0.36**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/4/2022	7/29/2022	5	20	
2	Site Preparation	Site Preparation	7/30/2022	8/3/2022	5	3	
3	Grading	Grading	8/4/2022	8/11/2022	5	6	
4	Building Construction	Building Construction	8/12/2022	6/15/2023	5	220	
5	Paving	Paving	6/16/2023	6/29/2023	5	10	
6	Architectural Coating	Architectural Coating	6/30/2023	7/13/2023	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 6

Acres of Paving: 0.47

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 7,500; Non-Residential Outdoor: 2,500; Striped Parking Area: 1,229 (Architectural

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OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Scrapers	1	8.00	367	0.48
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	26.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	12.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	54.00	21.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	11.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.9800e-003	0.0000	2.9800e-003	4.5000e-004	0.0000	4.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0169	0.1662	0.1396	2.4000e-004		8.3800e-003	8.3800e-003		7.8300e-003	7.8300e-003	0.0000	21.0777	21.0777	5.3700e-003	0.0000	21.2120
Total	**0.0169**	**0.1662**	**0.1396**	**2.4000e-004**	**2.9800e-003**	**8.3800e-003**	**0.0114**	**4.5000e-004**	**7.8300e-003**	**8.2800e-003**	**0.0000**	**21.0777**	**21.0777**	**5.3700e-003**	**0.0000**	**21.2120**

Unmitigated Construction Off-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.0000e-005	2.3900e-003	4.5000e-004	1.0000e-005	2.2000e-004	2.0000e-005	2.4000e-004	6.0000e-005	2.0000e-005	8.0000e-005	0.0000	0.8354	0.8354	3.0000e-005	1.3000e-004	0.8757
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-004	2.6000e-004	3.2700e-003	1.0000e-005	9.5000e-004	1.0000e-005	9.6000e-004	2.5000e-004	0.0000	2.6000e-004	0.0000	0.7812	0.7812	3.0000e-005	2.0000e-005	0.7889
Total	**4.5000e-004**	**2.6500e-003**	**3.7200e-003**	**2.0000e-005**	**1.1700e-003**	**3.0000e-005**	**1.2000e-003**	**3.1000e-004**	**2.0000e-005**	**3.4000e-004**	**0.0000**	**1.6166**	**1.6166**	**6.0000e-005**	**1.5000e-004**	**1.6646**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.3400e-003	0.0000	1.3400e-003	2.0000e-004	0.0000	2.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0169	0.1662	0.1396	2.4000e-004		8.3800e-003	8.3800e-003		7.8300e-003	7.8300e-003	0.0000	21.0777	21.0777	5.3700e-003	0.0000	21.2119
Total	**0.0169**	**0.1662**	**0.1396**	**2.4000e-004**	**1.3400e-003**	**8.3800e-003**	**9.7200e-003**	**2.0000e-004**	**7.8300e-003**	**8.0300e-003**	**0.0000**	**21.0777**	**21.0777**	**5.3700e-003**	**0.0000**	**21.2119**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.0000e-005	2.3900e-003	4.5000e-004	1.0000e-005	2.2000e-004	2.0000e-005	2.4000e-004	6.0000e-005	2.0000e-005	8.0000e-005	0.0000	0.8354	0.8354	3.0000e-005	1.3000e-004	0.8757
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-004	2.6000e-004	3.2700e-003	1.0000e-005	9.5000e-004	1.0000e-005	9.6000e-004	2.5000e-004	0.0000	2.6000e-004	0.0000	0.7812	0.7812	3.0000e-005	2.0000e-005	0.7889
Total	**4.5000e-004**	**2.6500e-003**	**3.7200e-003**	**2.0000e-005**	**1.1700e-003**	**3.0000e-005**	**1.2000e-003**	**3.1000e-004**	**2.0000e-005**	**3.4000e-004**	**0.0000**	**1.6166**	**1.6166**	**6.0000e-005**	**1.5000e-004**	**1.6646**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0700e-003	0.0235	0.0151	4.0000e-005		8.9000e-004	8.9000e-004		8.2000e-004	8.2000e-004	0.0000	3.2321	3.2321	1.0500e-003	0.0000	3.2582
Total	**2.0700e-003**	**0.0235**	**0.0151**	**4.0000e-005**	**2.3900e-003**	**8.9000e-004**	**3.2800e-003**	**2.6000e-004**	**8.2000e-004**	**1.0800e-003**	**0.0000**	**3.2321**	**3.2321**	**1.0500e-003**	**0.0000**	**3.2582**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	2.0000e-005	3.0000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0721	0.0721	0.0000	0.0000	0.0728
Total	**4.0000e-005**	**2.0000e-005**	**3.0000e-004**	**0.0000**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0721**	**0.0721**	**0.0000**	**0.0000**	**0.0728**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0700e-003	0.0000	1.0700e-003	1.2000e-004	0.0000	1.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0700e-003	0.0235	0.0151	4.0000e-005		8.9000e-004	8.9000e-004		8.2000e-004	8.2000e-004	0.0000	3.2321	3.2321	1.0500e-003	0.0000	3.2582
Total	**2.0700e-003**	**0.0235**	**0.0151**	**4.0000e-005**	**1.0700e-003**	**8.9000e-004**	**1.9600e-003**	**1.2000e-004**	**8.2000e-004**	**9.4000e-004**	**0.0000**	**3.2321**	**3.2321**	**1.0500e-003**	**0.0000**	**3.2582**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	2.0000e-005	3.0000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0721	0.0721	0.0000	0.0000	0.0728
Total	**4.0000e-005**	**2.0000e-005**	**3.0000e-004**	**0.0000**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0721**	**0.0721**	**0.0000**	**0.0000**	**0.0728**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0213	0.0000	0.0213	0.0103	0.0000	0.0103	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6200e-003	0.0510	0.0277	6.0000e-005		2.2300e-003	2.2300e-003		2.0500e-003	2.0500e-003	0.0000	5.4308	5.4308	1.7600e-003	0.0000	5.4747
Total	**4.6200e-003**	**0.0510**	**0.0277**	**6.0000e-005**	**0.0213**	**2.2300e-003**	**0.0235**	**0.0103**	**2.0500e-003**	**0.0123**	**0.0000**	**5.4308**	**5.4308**	**1.7600e-003**	**0.0000**	**5.4747**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	1.1000e-003	2.1000e-004	0.0000	1.0000e-004	1.0000e-005	1.1000e-004	3.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.3856	0.3856	2.0000e-005	6.0000e-005	0.4042
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	6.0000e-005	7.6000e-004	0.0000	2.2000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1803	0.1803	1.0000e-005	1.0000e-005	0.1821
Total	**1.1000e-004**	**1.1600e-003**	**9.7000e-004**	**0.0000**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**9.0000e-005**	**1.0000e-005**	**1.0000e-004**	**0.0000**	**0.5659**	**0.5659**	**3.0000e-005**	**7.0000e-005**	**0.5862**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.5700e-003	0.0000	9.5700e-003	4.6200e-003	0.0000	4.6200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6200e-003	0.0510	0.0277	6.0000e-005		2.2300e-003	2.2300e-003		2.0500e-003	2.0500e-003	0.0000	5.4308	5.4308	1.7600e-003	0.0000	5.4747
Total	**4.6200e-003**	**0.0510**	**0.0277**	**6.0000e-005**	**9.5700e-003**	**2.2300e-003**	**0.0118**	**4.6200e-003**	**2.0500e-003**	**6.6700e-003**	**0.0000**	**5.4308**	**5.4308**	**1.7600e-003**	**0.0000**	**5.4747**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	1.1000e-003	2.1000e-004	0.0000	1.0000e-004	1.0000e-005	1.1000e-004	3.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.3856	0.3856	2.0000e-005	6.0000e-005	0.4042
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	6.0000e-005	7.6000e-004	0.0000	2.2000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1803	0.1803	1.0000e-005	1.0000e-005	0.1821
Total	**1.1000e-004**	**1.1600e-003**	**9.7000e-004**	**0.0000**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**9.0000e-005**	**1.0000e-005**	**1.0000e-004**	**0.0000**	**0.5659**	**0.5659**	**3.0000e-005**	**7.0000e-005**	**0.5862**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0937	0.7375	0.7248	1.2600e-003		0.0355	0.0355		0.0340	0.0340	0.0000	104.8785	104.8785	0.0202	0.0000	105.3843
Total	**0.0937**	**0.7375**	**0.7248**	**1.2600e-003**		**0.0355**	**0.0355**		**0.0340**	**0.0340**	**0.0000**	**104.8785**	**104.8785**	**0.0202**	**0.0000**	**105.3843**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.2600e-003	0.0609	0.0177	2.1000e-004	6.2100e-003	5.6000e-004	6.7700e-003	1.7900e-003	5.4000e-004	2.3300e-003	0.0000	20.3582	20.3582	5.3000e-004	2.9800e-003	21.2608
Worker	8.4000e-003	5.4700e-003	0.0687	1.8000e-004	0.0200	1.1000e-004	0.0201	5.3300e-003	1.0000e-004	5.4300e-003	0.0000	16.3862	16.3862	5.6000e-004	5.0000e-004	16.5482
Total	**0.0107**	**0.0663**	**0.0864**	**3.9000e-004**	**0.0262**	**6.7000e-004**	**0.0269**	**7.1200e-003**	**6.4000e-004**	**7.7600e-003**	**0.0000**	**36.7443**	**36.7443**	**1.0900e-003**	**3.4800e-003**	**37.8090**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0937	0.7375	0.7248	1.2600e-003		0.0355	0.0355		0.0340	0.0340	0.0000	104.8783	104.8783	0.0202	0.0000	105.3842
Total	**0.0937**	**0.7375**	**0.7248**	**1.2600e-003**		**0.0355**	**0.0355**		**0.0340**	**0.0340**	**0.0000**	**104.8783**	**104.8783**	**0.0202**	**0.0000**	**105.3842**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.2600e-003	0.0609	0.0177	2.1000e-004	6.2100e-003	5.6000e-004	6.7700e-003	1.7900e-003	5.4000e-004	2.3300e-003	0.0000	20.3582	20.3582	5.3000e-004	2.9800e-003	21.2608
Worker	8.4000e-003	5.4700e-003	0.0687	1.8000e-004	0.0200	1.1000e-004	0.0201	5.3300e-003	1.0000e-004	5.4300e-003	0.0000	16.3862	16.3862	5.6000e-004	5.0000e-004	16.5482
Total	**0.0107**	**0.0663**	**0.0864**	**3.9000e-004**	**0.0262**	**6.7000e-004**	**0.0269**	**7.1200e-003**	**6.4000e-004**	**7.7600e-003**	**0.0000**	**36.7443**	**36.7443**	**1.0900e-003**	**3.4800e-003**	**37.8090**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1020	0.8106	0.8458	1.4900e-003		0.0365	0.0365		0.0350	0.0350	0.0000	123.5827	123.5827	0.0234	0.0000	124.1670
Total	**0.1020**	**0.8106**	**0.8458**	**1.4900e-003**		**0.0365**	**0.0365**		**0.0350**	**0.0350**	**0.0000**	**123.5827**	**123.5827**	**0.0234**	**0.0000**	**124.1670**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.6300e-003	0.0609	0.0184	2.4000e-004	7.3100e-003	3.2000e-004	7.6400e-003	2.1100e-003	3.1000e-004	2.4200e-003	0.0000	23.1744	23.1744	5.7000e-004	3.4000e-003	24.2020
Worker	9.2100e-003	5.7000e-003	0.0747	2.0000e-004	0.0236	1.3000e-004	0.0237	6.2800e-003	1.2000e-004	6.3900e-003	0.0000	18.6961	18.6961	6.0000e-004	5.4000e-004	18.8723
Total	**0.0108**	**0.0666**	**0.0931**	**4.4000e-004**	**0.0309**	**4.5000e-004**	**0.0314**	**8.3900e-003**	**4.3000e-004**	**8.8100e-003**	**0.0000**	**41.8705**	**41.8705**	**1.1700e-003**	**3.9400e-003**	**43.0743**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1020	0.8106	0.8458	1.4900e-003		0.0365	0.0365		0.0350	0.0350	0.0000	123.5826	123.5826	0.0234	0.0000	124.1669
Total	**0.1020**	**0.8106**	**0.8458**	**1.4900e-003**		**0.0365**	**0.0365**		**0.0350**	**0.0350**	**0.0000**	**123.5826**	**123.5826**	**0.0234**	**0.0000**	**124.1669**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.6300e-003	0.0609	0.0184	2.4000e-004	7.3100e-003	3.2000e-004	7.6400e-003	2.1100e-003	3.1000e-004	2.4200e-003	0.0000	23.1744	23.1744	5.7000e-004	3.4000e-003	24.2020
Worker	9.2100e-003	5.7000e-003	0.0747	2.0000e-004	0.0236	1.3000e-004	0.0237	6.2800e-003	1.2000e-004	6.3900e-003	0.0000	18.6961	18.6961	6.0000e-004	5.4000e-004	18.8723
Total	**0.0108**	**0.0666**	**0.0931**	**4.4000e-004**	**0.0309**	**4.5000e-004**	**0.0314**	**8.3900e-003**	**4.3000e-004**	**8.8100e-003**	**0.0000**	**41.8705**	**41.8705**	**1.1700e-003**	**3.9400e-003**	**43.0743**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.4000e-003	0.0431	0.0584	9.0000e-005		2.1700e-003	2.1700e-003		2.0000e-003	2.0000e-003	0.0000	7.7564	7.7564	2.4600e-003	0.0000	7.8179
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.4000e-003**	**0.0431**	**0.0584**	**9.0000e-005**		**2.1700e-003**	**2.1700e-003**		**2.0000e-003**	**2.0000e-003**	**0.0000**	**7.7564**	**7.7564**	**2.4600e-003**	**0.0000**	**7.8179**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-004	1.3000e-004	1.7400e-003	0.0000	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4364	0.4364	1.0000e-005	1.0000e-005	0.4405
Total	**2.2000e-004**	**1.3000e-004**	**1.7400e-003**	**0.0000**	**5.5000e-004**	**0.0000**	**5.5000e-004**	**1.5000e-004**	**0.0000**	**1.5000e-004**	**0.0000**	**0.4364**	**0.4364**	**1.0000e-005**	**1.0000e-005**	**0.4405**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.4000e-003	0.0431	0.0584	9.0000e-005		2.1700e-003	2.1700e-003		2.0000e-003	2.0000e-003	0.0000	7.7564	7.7564	2.4600e-003	0.0000	7.8178
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.4000e-003**	**0.0431**	**0.0584**	**9.0000e-005**		**2.1700e-003**	**2.1700e-003**		**2.0000e-003**	**2.0000e-003**	**0.0000**	**7.7564**	**7.7564**	**2.4600e-003**	**0.0000**	**7.8178**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-004	1.3000e-004	1.7400e-003	0.0000	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4364	0.4364	1.0000e-005	1.0000e-005	0.4405
Total	**2.2000e-004**	**1.3000e-004**	**1.7400e-003**	**0.0000**	**5.5000e-004**	**0.0000**	**5.5000e-004**	**1.5000e-004**	**0.0000**	**1.5000e-004**	**0.0000**	**0.4364**	**0.4364**	**1.0000e-005**	**1.0000e-005**	**0.4405**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0260					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.6000e-004	6.5100e-003	9.0600e-003	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2785
Total	**0.0270**	**6.5100e-003**	**9.0600e-003**	**1.0000e-005**		**3.5000e-004**	**3.5000e-004**		**3.5000e-004**	**3.5000e-004**	**0.0000**	**1.2766**	**1.2766**	**8.0000e-005**	**0.0000**	**1.2785**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.0000e-004	1.2800e-003	0.0000	4.0000e-004	0.0000	4.1000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3200	0.3200	1.0000e-005	1.0000e-005	0.3231
Total	**1.6000e-004**	**1.0000e-004**	**1.2800e-003**	**0.0000**	**4.0000e-004**	**0.0000**	**4.1000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3200**	**0.3200**	**1.0000e-005**	**1.0000e-005**	**0.3231**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0260					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.6000e-004	6.5100e-003	9.0600e-003	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2785
Total	**0.0270**	**6.5100e-003**	**9.0600e-003**	**1.0000e-005**		**3.5000e-004**	**3.5000e-004**		**3.5000e-004**	**3.5000e-004**	**0.0000**	**1.2766**	**1.2766**	**8.0000e-005**	**0.0000**	**1.2785**

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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.0000e-004	1.2800e-003	0.0000	4.0000e-004	0.0000	4.1000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3200	0.3200	1.0000e-005	1.0000e-005	0.3231
Total	**1.6000e-004**	**1.0000e-004**	**1.2800e-003**	**0.0000**	**4.0000e-004**	**0.0000**	**4.1000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3200**	**0.3200**	**1.0000e-005**	**1.0000e-005**	**0.3231**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	8.6000e-004	9.4000e-004	7.4200e-003	1.0000e-005	1.9000e-003	1.0000e-005	1.9100e-003	5.1000e-004	1.0000e-005	5.2000e-004	0.0000	1.3830	1.3830	1.0000e-004	7.0000e-005	1.4075
Unmitigated	8.6000e-004	9.4000e-004	7.4200e-003	1.0000e-005	1.9000e-003	1.0000e-005	1.9100e-003	5.1000e-004	1.0000e-005	5.2000e-004	0.0000	1.3830	1.3830	1.0000e-004	7.0000e-005	1.4075

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	1.89	4.74	5.29	5,128	5,128
Government (Civic Center)	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	1.89	4.74	5.29	5,128	5,128

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	10.00	5.00	6.50	33.00	48.00	19.00	66	28	6
Government (Civic Center)	10.00	5.00	6.50	75.00	20.00	5.00	50	34	16
Other Non-Asphalt Surfaces	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

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4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.565456	0.056003	0.181452	0.119774	0.020095	0.005300	0.013361	0.009475	0.000768	0.000676	0.024349	0.000802	0.002487
Government (Civic Center)	0.565456	0.056003	0.181452	0.119774	0.020095	0.005300	0.013361	0.009475	0.000768	0.000676	0.024349	0.000802	0.002487
Other Non-Asphalt Surfaces	0.565456	0.056003	0.181452	0.119774	0.020095	0.005300	0.013361	0.009475	0.000768	0.000676	0.024349	0.000802	0.002487

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	11.2852	11.2852	1.0400e-003	1.3000e-004	11.3488
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	11.2852	11.2852	1.0400e-003	1.3000e-004	11.3488
NaturalGas Mitigated	3.5000e-004	3.1800e-003	2.6700e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.4633	3.4633	7.0000e-005	6.0000e-005	3.4839
NaturalGas Unmitigated	3.5000e-004	3.1800e-003	2.6700e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.4633	3.4633	7.0000e-005	6.0000e-005	3.4839

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Government (Civic Center)	64900	3.5000e-004	3.1800e-003	2.6700e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.4633	3.4633	7.0000e-005	6.0000e-005	3.4839
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**3.5000e-004**	**3.1800e-003**	**2.6700e-003**	**2.0000e-005**		**2.4000e-004**	**2.4000e-004**		**2.4000e-004**	**2.4000e-004**	**0.0000**	**3.4633**	**3.4633**	**7.0000e-005**	**6.0000e-005**	**3.4839**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Government (Civic Center)	64900	3.5000e-004	3.1800e-003	2.6700e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.4633	3.4633	7.0000e-005	6.0000e-005	3.4839
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**3.5000e-004**	**3.1800e-003**	**2.6700e-003**	**2.0000e-005**		**2.4000e-004**	**2.4000e-004**		**2.4000e-004**	**2.4000e-004**	**0.0000**	**3.4633**	**3.4633**	**7.0000e-005**	**6.0000e-005**	**3.4839**

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Government (Civic Center)	69500	11.2852	1.0400e-003	1.3000e-004	11.3488
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**11.2852**	**1.0400e-003**	**1.3000e-004**	**11.3488**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Government (Civic Center)	69500	11.2852	1.0400e-003	1.3000e-004	11.3488
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**11.2852**	**1.0400e-003**	**1.3000e-004**	**11.3488**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0245	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.9000e-004	6.9000e-004	0.0000	0.0000	7.4000e-004
Unmitigated	0.0245	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.9000e-004	6.9000e-004	0.0000	0.0000	7.4000e-004

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.6000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0218					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.9000e-004	6.9000e-004	0.0000	0.0000	7.4000e-004
Total	**0.0245**	**0.0000**	**3.5000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**6.9000e-004**	**6.9000e-004**	**0.0000**	**0.0000**	**7.4000e-004**

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Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.6000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0218					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.9000e-004	6.9000e-004	0.0000	0.0000	7.4000e-004
Total	**0.0245**	**0.0000**	**3.5000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**6.9000e-004**	**6.9000e-004**	**0.0000**	**0.0000**	**7.4000e-004**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	3.0187	1.4600e-003	7.9000e-004	3.2917
Unmitigated	3.1397	1.4700e-003	8.0000e-004	3.4134

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 2.88338	1.6387	1.5000e-004	2.0000e-005	1.6479
Government (Civic Center)	0.993298 / 0.608796	1.5011	1.3200e-003	7.8000e-004	1.7655
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**3.1397**	**1.4700e-003**	**8.0000e-004**	**3.4134**

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Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 2.7075	1.5387	1.4000e-004	2.0000e-005	1.5474
Government (Civic Center)	0.993298 / 0.571659	1.4800	1.3100e-003	7.8000e-004	1.7443
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**3.0187**	**1.4500e-003**	**8.0000e-004**	**3.2917**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	5.8279	0.3444	0.0000	14.4383
Unmitigated	5.8279	0.3444	0.0000	14.4383

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8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.21	0.0426	2.5200e-003	0.0000	0.1056
Government (Civic Center)	28.5	5.7852	0.3419	0.0000	14.3327
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**5.8279**	**0.3444**	**0.0000**	**14.4383**

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Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.21	0.0426	2.5200e-003	0.0000	0.1056
Government (Civic Center)	28.5	5.7852	0.3419	0.0000	14.3327
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**5.8279**	**0.3444**	**0.0000**	**14.4383**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Elk Grove Great Nature Park Project

Sacramento Metropolitan AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	2.42	Acre	2.42	105,284.52	0
Government (Civic Center)	5.00	1000sqft	0.11	5,000.00	0
Other Non-Asphalt Surfaces	20.48	1000sqft	0.47	20,480.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2032
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	357.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Elk Grove Great Nature Park Project

Land Use - 7,290 sf of rain gardens, 0.75 acres of new gardens, and 1.5 acres of open space areas. 20,480 sf of pedestrian facilities.

Construction Phase - Defualt schedule assumed.

Off-road Equipment - Defualt equipment assumed.

Off-road Equipment - Defualt equipment assumed.

Off-road Equipment - Defualt equipment assumed.

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Off-road Equipment - Defualt equipment assumed.

Off-road Equipment - Defualt equipment assumed.

Off-road Equipment - Defualt equipment assumed.

Grading - 100 cy export

Demolition - 38 parking spaces removed.

Trips and VMT - Default trips

Vehicle Trips - Assume trips only for park.

Construction Off-road Equipment Mitigation - Water two times daily.

Water Mitigation - Use of water efficient irrigation.

Table Name	Column Name	Default Value	New Value
tblGrading	MaterialExported	0.00	100.00
tblTripsAndVMT	HaulingTripNumber	13.00	12.00
tblVehicleTrips	WD_TR	33.98	0.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.0965	17.3496	16.2925	0.0331	7.1970	0.8404	7.9427	3.4550	0.7852	4.1411	0.0000	3,125.7510	3,125.7510	0.7699	0.0753	3,159.8084
2023	5.4333	14.6837	15.9849	0.0328	0.5373	0.6212	1.1585	0.1454	0.5952	0.7406	0.0000	3,098.2886	3,098.2886	0.5449	0.0724	3,131.2034
Maximum	**5.4333**	**17.3496**	**16.2925**	**0.0331**	**7.1970**	**0.8404**	**7.9427**	**3.4550**	**0.7852**	**4.1411**	**0.0000**	**3,125.7510**	**3,125.7510**	**0.7699**	**0.0753**	**3,159.8084**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.0965	17.3496	16.2925	0.0331	3.2997	0.8404	4.0454	1.5711	0.7852	2.2573	0.0000	3,125.7510	3,125.7510	0.7699	0.0753	3,159.8084
2023	5.4333	14.6837	15.9849	0.0328	0.5373	0.6212	1.1585	0.1454	0.5952	0.7406	0.0000	3,098.2886	3,098.2886	0.5449	0.0724	3,131.2034
Maximum	**5.4333**	**17.3496**	**16.2925**	**0.0331**	**3.2997**	**0.8404**	**4.0454**	**1.5711**	**0.7852**	**2.2573**	**0.0000**	**3,125.7510**	**3,125.7510**	**0.7699**	**0.0753**	**3,159.8084**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**50.39**	**0.00**	**42.82**	**52.32**	**0.00**	**38.59**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1342	3.0000e-005	2.8300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.1100e-003	6.1100e-003	2.0000e-005		6.5000e-003
Energy	1.9200e-003	0.0174	0.0146	1.0000e-004		1.3200e-003	1.3200e-003		1.3200e-003	1.3200e-003		20.9186	20.9186	4.0000e-004	3.8000e-004	21.0429
Mobile	0.0116	9.0400e-003	0.0816	1.7000e-004	0.0206	1.0000e-004	0.0207	5.4800e-003	1.0000e-004	5.5800e-003		17.1138	17.1138	1.1300e-003	8.2000e-004	17.3858
Total	**0.1477**	**0.0265**	**0.0991**	**2.7000e-004**	**0.0206**	**1.4300e-003**	**0.0220**	**5.4800e-003**	**1.4300e-003**	**6.9100e-003**		**38.0386**	**38.0386**	**1.5500e-003**	**1.2000e-003**	**38.4352**

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Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1342	3.0000e-005	2.8300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.1100e-003	6.1100e-003	2.0000e-005		6.5000e-003
Energy	1.9200e-003	0.0174	0.0146	1.0000e-004		1.3200e-003	1.3200e-003		1.3200e-003	1.3200e-003		20.9186	20.9186	4.0000e-004	3.8000e-004	21.0429
Mobile	0.0116	9.0400e-003	0.0816	1.7000e-004	0.0206	1.0000e-004	0.0207	5.4800e-003	1.0000e-004	5.5800e-003		17.1138	17.1138	1.1300e-003	8.2000e-004	17.3858
Total	**0.1477**	**0.0265**	**0.0991**	**2.7000e-004**	**0.0206**	**1.4300e-003**	**0.0220**	**5.4800e-003**	**1.4300e-003**	**6.9100e-003**		**38.0386**	**38.0386**	**1.5500e-003**	**1.2000e-003**	**38.4352**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**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**	**0.00**	**0.00**

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3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/4/2022	7/29/2022	5	20	
2	Site Preparation	Site Preparation	7/30/2022	8/3/2022	5	3	
3	Grading	Grading	8/4/2022	8/11/2022	5	6	
4	Building Construction	Building Construction	8/12/2022	6/15/2023	5	220	
5	Paving	Paving	6/16/2023	6/29/2023	5	10	
6	Architectural Coating	Architectural Coating	6/30/2023	7/13/2023	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 6

Acres of Paving: 0.47

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 7,500; Non-Residential Outdoor: 2,500; Striped Parking Area: 1,229 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41

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Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Scrapers	1	8.00	367	0.48
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	26.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	12.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	54.00	21.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	11.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

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3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2983	0.0000	0.2983	0.0452	0.0000	0.0452			0.0000			0.0000
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829		2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**	**0.2983**	**0.8379**	**1.1362**	**0.0452**	**0.7829**	**0.8281**		**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.4000e-003	0.2260	0.0444	8.4000e-004	0.0227	1.9500e-003	0.0246	6.2100e-003	1.8600e-003	8.0700e-003		92.0842	92.0842	3.7000e-003	0.0146	96.5263
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0471	0.0238	0.3840	9.3000e-004	0.0989	5.4000e-004	0.0994	0.0262	4.9000e-004	0.0267		94.3871	94.3871	2.8200e-003	2.4500e-003	95.1892
Total	**0.0525**	**0.2498**	**0.4283**	**1.7700e-003**	**0.1216**	**2.4900e-003**	**0.1241**	**0.0324**	**2.3500e-003**	**0.0348**		**186.4713**	**186.4713**	**6.5200e-003**	**0.0171**	**191.7155**

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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1343	0.0000	0.1343	0.0203	0.0000	0.0203			0.0000			0.0000
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829	0.0000	2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**	**0.1343**	**0.8379**	**0.9722**	**0.0203**	**0.7829**	**0.8032**	**0.0000**	**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.4000e-003	0.2260	0.0444	8.4000e-004	0.0227	1.9500e-003	0.0246	6.2100e-003	1.8600e-003	8.0700e-003		92.0842	92.0842	3.7000e-003	0.0146	96.5263
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0471	0.0238	0.3840	9.3000e-004	0.0989	5.4000e-004	0.0994	0.0262	4.9000e-004	0.0267		94.3871	94.3871	2.8200e-003	2.4500e-003	95.1892
Total	**0.0525**	**0.2498**	**0.4283**	**1.7700e-003**	**0.1216**	**2.4900e-003**	**0.1241**	**0.0324**	**2.3500e-003**	**0.0348**		**186.4713**	**186.4713**	**6.5200e-003**	**0.0171**	**191.7155**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.3784	15.6673	10.0558	0.0245		0.5952	0.5952		0.5476	0.5476		2,375.1569	2,375.1569	0.7682		2,394.3613
Total	**1.3784**	**15.6673**	**10.0558**	**0.0245**	**1.5908**	**0.5952**	**2.1859**	**0.1718**	**0.5476**	**0.7193**		**2,375.1569**	**2,375.1569**	**0.7682**		**2,394.3613**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0290	0.0146	0.2363	5.7000e-004	0.0609	3.3000e-004	0.0612	0.0161	3.0000e-004	0.0165		58.0844	58.0844	1.7400e-003	1.5100e-003	58.5779
Total	**0.0290**	**0.0146**	**0.2363**	**5.7000e-004**	**0.0609**	**3.3000e-004**	**0.0612**	**0.0161**	**3.0000e-004**	**0.0165**		**58.0844**	**58.0844**	**1.7400e-003**	**1.5100e-003**	**58.5779**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7158	0.0000	0.7158	0.0773	0.0000	0.0773			0.0000			0.0000
Off-Road	1.3784	15.6673	10.0558	0.0245		0.5952	0.5952		0.5476	0.5476	0.0000	2,375.1569	2,375.1569	0.7682		2,394.3613
Total	**1.3784**	**15.6673**	**10.0558**	**0.0245**	**0.7158**	**0.5952**	**1.3110**	**0.0773**	**0.5476**	**0.6249**	**0.0000**	**2,375.1569**	**2,375.1569**	**0.7682**		**2,394.3613**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0290	0.0146	0.2363	5.7000e-004	0.0609	3.3000e-004	0.0612	0.0161	3.0000e-004	0.0165		58.0844	58.0844	1.7400e-003	1.5100e-003	58.5779
Total	**0.0290**	**0.0146**	**0.2363**	**5.7000e-004**	**0.0609**	**3.3000e-004**	**0.0612**	**0.0161**	**3.0000e-004**	**0.0165**		**58.0844**	**58.0844**	**1.7400e-003**	**1.5100e-003**	**58.5779**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0860	0.0000	7.0860	3.4253	0.0000	3.4253			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829		1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**1.5403**	**16.9836**	**9.2202**	**0.0206**	**7.0860**	**0.7423**	**7.8283**	**3.4253**	**0.6829**	**4.1082**		**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.3100e-003	0.3477	0.0683	1.3000e-003	0.0349	3.0000e-003	0.0379	9.5500e-003	2.8700e-003	0.0124		141.6679	141.6679	5.6900e-003	0.0225	148.5020
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0362	0.0183	0.2954	7.2000e-004	0.0761	4.1000e-004	0.0765	0.0202	3.8000e-004	0.0206		72.6055	72.6055	2.1700e-003	1.8900e-003	73.2224
Total	**0.0445**	**0.3660**	**0.3636**	**2.0200e-003**	**0.1110**	**3.4100e-003**	**0.1144**	**0.0297**	**3.2500e-003**	**0.0330**		**214.2734**	**214.2734**	**7.8600e-003**	**0.0244**	**221.7245**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.1887	0.0000	3.1887	1.5414	0.0000	1.5414			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829	0.0000	1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**1.5403**	**16.9836**	**9.2202**	**0.0206**	**3.1887**	**0.7423**	**3.9310**	**1.5414**	**0.6829**	**2.2243**	**0.0000**	**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.3100e-003	0.3477	0.0683	1.3000e-003	0.0349	3.0000e-003	0.0379	9.5500e-003	2.8700e-003	0.0124		141.6679	141.6679	5.6900e-003	0.0225	148.5020
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0362	0.0183	0.2954	7.2000e-004	0.0761	4.1000e-004	0.0765	0.0202	3.8000e-004	0.0206		72.6055	72.6055	2.1700e-003	1.8900e-003	73.2224
Total	**0.0445**	**0.3660**	**0.3636**	**2.0200e-003**	**0.1110**	**3.4100e-003**	**0.1144**	**0.0297**	**3.2500e-003**	**0.0330**		**214.2734**	**214.2734**	**7.8600e-003**	**0.0244**	**221.7245**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731		2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**		**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0454	1.1439	0.3444	4.1500e-003	0.1265	0.0111	0.1377	0.0364	0.0106	0.0471		444.4002	444.4002	0.0116	0.0651	464.0843
Worker	0.1956	0.0988	1.5949	3.8800e-003	0.4108	2.2300e-003	0.4130	0.1090	2.0500e-003	0.1110		392.0695	392.0695	0.0117	0.0102	395.4011
Total	**0.2410**	**1.2427**	**1.9393**	**8.0300e-003**	**0.5373**	**0.0133**	**0.5507**	**0.1454**	**0.0127**	**0.1581**		**836.4697**	**836.4697**	**0.0233**	**0.0753**	**859.4854**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731	0.0000	2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**	**0.0000**	**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0454	1.1439	0.3444	4.1500e-003	0.1265	0.0111	0.1377	0.0364	0.0106	0.0471		444.4002	444.4002	0.0116	0.0651	464.0843
Worker	0.1956	0.0988	1.5949	3.8800e-003	0.4108	2.2300e-003	0.4130	0.1090	2.0500e-003	0.1110		392.0695	392.0695	0.0117	0.0102	395.4011
Total	**0.2410**	**1.2427**	**1.9393**	**8.0300e-003**	**0.5373**	**0.0133**	**0.5507**	**0.1454**	**0.0127**	**0.1581**		**836.4697**	**836.4697**	**0.0233**	**0.0753**	**859.4854**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880		2,289.5233	2,289.5233	0.4330		2,300.3479
Total	**1.7136**	**13.6239**	**14.2145**	**0.0250**		**0.6136**	**0.6136**		**0.5880**	**0.5880**		**2,289.5233**	**2,289.5233**	**0.4330**		**2,300.3479**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0281	0.9724	0.3027	4.0000e-003	0.1265	5.4300e-003	0.1320	0.0364	5.1900e-003	0.0416		429.2069	429.2069	0.0106	0.0629	448.2209
Worker	0.1819	0.0874	1.4677	3.7600e-003	0.4108	2.1100e-003	0.4129	0.1090	1.9400e-003	0.1109		379.5584	379.5584	0.0106	9.4400e-003	382.6346
Total	**0.2100**	**1.0598**	**1.7704**	**7.7600e-003**	**0.5373**	**7.5400e-003**	**0.5448**	**0.1454**	**7.1300e-003**	**0.1525**		**808.7652**	**808.7652**	**0.0212**	**0.0724**	**830.8555**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880	0.0000	2,289.5233	2,289.5233	0.4330		2,300.3479
Total	**1.7136**	**13.6239**	**14.2145**	**0.0250**		**0.6136**	**0.6136**		**0.5880**	**0.5880**	**0.0000**	**2,289.5233**	**2,289.5233**	**0.4330**		**2,300.3479**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0281	0.9724	0.3027	4.0000e-003	0.1265	5.4300e-003	0.1320	0.0364	5.1900e-003	0.0416		429.2069	429.2069	0.0106	0.0629	448.2209
Worker	0.1819	0.0874	1.4677	3.7600e-003	0.4108	2.1100e-003	0.4129	0.1090	1.9400e-003	0.1109		379.5584	379.5584	0.0106	9.4400e-003	382.6346
Total	**0.2100**	**1.0598**	**1.7704**	**7.7600e-003**	**0.5373**	**7.5400e-003**	**0.5448**	**0.1454**	**7.1300e-003**	**0.1525**		**808.7652**	**808.7652**	**0.0212**	**0.0724**	**830.8555**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8802	8.6098	11.6840	0.0179		0.4338	0.4338		0.4003	0.4003		1,709.9926	1,709.9926	0.5420		1,723.5414
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8802**	**8.6098**	**11.6840**	**0.0179**		**0.4338**	**0.4338**		**0.4003**	**0.4003**		**1,709.9926**	**1,709.9926**	**0.5420**		**1,723.5414**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0505	0.0243	0.4077	1.0400e-003	0.1141	5.9000e-004	0.1147	0.0303	5.4000e-004	0.0308		105.4329	105.4329	2.9300e-003	2.6200e-003	106.2874
Total	**0.0505**	**0.0243**	**0.4077**	**1.0400e-003**	**0.1141**	**5.9000e-004**	**0.1147**	**0.0303**	**5.4000e-004**	**0.0308**		**105.4329**	**105.4329**	**2.9300e-003**	**2.6200e-003**	**106.2874**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8802	8.6098	11.6840	0.0179		0.4338	0.4338		0.4003	0.4003	0.0000	1,709.9926	1,709.9926	0.5420		1,723.5414
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8802**	**8.6098**	**11.6840**	**0.0179**		**0.4338**	**0.4338**		**0.4003**	**0.4003**	**0.0000**	**1,709.9926**	**1,709.9926**	**0.5420**		**1,723.5414**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0505	0.0243	0.4077	1.0400e-003	0.1141	5.9000e-004	0.1147	0.0303	5.4000e-004	0.0308		105.4329	105.4329	2.9300e-003	2.6200e-003	106.2874
Total	**0.0505**	**0.0243**	**0.4077**	**1.0400e-003**	**0.1141**	**5.9000e-004**	**0.1147**	**0.0303**	**5.4000e-004**	**0.0308**		**105.4329**	**105.4329**	**2.9300e-003**	**2.6200e-003**	**106.2874**

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3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.2046					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**5.3963**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0370	0.0178	0.2990	7.6000e-004	0.0837	4.3000e-004	0.0841	0.0222	4.0000e-004	0.0226		77.3175	77.3175	2.1500e-003	1.9200e-003	77.9441
Total	**0.0370**	**0.0178**	**0.2990**	**7.6000e-004**	**0.0837**	**4.3000e-004**	**0.0841**	**0.0222**	**4.0000e-004**	**0.0226**		**77.3175**	**77.3175**	**2.1500e-003**	**1.9200e-003**	**77.9441**

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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.2046					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**5.3963**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0370	0.0178	0.2990	7.6000e-004	0.0837	4.3000e-004	0.0841	0.0222	4.0000e-004	0.0226		77.3175	77.3175	2.1500e-003	1.9200e-003	77.9441
Total	**0.0370**	**0.0178**	**0.2990**	**7.6000e-004**	**0.0837**	**4.3000e-004**	**0.0841**	**0.0222**	**4.0000e-004**	**0.0226**		**77.3175**	**77.3175**	**2.1500e-003**	**1.9200e-003**	**77.9441**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0116	9.0400e-003	0.0816	1.7000e-004	0.0206	1.0000e-004	0.0207	5.4800e-003	1.0000e-004	5.5800e-003		17.1138	17.1138	1.1300e-003	8.2000e-004	17.3858
Unmitigated	0.0116	9.0400e-003	0.0816	1.7000e-004	0.0206	1.0000e-004	0.0207	5.4800e-003	1.0000e-004	5.5800e-003		17.1138	17.1138	1.1300e-003	8.2000e-004	17.3858

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	1.89	4.74	5.29	5,128	5,128
Government (Civic Center)	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	1.89	4.74	5.29	5,128	5,128

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	10.00	5.00	6.50	33.00	48.00	19.00	66	28	6
Government (Civic Center)	10.00	5.00	6.50	75.00	20.00	5.00	50	34	16
Other Non-Asphalt Surfaces	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

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4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.565456	0.056003	0.181452	0.119774	0.020095	0.005300	0.013361	0.009475	0.000768	0.000676	0.024349	0.000802	0.002487
Government (Civic Center)	0.565456	0.056003	0.181452	0.119774	0.020095	0.005300	0.013361	0.009475	0.000768	0.000676	0.024349	0.000802	0.002487
Other Non-Asphalt Surfaces	0.565456	0.056003	0.181452	0.119774	0.020095	0.005300	0.013361	0.009475	0.000768	0.000676	0.024349	0.000802	0.002487

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.9200e-003	0.0174	0.0146	1.0000e-004		1.3200e-003	1.3200e-003		1.3200e-003	1.3200e-003		20.9186	20.9186	4.0000e-004	3.8000e-004	21.0429
NaturalGas Unmitigated	1.9200e-003	0.0174	0.0146	1.0000e-004		1.3200e-003	1.3200e-003		1.3200e-003	1.3200e-003		20.9186	20.9186	4.0000e-004	3.8000e-004	21.0429

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Government (Civic Center)	177.808	1.9200e-003	0.0174	0.0146	1.0000e-004		1.3200e-003	1.3200e-003		1.3200e-003	1.3200e-003		20.9186	20.9186	4.0000e-004	3.8000e-004	21.0429
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**1.9200e-003**	**0.0174**	**0.0146**	**1.0000e-004**		**1.3200e-003**	**1.3200e-003**		**1.3200e-003**	**1.3200e-003**		**20.9186**	**20.9186**	**4.0000e-004**	**3.8000e-004**	**21.0429**

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Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Government (Civic Center)	0.177808	1.9200e-003	0.0174	0.0146	1.0000e-004		1.3200e-003	1.3200e-003		1.3200e-003	1.3200e-003		20.9186	20.9186	4.0000e-004	3.8000e-004	21.0429
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**1.9200e-003**	**0.0174**	**0.0146**	**1.0000e-004**		**1.3200e-003**	**1.3200e-003**		**1.3200e-003**	**1.3200e-003**		**20.9186**	**20.9186**	**4.0000e-004**	**3.8000e-004**	**21.0429**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1342	3.0000e-005	2.8300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.1100e-003	6.1100e-003	2.0000e-005		6.5000e-003
Unmitigated	0.1342	3.0000e-005	2.8300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.1100e-003	6.1100e-003	2.0000e-005		6.5000e-003

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6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0143					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1197					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.6000e-004	3.0000e-005	2.8300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.1100e-003	6.1100e-003	2.0000e-005		6.5000e-003
Total	**0.1342**	**3.0000e-005**	**2.8300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**6.1100e-003**	**6.1100e-003**	**2.0000e-005**		**6.5000e-003**

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Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0143					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1197					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.6000e-004	3.0000e-005	2.8300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.1100e-003	6.1100e-003	2.0000e-005		6.5000e-003
Total	**0.1342**	**3.0000e-005**	**2.8300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**6.1100e-003**	**6.1100e-003**	**2.0000e-005**		**6.5000e-003**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Elk Grove Great Nature Park Project

Sacramento Metropolitan AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	2.42	Acre	2.42	105,284.52	0
Government (Civic Center)	5.00	1000sqft	0.11	5,000.00	0
Other Non-Asphalt Surfaces	20.48	1000sqft	0.47	20,480.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2032
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	357.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Elk Grove Great Nature Park Project

Land Use - 7,290 sf of rain gardens, 0.75 acres of new gardens, and 1.5 acres of open space areas. 20,480 sf of pedestrian facilities.

Construction Phase - Defualt schedule assumed.

Off-road Equipment - Defualt equipment assumed.

Off-road Equipment - Defualt equipment assumed.

Off-road Equipment - Defualt equipment assumed.

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Off-road Equipment - Defualt equipment assumed.

Off-road Equipment - Defualt equipment assumed.

Off-road Equipment - Defualt equipment assumed.

Grading - 100 cy export

Demolition - 38 parking spaces removed.

Trips and VMT - Default trips

Vehicle Trips - Assume trips only for park.

Construction Off-road Equipment Mitigation - Water two times daily.

Water Mitigation - Use of water efficient irrigation.

Table Name	Column Name	Default Value	New Value
tblGrading	MaterialExported	0.00	100.00
tblTripsAndVMT	HaulingTripNumber	13.00	12.00
tblVehicleTrips	WD_TR	33.98	0.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.0730	17.3817	16.0944	0.0326	7.1970	0.8404	7.9427	3.4550	0.7852	4.1412	0.0000	3,082.2570	3,082.2570	0.7702	0.0769	3,116.8368
2023	5.4291	14.7762	15.8092	0.0324	0.5373	0.6212	1.1585	0.1454	0.5952	0.7406	0.0000	3,056.6693	3,056.6693	0.5453	0.0739	3,090.0810
Maximum	**5.4291**	**17.3817**	**16.0944**	**0.0326**	**7.1970**	**0.8404**	**7.9427**	**3.4550**	**0.7852**	**4.1412**	**0.0000**	**3,082.2570**	**3,082.2570**	**0.7702**	**0.0769**	**3,116.8368**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.0730	17.3817	16.0944	0.0326	3.2997	0.8404	4.0454	1.5711	0.7852	2.2573	0.0000	3,082.2570	3,082.2570	0.7702	0.0769	3,116.8368
2023	5.4291	14.7762	15.8092	0.0324	0.5373	0.6212	1.1585	0.1454	0.5952	0.7406	0.0000	3,056.6693	3,056.6693	0.5453	0.0739	3,090.0810
Maximum	**5.4291**	**17.3817**	**16.0944**	**0.0326**	**3.2997**	**0.8404**	**4.0454**	**1.5711**	**0.7852**	**2.2573**	**0.0000**	**3,082.2570**	**3,082.2570**	**0.7702**	**0.0769**	**3,116.8368**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**50.39**	**0.00**	**42.82**	**52.32**	**0.00**	**38.59**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1342	3.0000e-005	2.8300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.1100e-003	6.1100e-003	2.0000e-005		6.5000e-003
Energy	1.9200e-003	0.0174	0.0146	1.0000e-004		1.3200e-003	1.3200e-003		1.3200e-003	1.3200e-003		20.9186	20.9186	4.0000e-004	3.8000e-004	21.0429
Mobile	8.5000e-003	0.0104	0.0841	1.5000e-004	0.0206	1.0000e-004	0.0207	5.4800e-003	1.0000e-004	5.5800e-003		15.6787	15.6787	1.2800e-003	8.9000e-004	15.9764
Total	**0.1446**	**0.0279**	**0.1016**	**2.5000e-004**	**0.0206**	**1.4300e-003**	**0.0220**	**5.4800e-003**	**1.4300e-003**	**6.9100e-003**		**36.6035**	**36.6035**	**1.7000e-003**	**1.2700e-003**	**37.0258**

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Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1342	3.0000e-005	2.8300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.1100e-003	6.1100e-003	2.0000e-005		6.5000e-003
Energy	1.9200e-003	0.0174	0.0146	1.0000e-004		1.3200e-003	1.3200e-003		1.3200e-003	1.3200e-003		20.9186	20.9186	4.0000e-004	3.8000e-004	21.0429
Mobile	8.5000e-003	0.0104	0.0841	1.5000e-004	0.0206	1.0000e-004	0.0207	5.4800e-003	1.0000e-004	5.5800e-003		15.6787	15.6787	1.2800e-003	8.9000e-004	15.9764
Total	**0.1446**	**0.0279**	**0.1016**	**2.5000e-004**	**0.0206**	**1.4300e-003**	**0.0220**	**5.4800e-003**	**1.4300e-003**	**6.9100e-003**		**36.6035**	**36.6035**	**1.7000e-003**	**1.2700e-003**	**37.0258**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**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**	**0.00**	**0.00**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/4/2022	7/29/2022	5	20	
2	Site Preparation	Site Preparation	7/30/2022	8/3/2022	5	3	
3	Grading	Grading	8/4/2022	8/11/2022	5	6	
4	Building Construction	Building Construction	8/12/2022	6/15/2023	5	220	
5	Paving	Paving	6/16/2023	6/29/2023	5	10	
6	Architectural Coating	Architectural Coating	6/30/2023	7/13/2023	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 6

Acres of Paving: 0.47

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 7,500; Non-Residential Outdoor: 2,500; Striped Parking Area: 1,229 (Architectural

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Scrapers	1	8.00	367	0.48
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45

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Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	26.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	12.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	54.00	21.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	11.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2983	0.0000	0.2983	0.0452	0.0000	0.0452			0.0000			0.0000
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829		2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**	**0.2983**	**0.8379**	**1.1362**	**0.0452**	**0.7829**	**0.8281**		**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.2500e-003	0.2441	0.0453	8.4000e-004	0.0227	1.9500e-003	0.0246	6.2100e-003	1.8700e-003	8.0800e-003		92.0974	92.0974	3.6900e-003	0.0146	96.5403
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0416	0.0292	0.3326	8.3000e-004	0.0989	5.4000e-004	0.0994	0.0262	4.9000e-004	0.0267		83.9288	83.9288	3.2300e-003	2.8200e-003	84.8491
Total	**0.0469**	**0.2733**	**0.3779**	**1.6700e-003**	**0.1216**	**2.4900e-003**	**0.1241**	**0.0324**	**2.3600e-003**	**0.0348**		**176.0262**	**176.0262**	**6.9200e-003**	**0.0174**	**181.3894**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1343	0.0000	0.1343	0.0203	0.0000	0.0203			0.0000			0.0000
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829	0.0000	2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**	**0.1343**	**0.8379**	**0.9722**	**0.0203**	**0.7829**	**0.8032**	**0.0000**	**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.2500e-003	0.2441	0.0453	8.4000e-004	0.0227	1.9500e-003	0.0246	6.2100e-003	1.8700e-003	8.0800e-003		92.0974	92.0974	3.6900e-003	0.0146	96.5403
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0416	0.0292	0.3326	8.3000e-004	0.0989	5.4000e-004	0.0994	0.0262	4.9000e-004	0.0267		83.9288	83.9288	3.2300e-003	2.8200e-003	84.8491
Total	**0.0469**	**0.2733**	**0.3779**	**1.6700e-003**	**0.1216**	**2.4900e-003**	**0.1241**	**0.0324**	**2.3600e-003**	**0.0348**		**176.0262**	**176.0262**	**6.9200e-003**	**0.0174**	**181.3894**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.3784	15.6673	10.0558	0.0245		0.5952	0.5952		0.5476	0.5476		2,375.1569	2,375.1569	0.7682		2,394.3613
Total	**1.3784**	**15.6673**	**10.0558**	**0.0245**	**1.5908**	**0.5952**	**2.1859**	**0.1718**	**0.5476**	**0.7193**		**2,375.1569**	**2,375.1569**	**0.7682**		**2,394.3613**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0256	0.0180	0.2047	5.1000e-004	0.0609	3.3000e-004	0.0612	0.0161	3.0000e-004	0.0165		51.6485	51.6485	1.9900e-003	1.7300e-003	52.2148
Total	**0.0256**	**0.0180**	**0.2047**	**5.1000e-004**	**0.0609**	**3.3000e-004**	**0.0612**	**0.0161**	**3.0000e-004**	**0.0165**		**51.6485**	**51.6485**	**1.9900e-003**	**1.7300e-003**	**52.2148**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7158	0.0000	0.7158	0.0773	0.0000	0.0773			0.0000			0.0000
Off-Road	1.3784	15.6673	10.0558	0.0245		0.5952	0.5952		0.5476	0.5476	0.0000	2,375.1569	2,375.1569	0.7682		2,394.3613
Total	**1.3784**	**15.6673**	**10.0558**	**0.0245**	**0.7158**	**0.5952**	**1.3110**	**0.0773**	**0.5476**	**0.6249**	**0.0000**	**2,375.1569**	**2,375.1569**	**0.7682**		**2,394.3613**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0256	0.0180	0.2047	5.1000e-004	0.0609	3.3000e-004	0.0612	0.0161	3.0000e-004	0.0165		51.6485	51.6485	1.9900e-003	1.7300e-003	52.2148
Total	**0.0256**	**0.0180**	**0.2047**	**5.1000e-004**	**0.0609**	**3.3000e-004**	**0.0612**	**0.0161**	**3.0000e-004**	**0.0165**		**51.6485**	**51.6485**	**1.9900e-003**	**1.7300e-003**	**52.2148**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0860	0.0000	7.0860	3.4253	0.0000	3.4253			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829		1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**1.5403**	**16.9836**	**9.2202**	**0.0206**	**7.0860**	**0.7423**	**7.8283**	**3.4253**	**0.6829**	**4.1082**		**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.0800e-003	0.3756	0.0697	1.3000e-003	0.0349	3.0100e-003	0.0379	9.5500e-003	2.8800e-003	0.0124		141.6884	141.6884	5.6800e-003	0.0225	148.5235
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0320	0.0225	0.2558	6.4000e-004	0.0761	4.1000e-004	0.0765	0.0202	3.8000e-004	0.0206		64.5606	64.5606	2.4800e-003	2.1700e-003	65.2686
Total	**0.0401**	**0.3980**	**0.3255**	**1.9400e-003**	**0.1110**	**3.4200e-003**	**0.1144**	**0.0297**	**3.2600e-003**	**0.0330**		**206.2490**	**206.2490**	**8.1600e-003**	**0.0246**	**213.7920**

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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.1887	0.0000	3.1887	1.5414	0.0000	1.5414			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829	0.0000	1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**1.5403**	**16.9836**	**9.2202**	**0.0206**	**3.1887**	**0.7423**	**3.9310**	**1.5414**	**0.6829**	**2.2243**	**0.0000**	**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.0800e-003	0.3756	0.0697	1.3000e-003	0.0349	3.0100e-003	0.0379	9.5500e-003	2.8800e-003	0.0124		141.6884	141.6884	5.6800e-003	0.0225	148.5235
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0320	0.0225	0.2558	6.4000e-004	0.0761	4.1000e-004	0.0765	0.0202	3.8000e-004	0.0206		64.5606	64.5606	2.4800e-003	2.1700e-003	65.2686
Total	**0.0401**	**0.3980**	**0.3255**	**1.9400e-003**	**0.1110**	**3.4200e-003**	**0.1144**	**0.0297**	**3.2600e-003**	**0.0330**		**206.2490**	**206.2490**	**8.1600e-003**	**0.0246**	**213.7920**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731		2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**		**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0447	1.2286	0.3596	4.1500e-003	0.1265	0.0112	0.1377	0.0364	0.0107	0.0471		444.3483	444.3483	0.0116	0.0652	464.0637
Worker	0.1728	0.1213	1.3815	3.4500e-003	0.4108	2.2300e-003	0.4130	0.1090	2.0500e-003	0.1110		348.6274	348.6274	0.0134	0.0117	352.4502
Total	**0.2175**	**1.3499**	**1.7412**	**7.6000e-003**	**0.5373**	**0.0134**	**0.5507**	**0.1454**	**0.0128**	**0.1581**		**792.9757**	**792.9757**	**0.0250**	**0.0769**	**816.5139**

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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731	0.0000	2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**	**0.0000**	**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0447	1.2286	0.3596	4.1500e-003	0.1265	0.0112	0.1377	0.0364	0.0107	0.0471		444.3483	444.3483	0.0116	0.0652	464.0637
Worker	0.1728	0.1213	1.3815	3.4500e-003	0.4108	2.2300e-003	0.4130	0.1090	2.0500e-003	0.1110		348.6274	348.6274	0.0134	0.0117	352.4502
Total	**0.2175**	**1.3499**	**1.7412**	**7.6000e-003**	**0.5373**	**0.0134**	**0.5507**	**0.1454**	**0.0128**	**0.1581**		**792.9757**	**792.9757**	**0.0250**	**0.0769**	**816.5139**

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3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880		2,289.5233	2,289.5233	0.4330		2,300.3479
Total	**1.7136**	**13.6239**	**14.2145**	**0.0250**		**0.6136**	**0.6136**		**0.5880**	**0.5880**		**2,289.5233**	**2,289.5233**	**0.4330**		**2,300.3479**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0272	1.0451	0.3165	4.0000e-003	0.1265	5.4900e-003	0.1320	0.0364	5.2500e-003	0.0417		429.5145	429.5145	0.0106	0.0631	448.5722
Worker	0.1611	0.1072	1.2783	3.3400e-003	0.4108	2.1100e-003	0.4129	0.1090	1.9400e-003	0.1109		337.6315	337.6315	0.0122	0.0108	341.1609
Total	**0.1882**	**1.1523**	**1.5948**	**7.3400e-003**	**0.5373**	**7.6000e-003**	**0.5449**	**0.1454**	**7.1900e-003**	**0.1526**		**767.1459**	**767.1459**	**0.0227**	**0.0739**	**789.7331**

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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880	0.0000	2,289.5233	2,289.5233	0.4330		2,300.3479
Total	**1.7136**	**13.6239**	**14.2145**	**0.0250**		**0.6136**	**0.6136**		**0.5880**	**0.5880**	**0.0000**	**2,289.5233**	**2,289.5233**	**0.4330**		**2,300.3479**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0272	1.0451	0.3165	4.0000e-003	0.1265	5.4900e-003	0.1320	0.0364	5.2500e-003	0.0417		429.5145	429.5145	0.0106	0.0631	448.5722
Worker	0.1611	0.1072	1.2783	3.3400e-003	0.4108	2.1100e-003	0.4129	0.1090	1.9400e-003	0.1109		337.6315	337.6315	0.0122	0.0108	341.1609
Total	**0.1882**	**1.1523**	**1.5948**	**7.3400e-003**	**0.5373**	**7.6000e-003**	**0.5449**	**0.1454**	**7.1900e-003**	**0.1526**		**767.1459**	**767.1459**	**0.0227**	**0.0739**	**789.7331**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8802	8.6098	11.6840	0.0179		0.4338	0.4338		0.4003	0.4003		1,709.9926	1,709.9926	0.5420		1,723.5414
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8802**	**8.6098**	**11.6840**	**0.0179**		**0.4338**	**0.4338**		**0.4003**	**0.4003**		**1,709.9926**	**1,709.9926**	**0.5420**		**1,723.5414**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0447	0.0298	0.3551	9.3000e-004	0.1141	5.9000e-004	0.1147	0.0303	5.4000e-004	0.0308		93.7865	93.7865	3.3700e-003	3.0100e-003	94.7669
Total	**0.0447**	**0.0298**	**0.3551**	**9.3000e-004**	**0.1141**	**5.9000e-004**	**0.1147**	**0.0303**	**5.4000e-004**	**0.0308**		**93.7865**	**93.7865**	**3.3700e-003**	**3.0100e-003**	**94.7669**

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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8802	8.6098	11.6840	0.0179		0.4338	0.4338		0.4003	0.4003	0.0000	1,709.9926	1,709.9926	0.5420		1,723.5414
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8802**	**8.6098**	**11.6840**	**0.0179**		**0.4338**	**0.4338**		**0.4003**	**0.4003**	**0.0000**	**1,709.9926**	**1,709.9926**	**0.5420**		**1,723.5414**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0447	0.0298	0.3551	9.3000e-004	0.1141	5.9000e-004	0.1147	0.0303	5.4000e-004	0.0308		93.7865	93.7865	3.3700e-003	3.0100e-003	94.7669
Total	**0.0447**	**0.0298**	**0.3551**	**9.3000e-004**	**0.1141**	**5.9000e-004**	**0.1147**	**0.0303**	**5.4000e-004**	**0.0308**		**93.7865**	**93.7865**	**3.3700e-003**	**3.0100e-003**	**94.7669**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.2046					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**5.3963**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0328	0.0218	0.2604	6.8000e-004	0.0837	4.3000e-004	0.0841	0.0222	4.0000e-004	0.0226		68.7768	68.7768	2.4700e-003	2.2100e-003	69.4957
Total	**0.0328**	**0.0218**	**0.2604**	**6.8000e-004**	**0.0837**	**4.3000e-004**	**0.0841**	**0.0222**	**4.0000e-004**	**0.0226**		**68.7768**	**68.7768**	**2.4700e-003**	**2.2100e-003**	**69.4957**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.2046					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**5.3963**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0328	0.0218	0.2604	6.8000e-004	0.0837	4.3000e-004	0.0841	0.0222	4.0000e-004	0.0226		68.7768	68.7768	2.4700e-003	2.2100e-003	69.4957
Total	**0.0328**	**0.0218**	**0.2604**	**6.8000e-004**	**0.0837**	**4.3000e-004**	**0.0841**	**0.0222**	**4.0000e-004**	**0.0226**		**68.7768**	**68.7768**	**2.4700e-003**	**2.2100e-003**	**69.4957**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	8.5000e-003	0.0104	0.0841	1.5000e-004	0.0206	1.0000e-004	0.0207	5.4800e-003	1.0000e-004	5.5800e-003		15.6787	15.6787	1.2800e-003	8.9000e-004	15.9764
Unmitigated	8.5000e-003	0.0104	0.0841	1.5000e-004	0.0206	1.0000e-004	0.0207	5.4800e-003	1.0000e-004	5.5800e-003		15.6787	15.6787	1.2800e-003	8.9000e-004	15.9764

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	1.89	4.74	5.29	5,128	5,128
Government (Civic Center)	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	1.89	4.74	5.29	5,128	5,128

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	10.00	5.00	6.50	33.00	48.00	19.00	66	28	6
Government (Civic Center)	10.00	5.00	6.50	75.00	20.00	5.00	50	34	16
Other Non-Asphalt Surfaces	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

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4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.565456	0.056003	0.181452	0.119774	0.020095	0.005300	0.013361	0.009475	0.000768	0.000676	0.024349	0.000802	0.002487
Government (Civic Center)	0.565456	0.056003	0.181452	0.119774	0.020095	0.005300	0.013361	0.009475	0.000768	0.000676	0.024349	0.000802	0.002487
Other Non-Asphalt Surfaces	0.565456	0.056003	0.181452	0.119774	0.020095	0.005300	0.013361	0.009475	0.000768	0.000676	0.024349	0.000802	0.002487

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.9200e-003	0.0174	0.0146	1.0000e-004		1.3200e-003	1.3200e-003		1.3200e-003	1.3200e-003		20.9186	20.9186	4.0000e-004	3.8000e-004	21.0429
NaturalGas Unmitigated	1.9200e-003	0.0174	0.0146	1.0000e-004		1.3200e-003	1.3200e-003		1.3200e-003	1.3200e-003		20.9186	20.9186	4.0000e-004	3.8000e-004	21.0429

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Government (Civic Center)	177.808	1.9200e-003	0.0174	0.0146	1.0000e-004		1.3200e-003	1.3200e-003		1.3200e-003	1.3200e-003		20.9186	20.9186	4.0000e-004	3.8000e-004	21.0429
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**1.9200e-003**	**0.0174**	**0.0146**	**1.0000e-004**		**1.3200e-003**	**1.3200e-003**		**1.3200e-003**	**1.3200e-003**		**20.9186**	**20.9186**	**4.0000e-004**	**3.8000e-004**	**21.0429**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Government (Civic Center)	0.177808	1.9200e-003	0.0174	0.0146	1.0000e-004		1.3200e-003	1.3200e-003		1.3200e-003	1.3200e-003		20.9186	20.9186	4.0000e-004	3.8000e-004	21.0429
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**1.9200e-003**	**0.0174**	**0.0146**	**1.0000e-004**		**1.3200e-003**	**1.3200e-003**		**1.3200e-003**	**1.3200e-003**		**20.9186**	**20.9186**	**4.0000e-004**	**3.8000e-004**	**21.0429**

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6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1342	3.0000e-005	2.8300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.1100e-003	6.1100e-003	2.0000e-005		6.5000e-003
Unmitigated	0.1342	3.0000e-005	2.8300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.1100e-003	6.1100e-003	2.0000e-005		6.5000e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0143					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1197					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.6000e-004	3.0000e-005	2.8300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.1100e-003	6.1100e-003	2.0000e-005		6.5000e-003
Total	**0.1342**	**3.0000e-005**	**2.8300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**6.1100e-003**	**6.1100e-003**	**2.0000e-005**		**6.5000e-003**

CalEEMod Version: CalEEMod.2020.4.0

Date: 10/4/2021 1:40 PM

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0143					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1197					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.6000e-004	3.0000e-005	2.8300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.1100e-003	6.1100e-003	2.0000e-005		6.5000e-003
Total	**0.1342**	**3.0000e-005**	**2.8300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**6.1100e-003**	**6.1100e-003**	**2.0000e-005**		**6.5000e-003**

Appendix B

Biological Survey Report

MADRONE ECOLOGICAL CONSULTING

2617 K Street, Suite 175
Sacramento, CA 95816

www.madroneeco.com
(916) 822-3230

February 16, 2016

Mr. Fred Bremerman
Cosumnes CSD
9355 East Stockton Boulevard, Suite 185
Elk Grove, California 95624

Subject: Reconnaissance Level Biological Survey for the Maintenance Shop-Administration Building Property, Elk Grove, Sacramento County, California

Dear Mr. Bremerman:

Per your request, Madrone Ecological Consulting (Madrone) conducted a reconnaissance-level biological survey for the of the approximately 2.3-acre Maintenance Shop-Administration Building Property (Study Area). Madrone assessed the Study Area for the presence of wetlands including vernal pools, burrowing owls (and burrowing owl habitat), Swainson's hawks (and the presence of Swainson's hawk nesting/foraging habitat), elderberry shrubs, and other special, sensitive, or protected status species.

Project Area Location

The Study Area is located east of Williamson Drive, west of Elk Grove-Florin Road, and south of Elk Grove Boulevard in Elk Grove, California. **Figure 1** is a vicinity map, and **Figure 2** shows the boundaries of the Study Area overlain on a National Agriculture Imagery Program (NAIP) aerial photo flown June 21, 2014.

Methodology

A record search of the California Natural Diversity Data Base (CNDDB) was performed prior to the field survey to list all recorded occurrences of special status species within a 0.5-mile radius of the Study Area. Additionally, historic aerial photography from 1937 to 2015 was reviewed to ascertain historic land uses and to evaluate the potential presence of current or historical water features including wetlands and vernal pools.

Madrone senior biologist Matt Hirkala conducted a site visit on February 15, 2017, to determine if the Study Area supported potential wetlands or other waters of the U.S. or State (including vernal pools) or other sensitive habitats or special status species. Meandering transects were performed on foot throughout the entire Study Area.

Existing Site Conditions

The Study Area is undeveloped and contains no habitable structures. It is bordered by Jessie Baker School and Clarence Frank Baker Park on the south, by Cosumnes Community Services District buildings on the north and Williamson Drive on the West.

Land uses in the surrounding areas primarily consist of residential and commercial developments.

The Study Area supports degraded fallow non-native annual grasslands primarily comprised of rip-gut brome (*Bromus diandrus*), wild oats (*Avena fatua*), seaside barley (*Hordeum marinum*), soft brome (*Bromus hordeaceus*), and perennial ryegrass (*Festuca perennis*). Several trees are located throughout the Study Area and primarily include valley oak (*Quercus lobata*) as well as a few scattered non-native ornamentals.

Results

The Study Area currently appears to support approximately 0.131 acre of potential water features (**Figure 2**). The approximate location and extent of the potential waters was "heads-up digitized" on geo-rectified NAIP aerial photography based upon saturation and ponding observed during the site visit. Recent rains and the above-average 2016-17 wet-season precipitation totals have likely increased the reach of these features from previous years; the actual extent of wetlands per the Corps of Engineers standards, which also factors in the species of live plants present, may be smaller than those mapped.

The largest water feature is a seasonal wetland which traverses the northern part of the Study Area and follows the historic alignment of Elk Grove Creek, which was rerouted to the west of Williamson Drive sometime after 1937. Additionally, the site supports a drainage ditch which is located in the northwest corner of the parcel. This ditch parallels the west edge of the Study Area and drains into the above-discussed seasonal wetland. Both of these features drain into a ground-level grate near the pedestrian crosswalk on Williamson Drive that marks the entrance to a storm drain. A detailed aquatic resources delineation performed during the growing season prior to any disking or other ground disturbing activities is recommended to ascertain the accurate reach of water features. The delineation should be conducted in accordance with U.S. Army Corps of Engineers (USACE) guidelines for determining the extent of waters of the U.S.

A Department of the Army Permit from the USACE is required prior to the discharge of dredged or fill material into waters of the U.S. Based on the acreage of potential waters identified, it appears that development of the site could be authorized by a Nationwide Permit.

The seasonal wetland feature may provide suitable habitat for the Federally-listed vernal pool fairy shrimp (*Branchinecta lynchi*) and vernal pool tadpole shrimp (*Lepidurus packardi*). In the absence of negative protocol-level surveys, the presence of these species is typically assumed within wetlands that pond during the winter months and dry up in the late spring. During processing of a Nationwide Permit request, the USACE would consult with the U.S. Fish and Wildlife Service for impacts to potential habitat for the federal-listed vernal pool fairy shrimp and tadpole shrimp.

No burrowing owls (*Athene cunicularia*) were observed during the site visit. Although appropriately-sized ground squirrel burrows were identified on or immediately adjacent to the site, no evidence of burrowing owl use (whitewash, owl pellets, or molted feathers) was observed. Though appropriate burrowing owl

nesting and foraging habitat is present on the site, it is of low quality due to the extensive commercial and residential developments that surround the Study Area.

The site contains trees large enough to support raptor nests including those for Swainson's hawks (*Buteo swainsoni*); however, no large nests were observed. The non-native annual grasslands provide suitable foraging habitat for Swainson's hawks and other raptors. The nesting and foraging habitats contained within the Study Area are of low quality due to the close proximity of highly developed lands surrounding the site.

The Study Area contains native valley oaks that may fall under the purview of the tree preservation ordnances of the City of Elk Grove. Though certain activities performed by the Cosumnes Community Services District are exempt from tree permit requirements, we recommend contacting the City prior to the start of any tree removing or pruning activities. (The City's Tree Preservation and Protect policy is outlined at the following link: http://www.codepublishing.com/CA/ElkGrove/html/ElkGrove19/ElkGrove1912.html.

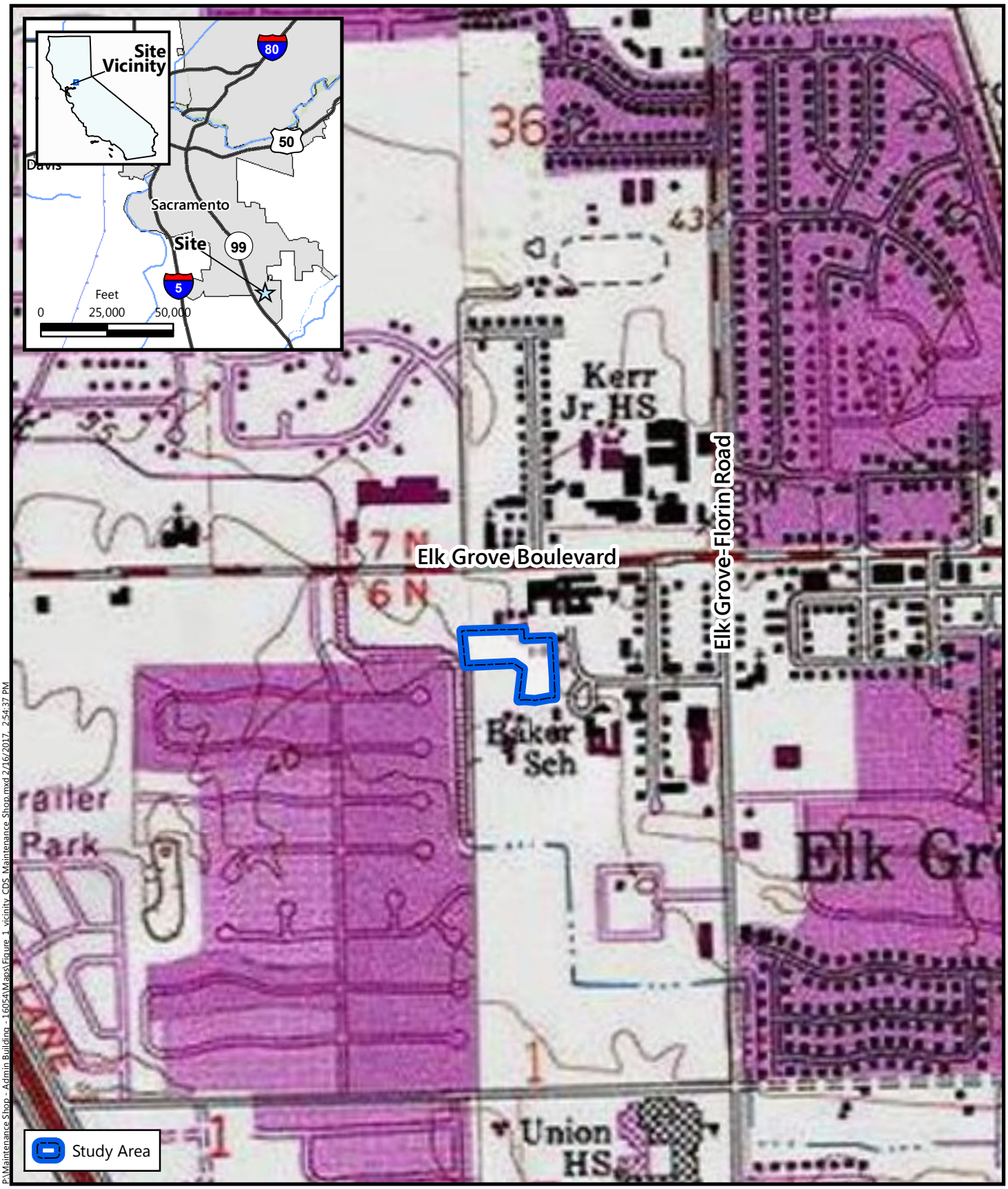
Lastly, the site does not support any elderberry shrubs or suitable tricolored blackbird nesting habitat such as blackberry thickets or stands of cattails or bulrush.

In summary, we recommend that prior to development of the site you conduct a delineation of aquatic resources per the U.S. Army Corps of Engineers guidelines, and obtain the appropriate permits for fill in waters of the U.S. We also recommend pre-construction surveys for active burrowing owl and hawk nests. We appreciate the opportunity to assist you with this project. If you have any questions or need additional information, please contact me at (916) 822-3230 or gfodge@madroneeco.com.

Sincerely,

Ginger E. Fodge

Ginger E. Fodge
Principal



P:\Maintenance Shop - Admin Building - 16054\Maps\Figure 1_vicinity_CDS_Maintenance Shop.mxd 2/16/2017, 2:54:37 PM

Source: *United States Geologic Survey, 1980*
"Florin and Elk Grove, California" 7.5-Minute Topographic Quadrangles
Section 1, Township 6 North, Range 5 East, MDBM

Figure 1
Vicinity Map
Reconnaissance Level Biological Survey

Maintenance Shop-Administration Building
Sacramento County, California

MADRONE ECOLOGICAL CONSULTING

N

Feet

0 50 100

Aerial Source: *USDA, National Agriculture Imagery Program,* June 21, 2014

Figure 2
Study Area
Reconnaissance Level Biological Survey

Maintenance Shop-Administration Building
Sacramento County, California

MADRONE ECOLOGICAL CONSULTING

Appendix C

Aquatic Resources Jurisdictional Delineation

853 LINCOLN WAY, SUITE 208
AUBURN, CALIFORNIA 95603
T 530.887.8500 F 530.887.1250

August 31, 2021 13486

Christine Manitta
Senior Landscape Architect
Cosumnes Community Services District
8820 Elk Grove Boulevard
Elk Grove, CA 95624

Subject: Aquatic Resources Jurisdictional Delineation for the Cosumnes Community Services District Nature Park, Sacramento County, California

Dear Ms. Manitta,

This technical report presents the findings of a jurisdictional delineation of aquatic resources conducted by Dudek for the proposed construction of the Cosumnes Community Services District (CCSD) Nature Park (proposed project) in the City of Elk Grove, Sacramento County, California (Figure 1, Project Location). The purpose of this investigation was to evaluate the presence and extent of aquatic resources that may be subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and/or the California Department of Fish and Wildlife (CDFW). The investigation included an analysis of aquatic resources within the vicinity of proposed improvements (the project site).

This report is intended to satisfy formal documentation according to the delineation guidelines and protocols stipulated by the USACE under Section 404 of the federal Clean Water Act (CWA), the RWQCB under Section 401 of the federal CWA, and the CDFW under Section 1600-1607 of the California Fish and Game Code (CFGC).

1 Project Site Location and Description

The project site includes an existing parking lot associated with the CCSD Administration Building, an old trailer, non-native annual grassland with scattered valley oak and non-native ornamental trees, and the existing Baker Park. The project site is located on Assessor Parcel Numbers 125-0120-021, -025 and is surrounded by a mix of school, residential, and commercial uses. To the west is a channelized portion of Elk Grove Creek. The project site occurs at an elevation that ranges from 30 to 35 feet above mean sea level, and is located within Sections 1 of Township 6 North, Range 5 East, of the Elk Grove California 7.5-minute U.S. Geological Survey quadrangle (Figure 1, Project Location). The project site encompasses non-native annual grassland and was evaluated for this aquatic resources jurisdictional delineation (Figure 2, Project Site).

To access the project site from California Highway 99 heading south from Sacramento, California, exit on Elk Grove Boulevard (Exit 286) and turn left onto Elk Grove Boulevard. The project site is located on the right side of the road behind the CCSD Administration building.

2 Proposed Project

The proposed project design is in a conceptual phase as of August 2021, but as currently designed it would preserve the existing wetlands and add approximately 22 new trees, 20,480 square feet of ADA-compliant accessible pathways, ramps, and bridges, rain gardens to capture stormwater runoff, redesign of the existing parking lot including new solar covers, and 32 new bicycle parking spaces. The project would also include a children's nature play area and new gardens for urban agriculture and planting demonstrations. A proposed future Nature Center building would allow for education, training, events, and community activities. A small parking lot with 8 vehicle spaces would be located adjacent to the Nature Center.

3 Summary of Regulations

Three agencies regulate activities within inland streams, wetlands, and riparian areas in California. The USACE's Regulatory Program regulates activities pursuant to Section 404 of the CWA; the CDFW regulates activities under the CFGC Sections 1600–1616; and the RWQCB regulates activities under Section 401 of the CWA and the Porter–Cologne Water Quality Control Act (Porter–Cologne Act).

The USACE regulates "discharge of dredged or fill material" into "waters of the United States," which includes tidal waters, interstate waters, and all other waters that are part of a tributary system to interstate waters or to navigable "waters of the United States," the use, degradation, or destruction of which could affect interstate or foreign commerce or which are tributaries to waters subject to the ebb and flow of the tide (33 CFR, Part 328.3(a)), pursuant to provisions of Section 404 of the CWA. The USACE generally takes jurisdiction within rivers and streams to the "ordinary high water mark" (OHWM) determined by erosion, the deposition of vegetation or debris, and changes in vegetation. On January 23, 2020, the EPA and USACE published a final rule (33 CFR, Part 328) defining the scope of waters protected under the CWA in an effort to undo the broad interpretation of federal jurisdiction established in the 2015 "Clean Water Rule" (80 Federal Regulation 37053). The new rule, referred to as the "Navigable Waters Protection Rule," issued new regulations to redefine the types of waterbodies covered by the federal CWA, which dramatically narrowed the scope of the federal administration's regulatory authority compared to previous CWA regulations. As a result of the final rule, EPA and USACE define "waters of the United States" to include the following four categories: (1) the territorial seas and traditional navigable waters (TNWs); (2) tributaries of such waters; (3) certain lakes, ponds, and impoundments of jurisdictional waters; and (4) wetlands adjacent to other jurisdictional waters (other than waters that are themselves wetlands). The USACE defines jurisdictional wetlands as areas that contain hydrophytic vegetation, hydric soils, and wetland hydrology, in accordance with the procedures established in the Corps Wetland Delineation Manual (USACE 1987) and the Regional Supplement to the Wetland Delineation Manual: Arid West Region (USACE 2008b).

On August 30, 2021, the Navigable Waters Protection Rule was struck down in the U.S. District Court for the District of Arizona. While still unclear, federal jurisdiction may revert to pre-2015 definitions, including those detailed in key court decisions (i.e., Rapanos v. United States, Carabell v. United States Army Corps of Engineers). Under these definitions, USACE typically asserts jurisdiction over the following: 1) TNWs and their adjacent wetlands; non-navigable tributaries of TNWs that are relatively permanent (e.g., tributaries that typically flow year-round or have a continuous flow at least seasonally); 2) wetlands that directly abut such tributaries (e.g., not separated by uplands,

berm, dike, or similar feature)[1]; and, 3) non-relatively permanent waters, if determined (on a fact-specific analysis) to have a significant nexus with a TNW—including non-navigable tributaries that do not typically flow year-round or have continuous flow at least seasonally, wetlands adjacent to such tributaries, and wetlands adjacent to but that do not directly abut such tributaries. Absent a significant nexus, federal jurisdiction is lacking.

In accordance with Section 1602 of the CFGC (Lake and Streambed Alteration), the CDFW regulates activities that "will substantially divert, obstruct, or substantially change the natural flow or bed, channel or bank, of any river, stream, or lake designated by the Department in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit." The CDFW takes jurisdiction to the top of bank of the stream, or the limit of the adjacent riparian vegetation, referred to in this report as "streambed and associated riparian habitats." Lake and Streambed Alteration Agreement applications to the CDFW must include a California Environmental Quality Act (CEQA) document for the application to be deemed complete by CDFW. A complete certified or adopted CEQA document must be received before the CDFW can issue a Lake and Streambed Alteration Agreement.

The RWQCB regulates "discharging waste, or proposing to discharge waste, within any region that could affect the waters of the State" (Water Code Section 13260 (a)), pursuant to provisions of the Porter–Cologne Act. "Waters of the State" are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (Water Code Section 13050 (e)). Before the USACE will issue a CWA Section 404 permit, applicants must receive a CWA Section 401 Water Quality Certification from the RWQCB. If a CWA Section 404 permit is not required for the project, the RWQCB may still require a permit (i.e., Waste Discharge Requirement) under the Porter–Cologne Act. Applications to the RWQCB must also include a complete certified or adopted CEQA document to be deemed complete by RWQCB.

4 Methods

Data regarding aquatic resources present within the project site were obtained through a review of pertinent literature and field assessment; both are described in detail below.

4.1 Literature Review

Prior to visiting the project site, potential and/or historic drainages and aquatic features were investigated based on a review of the following: USGS topographic maps (1:24,000 scale), aerial imagery, the National Wetland Inventory (NWI) database (USFWS 2020), and the Natural Resource Conservation Service (NRCS) Web Soil Survey (2020).

4.2 Aquatic Resources Field Delineation

Following the initial data collection, Dudek biologist and wetland delineator, Paul Keating performed a formal (routine) wetlands delineation within the project site on August 11, 2021. All areas that were identified as being potentially subject to the jurisdiction of the USACE, RWQCB, and CDFW were field verified and mapped.

1 Relatively permanent waters do not include ephemeral tributaries, which flow only in response to precipitation, and intermittent streams, which do not typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months)

The USACE wetlands delineation was performed in accordance with the Corps Wetlands Delineation Manual (USACE 1987), Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (USACE 2008a), A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the United States (USACE 2008b), and guidance provided by the USACE and EPA on the geographic extent of federal jurisdiction (Navigable Waters Protection Rule; 33 CFR, Part 328). Refer to Section 3 regarding potential changes in federal jurisdiction that occurred after the field delineation.

For potential wetland areas, data on vegetation, hydrology, and soils were collected on standardized wetland delineation data forms in representative locations to assess the potential for hydric soils, hydrophytic vegetation, and hydrology. The wetland indicator status was assigned to each plant species using the Arid West 2018 Regional Wetland Plant List (USACE 2018), as shown in Table 1 below. Dominant plant species encountered within the project site were identified to the lowest taxonomic level needed to determine wetland plant indicator status. Those species that could not be immediately identified were brought into the laboratory for further investigation.

Table 1. Summary of Wetland Indicator Status

Category	Probability
Obligate Wetland (OBL)	Almost always occur in wetlands (estimated probability of >99%)
Facultative Wetland (FACW)	Usually occur in wetlands (estimated probability of 67% to 99%)
Facultative (FAC)	Equally likely to occur in wetlands/non-wetlands (estimated probability of 34% to 66%)
Facultative Upland (FACU)	Usually occur in non-wetlands (estimated probability 67% to 99%)
Obligate Upland (UPL)	Almost always occur in non-wetlands (estimated probability >99%)
No Indicator (NI)	—

Potential non-wetland waters of the United States were delineated based on the limits of an OHWM. During the jurisdictional delineation, drainage features were examined for evidence of an OHWM, saturation, presence of surface water, wetland vegetation, and nexus to a traditional navigable water of the United States. If any of these criteria were met, transects were run to determine the extent of each regulatory agency's jurisdiction. Data on transect widths, dominant vegetation present within the wetland and in the adjacent uplands, and wetland morphology were recorded on field forms.

Areas regulated by the RWQCB as waters of the state are generally coincident with the USACE but include wetland and non-wetland water features isolated from navigable waters of the United States that have evidence of surface water inundation.

Wetland and non-wetland waters were mapped during the field survey to obtain characteristic parameters and detailed descriptions using standard measurement tools. The location of transects, extents of each feature, and sample points were collected in the field using an aerial photograph and topographic map of the project site, and a Trimble R1 GNSS Receiver with sub-meter accuracy and ArcGIS Collector app for iOS. A Dudek geographic information system (GIS) technician digitized the jurisdictional extents based on the transect measurements and GPS data into a project-specific GIS using ArcGIS software.

5 Results

Dudek used the methods described above to determine the presence or absence of wetland resources under the jurisdiction of USACE, RWQCB, and CDFW within the project site. Only one seasonal wetland swale was identified within the project site as a potential jurisdictional resource. The determination of aquatic resource jurisdiction within the project site was supported by information obtained from the USGS topographic map, Web Soil Survey, USFWS NWI map, and field assessment. Information obtained from each source is described below.

5.1 USGS Topographic and Watershed Map Review

The USGS 7.5-minute Elk Grove, California topographic map (USGS 2018) was utilized to identify natural and man-made features occurring within the vicinity of the project site. Information obtained from the map included contour lines, streets, streams, railroad lines, and vegetation. The Elk Grove topographic map was based on National Agriculture Imagery Program imagery from May 2012 and National Elevation Dataset contours from 1999. The project site was generally mapped as undeveloped land. No aquatic features such as "blue-line drainages or significant structural features are identified on the map within the project site's boundaries. The nearest mapped aquatic feature is Elk Grove Creek located to the west. Elk Grove Creek is not hydrologically connected to the project site via any surface drainages but may connect through subsurface stormwater drainage of the site.

The project site occurs within the Herald Hydrologic Subarea (31.11) of the Lower Cosumnes Hydrologic Area (114.20), which occurs within the larger San Joaquin Hydrologic basin (NCRWQCB 2018). According to the USGS, the project site occurs in the Lower Sacramento watershed (HUC8: 18020109; USGS 2020). Sources of hydrology in the project site include local precipitation and runoff from adjacent roadways and parking lots.

5.2 Soil Survey Review

The U.S. Department of Agriculture, Natural Resources Conservation Service's Web Soil Survey for Sacramento County, California (USDA 2020) was consulted and identified one soil association occurring throughout the project site: San Joaquin silt loam, leveled, 0 to 1 percent slopes, San Joaquin silt loam, 0 to 3 percent slopes (Figure 3, Project Soils). Each of these soil types is described in further detail below.

San Joaquin silt loam, leveled, 0 to 1 percent slopes and San Joaquin silt loam, 0 to 3 percent slopes. The San Joaquin series consist of soils on terraces and derived from residuum weathered from alluvium derived from granite. This soil is shallow with a restrictive bedrock layer from 8 to 20 inches. Goulding soils are moderately well-drained and have a very low water transmission rate (hydrologic soil group C). This soil series is not listed as hydric (USDA 2020). Hydric soils are defined by the National Technical Committee for Hydric Soils as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part. Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation. Soils encountered during the field visit were sandy clay loam with some interspersed gravel and generally matched the USDA soil mapping series.

5.3 National Wetlands Inventory Review

The National Wetlands Inventory (NWI) does not identify any aquatic resources within the project site. The NWI identifies Elk Grove Creek (Riverine) as the nearest aquatic feature approximately 150 feet west of the project site. The Riverine System classification includes all wetlands and deep-water habitats contained within a channel, with two exceptions: (1) wetlands dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens, and (2) habitats with water containing ocean-derived salts of 0.5 ppt or greater. A channel is an open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two bodies of standing water (Figure 4, Hydrologic Setting). The NWI dataset is based on coarse aerial mapping and may not capture aquatic resources that are obscured by tree canopy or are otherwise not visible in aerial photography.

5.4 Climate and Rainfall Data Review

The project site is located in the outer Sacramento Valley geographic subdivision of the California Floristic Province (Jepson Flora Project 2020). Annual temperatures in the project site region range from 39.9°F to 91.7°F, and the average annual precipitation is 18.15 inches. On average, the month with the highest rainfall is January (average 3.66 inches), and July has the least precipitation (average 0.01 inch) (WRCC 2020).

According to data from the Sacramento 5E Weather Station Gauge, total precipitation recorded from October 1, 2020, through August 11, 2021, was 6.3 inches, approximately 35% of normal (CDEC 2021). Therefore, the project site region had below normal hydrological conditions in the year preceding the survey.

5.5 Aquatic Resources Field Delineation

5.5.1 Aquatic Resources

Two potential seasonal wetlands and a roadside drainage were investigated within the project site during the field survey. Figure 5 illustrates the location and extent, and Table 2 provides a summary of aquatic resources within the project area. A description of aquatic resources within the project site is provided below, and representative photographs of these resources are provided in Attachment A.

Table 2. Summary of Aquatic Resources

Feature	Cowardin Code [1]	Width (feet)		Length (feet)	Area (acres)		
		USACE	RWQCB/ CDFW	USACE/RWQCB/CDFW	USACE	RWQCB	CDFW
Seasonal Wetland Swale	PEM	–	–	0	0.04	0.04	0.04
			Total	0	0.04	0.04	0.04

Note: [1] PEM = palustrine, emergent.
Source: USFWS 1992.

Seasonal Wetland Swale. One seasonal wetland swale comprising approximately 0.04 acre is present in the eastern portion of the project site. This feature only appears to be inundated seasonally by precipitation and runoff,

especially from the impervious surfaces of the parking lot to the east. It is physically and hydrologically isolated from the nearest mapped aquatic feature, Elk Grove Creek. This feature is discernible from the adjacent upland areas by a change in vegetation. Wetland data stations were established at this feature to collect characteristic parameters and determine jurisdictional status. The feature supported a dominance of hydrophytic vegetation species, including Italian rye grass (*Festuca perennis*; FAC), and Kentucky blue Grass (*Poa pratensis*; FAC). The wetlands contained hydric soils, as indicated by redox dark surface (Hydric Soil Indicator F6). Wetland hydrology was confirmed by the presence of saturation visible on aerial imagery (Hydrology Indicator C9) and drainage patterns (B10). No surface water or saturation was present in the wetland during the August 2021 field survey.

As noted above, the seasonal wetland swale is an isolated feature that has no apparent direct physical or hydrologic influence on any waters of the United States. It is relatively flat, with a very gradual westward slope to a culvert on the eastern edge of the property that heads under a parking lot. However, the presence of storm drains within the western and eastern portion of the project site and the presence of a visible outlet west of the project site at Elk Grove Creek could indicate connectivity through the storm drain system (refer to Figure 5).

5.5.2 Data Summary

Results from observable field indicators from five wetland data stations indicate that one aquatic resource occurs within the project site (Figure 5, Aquatic Resources). These data collected at each data point is included in Attachment C and summarized in Table 3 below.

Table 3. Wetland Data Station Summary

Data Point	Wetland Determination Field Indicators			Location		Determination
	Vegetation	Soils	Hydrology	Latitude	Longitude	
1	Yes	Yes	Yes	38.407405	-121.374705	Wetland
2	No	No	No	38.407343	-121.374740	Non-wetland (upland)
3	Yes	No	Yes	38.407093	-121.374290	Non-wetland (upland)
4	No	No	No	38.407715	-121.375511	Non-wetland (upland)
5	Yes	No	No	38.407988	-121.376067	Non-wetland (upland)

6 Conclusion

The purpose of this report is to identify and delineate all potentially jurisdictional aquatic resources regulated by the USACE, RWQCB, and/or CDFW within the project site. This report represents existing conditions only and does not address any activities proposed within the project site. Information contained within this report will be used to determine the location and extent of potential impacts to jurisdictional aquatic resources associated with future construction activities within the project site.

Dudek delineated one seasonal wetland swale that comprises 0.04 acre and is potentially jurisdictional under federal and state law. The seasonal wetland swale is ephemeral in nature, and connectivity to offsite waters in

unclear. However, the final determination of what agency has jurisdiction cannot be made until the resource agencies have verified the findings of this investigation.

Any project activities that involve impacting this potentially jurisdictional wetland through filling, stockpiling, conversion to a storm drain, road or utility line crossings, maintenance, or any other modification may require permits from regulatory agencies, specifically a Nationwide Permit from USACE, a Water Quality Certification from the RWQCB, and a Streambed Alteration Agreement from the CDFW. If the seasonal wetland swale is not jurisdictional under Section 404 of the CWA and is determined to be only a water of the state, then a Waste Discharge Requirement from RWQCB and a Streambed Alteration Agreement would be necessary for development. Alternatively, no permits will be required if the feature is avoided entirely. If USACE permitting under Section 404 of the CWA is ultimately necessary, it can occur concurrently with processing of the RWQCB's CWA Section 401 permit and can use the same information and analysis. The results of this analysis are preliminary until verified by the Sacramento District of the USACE.

If you have any questions regarding the contents of this report, please contact me by email (mhenry@dudek.com) or phone 530.613.9875.

Sincerely,

Mike Henry
Senior Biologist

Att.: *Figures 1 – 5*
A – Representative Site Photographs
B –Wetland Data Forms
C – Aquatic Resources Spreadsheet

cc: *Paul Keating, Dudek*

7 References Cited

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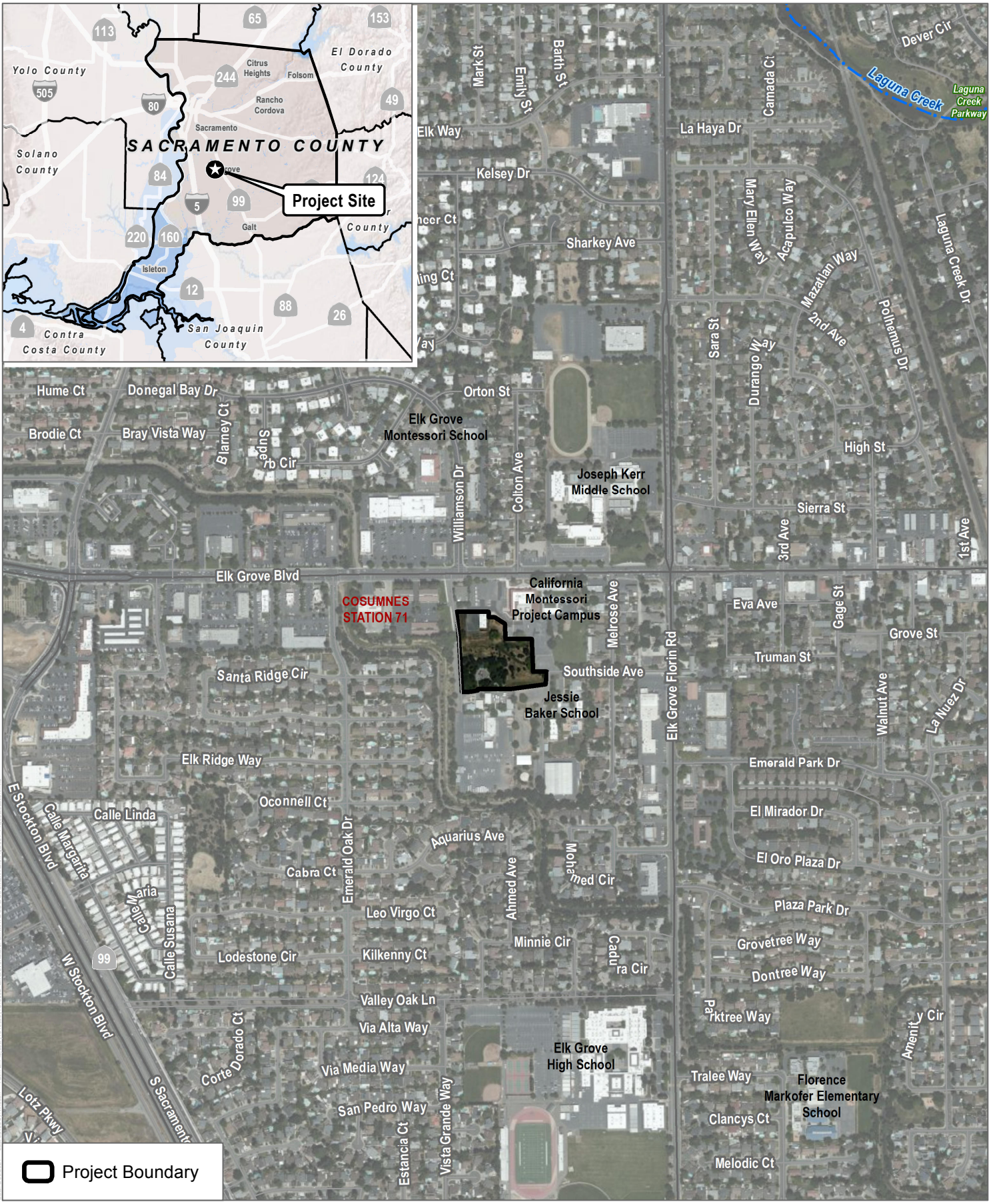
Figures 1-5



SOURCE: Bing Imagery 2021, Sacramento County 2020, NHD 2020, Open Street Maps 2020

FIGURE 1

Project Location

Biological Resources Assessment for the Cosumnes Community Services District Nature Park

DUDEK

SOURCE: Bing Imagery 2021, Sacramento County 2020, NHD 2020, Open Street Maps 2020

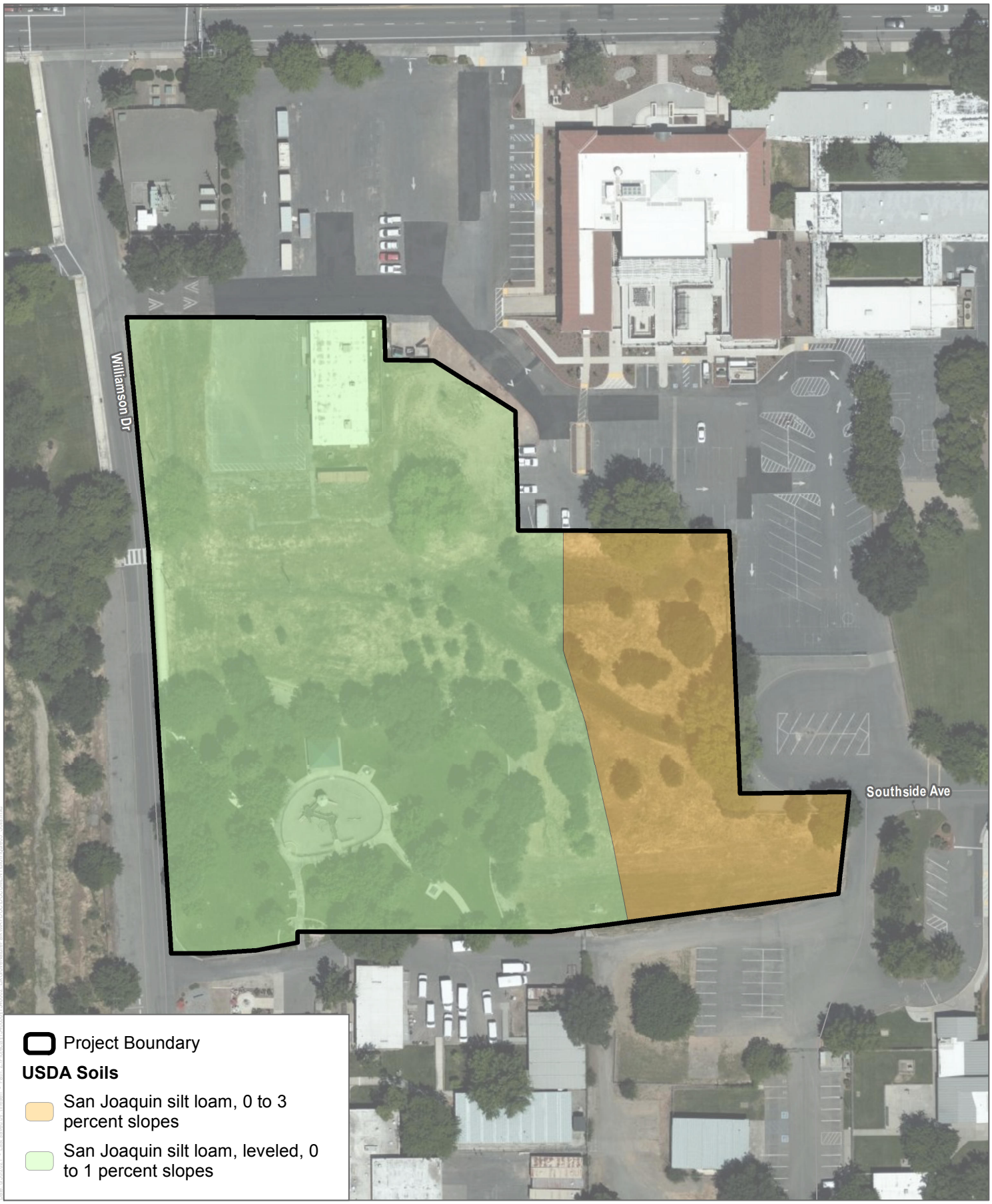
DUDEK

0 150 300 Feet

FIGURE 2

Project Site

Biological Resources Assessment for the Cosumnes Community Services District Nature Park



SOURCE: Bing Imagery 2021, Sacramento County 2020, NHD 2020, Open Street Maps 2020, USDA SURRGO 2009

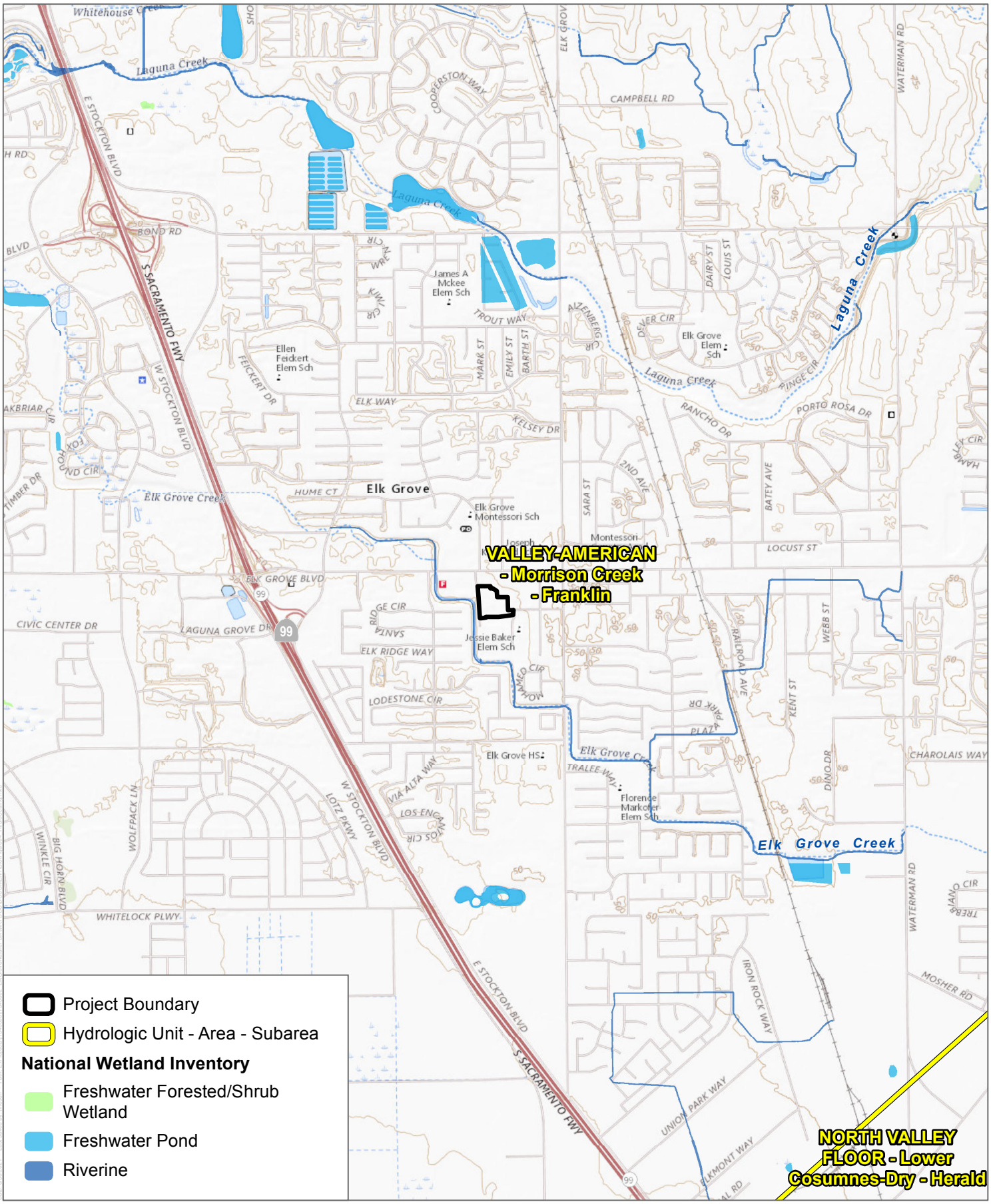
DUDEK

0 50 100 Feet

FIGURE 3

Project Soils

Biological Resources Assessment for the Cosumnes Community Services District Nature Park



SOURCE: USGS National Map 2021, County of Placer 2021, Open Street Maps 2020, USFWS 2020, NHD 2020

DUDEK

0 1,000 2,000 Feet

FIGURE 4

Hydrologic Setting

Biological Resources Assessment for the Cosumnes Community Services District Nature Park

SOURCE: Bing Imagery 2021, Sacramento County 2020, NHD 2020, Open Street Maps 2020

DUDEK

0 50 100 Feet

FIGURE 5

Aquatic Resources

Biological Resources Assessment for the Cosumnes Community Services District Nature Park

Attachment A

Representative Site Photographs

Photo 1. SP01. Data station for Seasonal Wetland 1.

Photo 2. SP02. Paired upland point for SP01

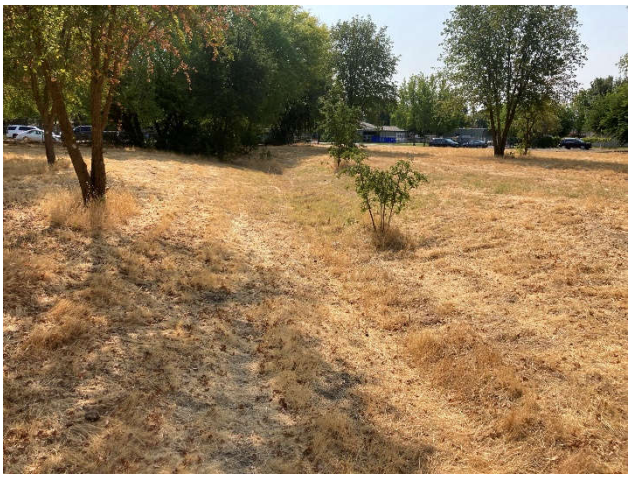


Photo 3. View facing east of seasonal wetland 1 within California annual grassland.

Photo 4. View facing west of seasonal wetland 1 within California annual grassland.

Photo 1. SP03. Potential seasonal wetland. Flows west into culvert under road/parking lot.

Photo 2. SP04. Upland point within slight depressional feature bisecting the north and south half of study area.

Photo 3. SP05. Upland point within slight roadside depressional area/ditch.

Photo 4. View facing north of storm drain, in the southwest corner of site, which appears to drain most of the western half of the study area.

Attachment B

Wetland Data Form

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Cosumnes Community Nature Park City/County: Elk Grove/Sacramento Sampling Date: 8/11/2021

Applicant/Owner: Cosumnes Community Services District State: CA Sampling Point: SP01

Investigator(s): P. Keating Section, Township, Range: 1, 6N, 5E

Landform (hillslope, terrace, etc.): Bottomland Local relief (concave, convex, none): convex Slope (%): 1

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

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

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ✔

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

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

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

Remarks:

Drought year.
Flows to culvert

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1. Rumex crispus	3	N	FAC
2. Festuca perennis	30	Y	FAC
3. Poa pratensis	30	Y	FAC
4. Bromus diandrus	10	N	NL
5. Avena barbata	10	N	NL
6.			
7.			
8.			
	83 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 17 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

Vegation has been mowed. Likely for Fire control. Sample point taken where vegetation was most identifiable.

SOIL

Sampling Point: SP01

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR3/2	95	5YR4/4	5	c	M	Clay Loam	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: hardpan

Depth (inches): 7

Hydric Soil Present? Yes ✔ **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Cosumnes Community Nature Park City/County: Elk Grove/Sacramento Sampling Date: 8/11/2021

Applicant/Owner: Cosumnes Community Services District State: CA Sampling Point: SP02

Investigator(s): P. Keating Section, Township, Range: 1, 6N, 5E

Landform (hillslope, terrace, etc.): Bottomland Local relief (concave, convex, none): none Slope (%): 1

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

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

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ✔

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

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

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

Remarks:

Drought year
Paired upland for SP01

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1. Bromus diandrus	30	Y	NL
2. Avena barbata	50	Y	NL
3. Festuca myuros	15	N	FACU
4.			
5. A			
6.			
7.			
8.			
	95 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

Vegation has been mowed. Likely for Fire control. Sample point taken where vegetation was most identifiable.

SOIL

Sampling Point: SP02

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR3/3	70					sandy clay	
0-4	7.5YR4/4	30						

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: hardpan

Depth (inches): 4

Hydric Soil Present? Yes _____ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No ✔

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Cosumnes Community Nature Park City/County: Elk Grove/Sacramento Sampling Date: 8/11/2021

Applicant/Owner: Cosumnes Community Services District State: CA Sampling Point: SP03

Investigator(s): P. Keating Section, Township, Range: 1, 6N, 5E

Landform (hillslope, terrace, etc.): Bottomland Local relief (concave, convex, none): convex Slope (%): 1

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

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

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ✔

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

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

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

Remarks:

Drought year
Point taken in roadside ditch. Flows to culvert
Same upland point as SP01

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1. Poa pratensis	80	Y	FAC
2. Avena barbata	15	N	NL
3.			
4.			
5.			
6.			
7.			
8.			
	95 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

Vegation has been mowed. Likely for Fire control. Sample point taken where vegetation was most identifiable.

SOIL

Sampling Point: SP03

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR3/2	80					Sandy Loar	
0-3	10YR3/3	20					Sandy Loar	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: hardpan/gravel

Depth (inches): 3

Hydric Soil Present? Yes ✔ **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

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

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

Remarks:

Saturation not present or difficult to see in most historic aerials.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Cosumnes Community Nature Park City/County: Elk Grove/Sacramento Sampling Date: 8/11/2021

Applicant/Owner: Cosumnes Community Services District State: CA Sampling Point: SP04

Investigator(s): P. Keating Section, Township, Range: 1, 6N, 5E

Landform (hillslope, terrace, etc.): Bottomland Local relief (concave, convex, none): none Slope (%): 1

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

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

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ✔

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

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

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

Remarks:

Drought year. Point taken in a ditch that bisects property near seasonal wetland 01

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1. Bromus diandrus	15	N	NL
2. Avena barbata	85	Y	NL
3.			
4.			
5. A			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

Vegation has been mowed. Likely for Fire control. Sample point taken where vegetation was most identifiable.

SOIL

Sampling Point: SP04

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR3/3	80					sandy clay	
0-4	7.5YR4/4	20						

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: hardpan

Depth (inches): 4

Hydric Soil Present? Yes _____ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No ✔

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Cosumnes Community Nature Park City/County: Elk Grove/Sacramento Sampling Date: 8/11/2021

Applicant/Owner: Cosumnes Community Services District State: CA Sampling Point: SP05

Investigator(s): P. Keating Section, Township, Range: 1, 6N, 5E

Landform (hillslope, terrace, etc.): Bottomland Local relief (concave, convex, none): convex Slope (%): 1

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

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

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ✔

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

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

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

Remarks:

Drought year
Point taken in roadside ditch. Flows to storm drain.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1. Poa pratensis	35	Y	FAC
2. Chicorium intybus	7	N	FACU
3. Plantago lanceolata	2	N	FAC
4.			
5.			
6.			
7.			
8.			
	44 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 46 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

Vegation has been mowed. Likely for Fire control. Sample point taken where vegetation was most identifiable.

SOIL

Sampling Point: SP05

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR3/2	90					Sandy Loar	
0-1	10YR3/3	10						

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: hardpan/gravel

Depth (inches): 1

Hydric Soil Present? Yes _____ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No ✔

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

Remarks:

Attachment C

Aquatic Resources Spreadsheet

DUDEK

Waters_Name	State	Cowardin_Code	HGM_Code	Meas_Type	Amount	Units	Waters_Type	Latitude	Longitude	Local_Waterway
Seasonal Wetland Swale	CALIFORNIA	PEM		Area	0.04	ACRE	ISOLATE	38.407405	-121.374705	Elk Grove Creek

Appendix D

Cultural Resources Inventory Report

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SACRAMENTO, CALIFORNIA 95811
T 916.443.8335 F 916.443.5113

October 4, 2021

Christine Manitta
Senior Landscape Architect
Cosumnes Community Services District
8820 Elk Grove Blvd
Elk Grove, CA 95624

Subject: ***Cultural Resources Letter Report for the Elk Grove Nature Park, Sacramento County, California***

Dear Ms. Manitta:

This letter report documents the cultural resources study conducted by Dudek for the proposed Elk Grove Nature Center (Project), located in the City of Elk Grove, California. The Cosumnes Community Service District (District) is the lead agency responsible for compliance with the California Environmental Quality Act (CEQA). This cultural resources study included a North Central Information Center (NCIC) records search, Native American Heritage Commission (NAHC) Sacred Lands File search, and an intensive pedestrian survey for cultural resources. The cultural resources study was conducted by Dudek in accordance with the standards and guidelines defined by the California Office of Historic Preservation and CEQA.

PROJECT LOCATION AND DESCRIPTION

The Project site is located in Sections 1, 6, 31, and 36 of Townships 7 and 6 North, Ranges 5 and 6 East, of the Florin and Elk Grove 7.5' USGS Quadrangle maps (Figure 1). The Project site is located in the central portion of the City of Elk Grove, at the southeast corner of Elk Grove Boulevard and Williamson Drive. The project site includes an existing paved surface parking lot associated with the CCSD Administration Building, an old trailer, non-native annual grassland with scattered valley oak and non-native ornamental trees, and the existing Baker Park. The Project proposes development of a Nature Park, including:

- Construction of a 4,00-5,000 sf single-story building to house the Nature Center, to be used for education, training, events, and community activities.

- Preservation and protection of existing wetlands and construction of boardwalks and overlooks to allow pedestrians to access and view the wetland area without disturbing natural features

- Landscaping to create 7,290 sf of rain gardens and swales to capture and manage storm runoff from adjacent parking lots and hard surfaces using flood tolerant and erosion resistant plants

- Additional landscaping, including planting additional native trees, preservation of open spaces for play areas and to create new gardens for planting demonstrations and preserved open spaces

These improvements are proposed on approximately 4.43 acres in an area undeveloped and developed land including the existing Baker Park (Figure 2).

REGULATORY FRAMEWORK

State Regulations

The California Register of Historical Resources

In California, the term "historical resource" includes but is not limited to "any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (California Public Resources Code [PRC] Section 5020.1(j)). In 1992, the California legislature established the California Register of Historical Resources (CRHR) "to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC Section 5024.1(a)). The criteria for listing resources in the CRHR were expressly developed to be in accordance with previously established criteria developed for listing in the National Register of Historic Places (NRHP), enumerated below. According to PRC Section 5024.1(c)(1–4), a resource is considered historically significant if it (i) retains "substantial integrity," and (ii) meets at least one of the following criteria:

(1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

(2) Is associated with the lives of persons important in our past.

(3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.

(4) Has yielded, or may be likely to yield, information important in prehistory or history.

In order to understand the historic importance of a resource, sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the resource. A resource less than 50 years old may be considered for listing in the CRHR if it can be demonstrated that sufficient time has passed to understand its historical importance (see California Code Regulations, Title 14, Section 4852(d)(2)).

The CRHR protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources. The criteria for the CRHR are nearly identical to those for the NRHP, and properties listed or formally designated as eligible for listing in the NRHP are automatically listed in the CRHR, as are the state landmarks and points of interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

California Environmental Quality Act

As described further below, the following CEQA statutes and CEQA Guidelines are of relevance to the analysis of archaeological, historic, and tribal cultural resources:

- PRC Section 21083.2(g) defines "unique archaeological resource."
- PRC Section 21084.1 and CEQA Guidelines Section 15064.5(a) defines "historical resources." In addition, CEQA Guidelines Section 15064.5(b) defines the phrase "substantial adverse change in the significance of an historical resource;" it also defines the circumstances when a project would materially impair the significance of an historical resource.
- PRC Section 21074(a) defines "tribal cultural resources."
- PRC Section 5097.98 and CEQA Guidelines Section 15064.5(e): Set forth standards and steps to be employed following the accidental discovery of human remains in any location other than a dedicated ceremony.
- PRC Sections 21083.2(b)-(c) and CEQA Guidelines Section 15126.4: Provide information regarding the mitigation framework for archaeological and historic resources, including examples of preservation-in-place mitigation measures; preservation-in-place is the preferred manner of mitigating impacts to significant archaeological sites because it maintains the relationship between artifacts and the archaeological context, and may also

help avoid conflict with religious or cultural values of groups associated with the archaeological site(s).

More specifically, under CEQA, a project may have a significant effect on the environment if it may cause "a substantial adverse change in the significance of an historical resource" (PRC Section 21084.1; CEQA Guidelines Section 15064.5(b)). If a site is either listed or eligible for listing in the CRHR, or if it is included in a local register of historic resources, or identified as significant in a historical resources survey (meeting the requirements of PRC Section 5024.1(q)), it is a "historical resource" and is presumed to be historically or culturally significant for purposes of CEQA (PRC Section 21084.1; CEQA Guidelines Section 15064.5(a)). The lead agency is not precluded from determining that a resource is a historical resource even if it does not fall within this presumption (PRC Section 21084.1; CEQA Guidelines Section 15064.5(a)).

A "substantial adverse change in the significance of an historical resource" reflecting a significant effect under CEQA means "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (CEQA Guidelines Section 15064.5(b)(1); PRC Section 5020.1(q)). In turn, the significance of a historical resource is materially impaired when a project:

(1) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or

(2) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the PRC or its identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the PRC, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

(3) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA (CEQA Guidelines Section 15064.5(b)(2)).

Pursuant to these sections, the CEQA inquiry begins with evaluating whether a project site contains any "historical resources," then evaluates whether that project will cause a substantial adverse

change in the significance of a historical resource such that the resource's historical significance is materially impaired.

If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (PRC Section 21083.2[a], [b], and [c]).

PRC Section 21083.2(g) defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

(1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.

(2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.

(3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Impacts to non-unique archaeological resources are generally not considered a significant environmental impact (PRC Section 21083.2(a); CEQA Guidelines Section 15064.5(c)(4)). However, if a non-unique archaeological resource qualifies as tribal cultural resource (PRC Sections 21074(c); 21083.2(h)), further consideration of significant impacts is required.

CEQA Guidelines Section 15064.5 assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. As described below, these procedures are detailed in PRC Section 5097.98.

Native American Historic Cultural Sites

State law addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project; and establishes the Heritage Commission to resolve disputes regarding the disposition of such remains. In addition, the Native American Historic Resource Protection Act makes it a misdemeanor punishable by up to 1 year in jail to deface or destroy a Native American historic or cultural site that is listed or may be eligible for listing in the CRHR.

California Health and Safety Code Section 7050.5

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains shall occur until the County coroner has examined the remains (Section 7050.5b). PRC Section 5097.98 also outlines the process to be followed in the event that remains are discovered. If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact the NAHC within 24 hours (Section 7050.5c). The NAHC will notify the Most Likely Descendant (MLD). With the permission of the landowner, the MLD may inspect the site of discovery. The inspection must be completed within 48 hours of notification of the MLD by the NAHC. The MLD may recommend means of treating or disposing of, with appropriate dignity, the human remains and items associated with Native Americans.

BACKGROUND RESEARCH

Cultural Records Search Results

A records search was completed for the current proposed Project site and a 1/2-mile radius by Dudek staff at the NCIC at Sonoma State University on September 21, 2021 (Confidential Appendix A). This search included a review of their collection of mapped prehistoric, historical, and built-environment resources, Department of Parks and Recreation Site Records, technical reports, historical maps, and local inventories. Additional consulted sources included the NRHP, California Inventory of Historical Resources/CRHR and listed Office of Historic Preservation Archaeological Determinations of Eligibility, California Points of Historical Interest, and California Historical Landmarks.

Previously Conducted Studies

NCIC records indicate that ten (10) previous cultural resources technical investigations have been conducted within 1/2-mile of the proposed Project site (Table 1). Of these studies, none include any portions of the proposed Project site.

Table 1.
Previous Technical Studies

Report Number	Date	Title	Author
Reports within the Project Site			
None			
Reports within the 1/2-Mile Search Site			
000088	1974	Reconnaissance Archeological Survey of the Morrison Stream Group in Sacramento County, California.	Johnson, Jerald J.
002873	1993	Elk Grove-Florin Road Widening: Elk Grove Boulevard to Bond Road: EIR Draft	Warner, Laurie
003528	2001	NEPA Screening for Wireless Telecommunication Site- Elk Grove Caltrans Cell Site, 9660 East Stockton Blvd., in Elk Grove, CA	Krzeminski, Mike
008023	2006	Archaeological and Historical Investigations for the Elk Grove Boulevard and State Route 99 Northbound Loop On-Ramp Project	
008694	2003	Elk Grove Boulevard Improvement Project	Christopher McMorris
008694	2003	Negative Archaeological Survey Report, Elk Grove Boulevard Improvement Project	Julia Costello and Laura Leach-Palm
010036	1988	Elk Grove Unified School District General Plan Amendment	Paula Boghosian
011822	2012	Elk Grove Historic Context Statement	Ruth Todd, Meg de Courcy, Jonathan Lammers, and Karen Lial
011838	2014	City of Elk Grove Historical Resources Inventory and Evaluation Report	Monte Kim, Meg Scantlebury, James Williams, and Margo Nayyar
012852	2019	City of Elk Grove Historic Resources Survey and Evaluation Report	Margo Nayyar
012913	2019	Historic and Archaeological Survey Report for the Arterial Road Rehabilitation Project and Bicycle Lane Improvement Project, Elk Grove, Sacramento County, California	Ben Curry and Amber Grady

Previously Identified Cultural Resources

NCIC records indicate that no archaeological or built-environment resources are on file within or adjacent to the Project site. Twenty-nine (29) resources were on file within the ½-mile records search area (Table 2).

Table 2.
Previously Recorded Cultural Resources

Primary Number	Trinomial	Period	Name	Type	NRHP/CRHR Status
Resources within the Project Site					
None					
Resources within the 1/2-Mile Search Site					
P-34-000700	CA-SAC-545H	Historic-era	Elk Grove-Florin Road	Roads/trails/railroad grades	
P-34-001682		Historic-era	Texaco Service Station; 8950 Elk Grove Boulevard/9610 Adams Street	Single family property; 1-3 story commercial building	
P-34-001683		Historic-era	Sacramento County Municipal Court; Sacramento County Justice Court; Elk Grove Branch & Elk Grove Library	Government building; Educational building	
P-34-001684		Historic-era	Elk Grove Historic District; Old Elk Grove; Elk Grove Old Town; Elk Grove Historic District;	1-3 story commercial building	
P-34-003896		Historic-era	Elitha Cumi Donner Wilder Grave	Graves/cemetary	
P-34-005023		Historic-era	Ehrhardt & Rhoades Garage	1-3 story commercial building	
P-34-005024		Historic-era	Elk Grove Cemetery	Cemetery	
P-34-005029		Historic-era	Fire Shed	Public utility building	
P-34-005033		Historic-era	Site of Judge Everson Residence	Other	
P-34-005270		Historic-era	Lenard/Leonard Residence	Single family property	
P-34-005271		Historic-era	Agnes Baker Residence	Single family property	
P-34-005272		Historic-era	Stevens Duplex	Multiple family property	
P-34-005273		Historic-era	Cables Residence	Single family property	
P-34-005274		Historic-era	Stevens Residence	Single family property	
P-34-005275		Historic-era	Backer Family Residence	Single family property	
P-34-005276		Historic-era	Fred Vogt Residence	Multiple family property	
P-34-005277		Historic-era	Wilson Lillico Residence	Single family property	

Table 2.
Previously Recorded Cultural Resources

Primary Number	Trinomial	Period	Name	Type	NRHP/CRHR Status
P-34-005278		Historic-era	Elk Grove County Library	Single family property	
P-34-005279		Historic-era	John Keema Residence	Single family property	
P-34-005280		Historic-era	Clem Residence	1-3 story commercial building	
P-34-005281		Historic-era	Dunbar Residence	Single family property	
P-34-005282		Historic-era	Elk Grove Grammar School	Educational building	
P-34-005283		Historic-era	Bartholomew House	1-3 story commercial building	
P-34-005284		Historic-era	Pia Residence	Single family property; Ancillary building	
P-34-005307		Historic-era	Gage Mansion	Single family property	
P-34-005315		Historic-era	Williamson Ranch Packing Shed	Ancillary building	
P-34-005316		Historic-era	Buchanan Residence	Single family property	
P-34-005321		Historic-era	Coon Residence	Single family property	
P-34-005323		Historic-era	Williamson Ranch Historic District	Single family property; Multiple family property; Street furniture	

Archival and Building Development Research

Dudek consulted historic maps and aerial photographs to understand development of the proposed Project site and surrounding properties. Historic aerial photographs were available from 1947 to 2018; historic maps were available from 1909 to 2018 (NETR 2021). Aerial images indicate the vicinity of the Project site was undeveloped agricultural land until at least 1967. Topographic maps prior to 1970 show Elk Grove Creek intersecting the Project site, however the aerial imagery suggests that the creek was channelized prior to 1957.All of the buildings in the vicinity of the Project site, appear to have been constructed by 1993, while Baker Park was constructed between 1998 and 2002

NAHC and Tribal Correspondence

Dudek requested a NAHC search of their Sacred Lands File on September 28, 2021 for the Project site. The results of this request are yet to be received, but will be forwarded to the District upon receipt; follow-up communication and formal consultation with Native American tribes pursuant to Assembly Bill (AB) 52 will be completed by District staff.

The proposed Project is subject to compliance with Assembly Bill 52 (PRC Section 21074), which requires consideration of impacts to "tribal cultural resources" as part of the CEQA process and requires the CEQA lead agency to notify any groups (who have requested notification) of the Project who are traditionally or culturally affiliated with the geographic area of the Project. Because AB 52 is a government-to government process, all records of correspondence related to AB 52 notification and any subsequent consultation are on file with the District.

Intensive Pedestrian Survey

Dudek archaeologist Nicholas Hanten inspected all portions of the approximately 4.43-acre Project site on September 30, 2021, using standard archaeological procedures and techniques that meet the Secretary of Interior's Standards and Guidelines for cultural resources inventory. The southwestern portion of the Project site is the current Clarence Frank Baker Park and has been disturbed from construction of the play structure, paved walkways, and grading for landscaping. The northwestern portion of the Project site was paved for an asphalt parking lot and a portable building. Portions of the remainder of the Project site were largely undisturbed, although some grading and/or erosion from water runoff has previously occurred in the area. Exposed ground surfaces were observed for surface artifacts, undisturbed areas, archaeological deposits, and historic structures. Ground visibility was poor due to existing development and dense annual grasses in undeveloped areas. Evidence of artifacts and archaeological deposits were opportunistically sought after in animal burrows. No historic structures were observed. No archaeological resources were identified within the Project site during the field survey.

Geomorphology

Potential for yet identified cultural resources in the vicinity was reviewed against geologic and topographic GIS data for the area and information from other nearby projects. The "archaeological sensitivity," or potential to support the presence of a buried prehistoric archaeological deposits, is generally interpreted based on geologic landform and environmental parameters (i.e., distance to water and landform slope).

The Project site is located within the Great Valley Geomorphic Province of California, a large basin comprised of the Sacramento and San Joaquin Valleys, bounded by the Serra Nevada and Coast Ranges to the east and west respectively. Specifically, the Project site is situated in the floodplain on the Cosumnes River, and is directly adjacent to Elk Grove Creek, which has been channelized and runs along the western edge of the Project site. Historic topographic maps and aerial images, discussed above, indicate that prior to its channelization, Elk Grove Creek ran through the project area at various points in the past, a remnant of which is the existing wetland/channel area in the northern portion of the project area.

Soils within the site are entirely characterized as San Joaquin silt loam soil series, which consists of moderately deep to a duripan, well and moderately well drained soils. These soils are formed in alluvium derived from mixed but dominantly granitic rock sources, generally on undulating low terraces with slopes between 0- and 9-percent. Slopes within the Project site are between 0-5 percent. Based on review of this information and ignoring surface disturbances observed during survey, the flat topography and proximity to an active waterway indicate the Project site would be moderately-well suited to support the formation or continued presence of buried cultural deposits or surface manifestations.

SUMMARY AND MANAGEMENT RECOMMENDATIONS

Archaeological Resources

Observation of the present conditions within the proposed Project indicate surface conditions are disturbed from landscaping, previous agricultural activities, and other development. No newly identified archaeological resources were recorded during the pedestrian survey of the proposed Project site. Further, a NCIC records search did not identify the presence of cultural resources within the proposed Project site or the surrounding vicinity. An NAHC Sacred Lands File search was requested but has not yet been received. The proposed Project, as currently designed, appears to have a very low potential for encountering intact cultural deposits during ground-disturbing activities and would have no impact to known cultural resources. Based on these negative findings and the observed conditions of the present proposed Project site, no additional cultural resources efforts, including archaeological monitoring, are recommended to be necessary beyond standard protection measures for unanticipated discoveries of cultural resources and human remains, outlined below.

Unanticipated Discovery of Archaeological Resources

In the event that archaeological resources (sites, features, or artifacts) are exposed during construction activities for the proposed Project, all construction work occurring within 100 feet of the find shall immediately stop until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, can evaluate the significance of the find and determine whether or not additional study is warranted. Depending upon the significance of the find under CEQA (14 CCR 15064.5(f); PRC Section 21082), the archaeologist may simply record the find and allow work to continue. If the discovery proves significant under CEQA, additional work such as preparation of an archaeological treatment plan, testing, or data recovery may be warranted.

Unanticipated Discovery of Human Remains

In accordance with Section 7050.5 of the California Health and Safety Code, if human remains are found, the County Coroner shall be immediately notified of the discovery. No further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined, within 2 working days of notification of the discovery, if the potential remains are human in origin. If the County Coroner determines that the remains are, or are believed to be, Native American, he or she shall notify the NAHC in Sacramento within 24 hours. In accordance with California Public Resources Code, Section 5097.98, the NAHC must immediately notify those persons it believes to be the MLD from the deceased Native American. The MLD shall complete their inspection within 48 hours of being granted access to the site. The designated Native American representative would then determine, in consultation with the property owner, the disposition of the human remains.

If you have any questions about this report, please contact me at wburns@dudek.com.

Respectfully submitted,

Nicholas Hanten M.A.

cc: Adam Giacinto, MA, RPA, Dudek
Christine Kronenberg, Dudek

Att: NADB Information
Figure 1. Project Location
Figure 2. Project Site
Appendix A: NCIC Records Search Results - Confidential
Appendix B: NAHC SLF Search

REFERENCES CITED

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NATIONAL ARCHAEOLOGICAL DATABASE (NADB) INFORMATION

Authors: Nicholas Hanten, MA, and Adam Giacinto, MA, RPA

Firm: Dudek

Project Proponent: Cosumnes Community Service District

Report Date: October 2021

Report Title: Cultural Resources Letter Report for the Elk Grove Nature Center, Sacramento County, California

Type of Study: Archaeological Inventory, Intensive Pedestrian Survey

Acreage: Approximately 4.4 acres

Resources: None

USGS Quads: Sections 1, 6, 31, and 36, Township 6 and 7 North, Range 5 and 6 East, Florin and Elk Grove Quadrangle USGS map

Keywords: Elk Grove, Archaeological Inventory, Intensive Pedestrian Survey, Cosumnes Community Service District

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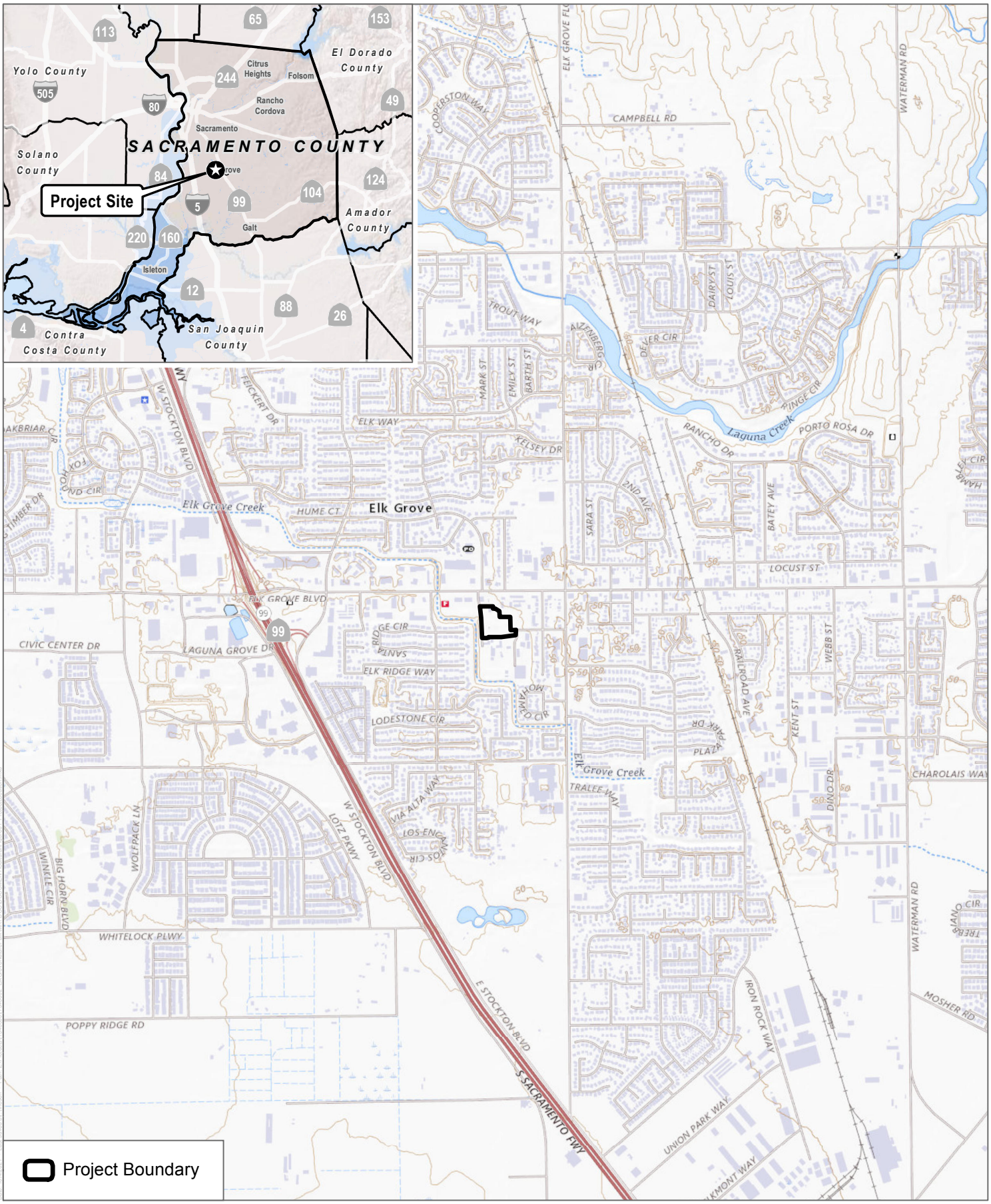

SOURCE: USGS National Map Florin and Elk Grove Quadrangles
Township 6N \ Range 5E \ Section 01

0 1,000 2,000 Feet
0 300 600 Meters

DUDEK

FIGURE 1

Project Location

Cosumnes Community Services District Nature Park

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SOURCE: Bing Imagery 2021, Sacramento County 2020, NHD 2020, Open Street Maps 2020

DUDEK

0 50 100 Feet

0 15 30 Meters

FIGURE 2

Project Site

Cosumnes Community Services District Nature Park

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APPENDIX A

CONFIDENTIAL

NWIC Records Search Results