Sacramento Municipal Utility District

North City Landfill Closure Project

Draft Initial Study and Mitigated Negative Declaration •
January 2021

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Sacramento Municipal Utility District

North City Landfill Closure Project

Draft Initial Study and Mitigated Negative Declaration • January 2021

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TABLE OF CONTENTS

1.0 Introduction 5

1.1 Project Overview 5
1.2 Purpose of Document 5
1.3 Public Review Process 6
1.4 SMUD Board Approval Process 6
1.5 Document Organization 7
1.6 Environmental Factors Potentially Affected 8
1.7 Determination 9

2.0 Project Description 10

2.1 Background Information 10
2.2 Project Location 11
2.3 Project Description 11
2.4 Project Objectives 23
2.5 Potential Permits and Approvals Required 23

3.0 Environmental Impact Evaluation 24

3.0 Evaluation of Environmental Impacts 24
3.1 Aesthetics 26
3.2 Agriculture and Forestry Resources 29
3.3 Air Quality 32
3.4 Biological Resources 39
3.5 Cultural Resources 51
3.6 Energy 54
3.7 Geology and Soils 56
3.8 Greenhouse Gas Emissions 62
3.9 Hazards and Hazardous Materials 64
3.10 Hydrology and Water Quality 72
3.11 Land Use and Planning 77
3.12 Mineral Resources 78
3.13 Noise 79
3.14 Population and Housing 88
3.15 Public Services 89
3.16 Recreation 92
3.17 Transportation 93
3.18 Tribal Cultural Resources 95
3.19 Utilities and Service Systems 98
3.20 Wildfire 100
3.21 Mandatory Findings of Significance 102

4.0 Environmental Justice Evaluation 105

4.1 Introduction 105
4.2 Regulatory Context 106
4.3 Sensitivity of Project Location 108
4.4 Environmental Conditions 109
4.5 Evaluation of the Project's Contribution to a Community's Sensitivity 111
4.6 Summary of Environmental Justice Assessment 113

5.0 List of Preparers 115

6.0 References 117

Chapter 1, “Introduction” 117
Chapter 2, “Project Description” 117
Section 3.1, “Aesthetics” 117
Section 3.2, “Agriculture and Forestry Resources” 117
Section 3.3, “Air Quality” 118
Section 3.4, “Biological Resources” 118
Section 3.5, “Cultural Resources” 119
Section 3.6, “Energy” 119
Section 3.7, “Geology and Soils” 120
Section 3.8, “Greenhouse Gas Emissions” 121
Section 3.9, “Hazards and Hazardous Materials” 121
Section 3.10, “Hydrology and Water Quality” 122
Section 3.11, “Land Use and Planning” 122
Section 3.12, “Mineral Resources” 122
Section 3.13, “Noise” 122
Section 3.14, “Population and Housing” 123
Section 3.15, “Public Services” 123
Section 3.16, “Recreation” 123
Section 3.17, “Transportation” 123
Section 3.18, “Tribal Cultural Resources” 123
Section 3.19, “Utilities and Service Systems” 124
Section 3.20, “Wildfire” 124
Section 3.21, “Mandatory Findings of Significance” 124
Chapter 4, “Environmental Justice Evaluation” 124

APPENDICES

A Air Quality Modeling Results
B Biological Resource Database Information
C Noise Modeling Results
D Cultural Resources Report

FIGURES

Figure 2-1 Project Location 12
Figure 2-2 Project Features 13
Figure 2-3 Proposed Haul Routes 17

TABLES

Table 3.5-1 Criteria for Determining Paleontological Potential 59
Table 3.13-2 Ground-Borne Vibration Impact Criteria for General Assessment 82
Table 3.13-3 Caltrans Recommendations Regarding Levels of Vibration Exposure 82
Table 3.13-4 Exterior Noise Standards 83
Table 3.13-5 Noise Emission Levels from Construction Equipment 85

LIST OF ABBREVIATIONS

AB	Assembly Bill
BACT	Best Available Control Technology
BMP	best management practice
CAAQS	California ambient air quality standards
CalEEMod	California Emissions Estimator Model
CalEnviroScreen	California Communities Environmental Health Screening Tool
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
City	City of Sacramento
CNDDB	California Natural Diversity Database
CO	carbon monoxide
CO_2	carbon dioxide
DAC	disadvantaged community
Draft IS/MND	draft initial study/mitigated negative declaration
DSH	diameter at standard height
DTSC	California Department of Toxic Substances Control
ESA	federal Endangered Species Act
ESL	Environmental Screening Level
FEMA	Federal Emergency Management Agency
FMMP	Farmland Mapping and Monitoring Program
Framework	*Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (Desmocerus californicus dimorphus)*
FTA	Federal Transit Authority
GGRF	Greenhouse Gas Reduction Fund
GHG	Greenhouse gas
GHG	greenhouse gas
in/sec	inch per second
lbs/day	pounds per day
LEA	local enforcement agency
Lot 31	Lot 31 disposal site

MCL	Maximum Contaminant Limit
MMRP	mitigation monitoring and reporting program
$MTCO_2e$	metric tons per year of CO_2 equivalent
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
NCLF	North City Landfill
NO_2	nitrogen dioxide
NOI	notice of intent
NO_X	nitrogen oxides
NPDES	National Pollution Discharge Elimination System
OPR	Governor's Office of Planning and Research
PM_{10}	particulate matter less than or equal to 10 microns in diameter
$PM_{2.5}$	particulate matter less than or equal to 2.5 microns in diameter
ppm	parts per million
PPV	peak particle velocity
PRC	Public Resources Code
ROG	reactive organic gases
SGMA	Sustainable Groundwater Management Act
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMUD	Sacramento Municipal Utility District
SO_2	sulfur dioxide
SSHSP	site-specific health and safety plan
SVAB	Sacramento Valley Air Basin
SVP	Society of Vertebrate Paleontology
TAC	toxic air contaminant
tpy	tons per year
UAIC	United Auburn Indian Community
USFWS	U.S. Fish and Wildlife Service
UST	underground storage tank
VdB	vibration decibels
WPCP	water pollution control plan

1.0 INTRODUCTION

1.1 Project Overview

The Sacramento Municipal Utility District (SMUD) is proposing a landfill closure project of two properties with historic landfill activities, in compliance with California Department of Resources Recycling and Recovery (CalRecycle) requirements and the California Code of Regulations (CCR) Title 27 solid waste regulations, as regulated by Sacramento County environmental management Department (EMD) as the Local Enforcement Agency (LEA) in Sacramento County. The project would include demolition of concrete slab and piers, grading the site for proper drainage, importing soil for the soil cover, constructing a gravel maintenance road, transmission tower maintenance pads and the final soil cover, and developing site drainage improvements and erosion control. Upon completion of landfill closure activities, a post-remediation site monitoring and maintenance plan would be implemented as part of the project to address issues such as site inspections, environmental monitoring, cover maintenance, utility construction, and maintenance of existing and future utilities.

1.2 Purpose of Document

This draft initial study/mitigated negative declaration (Draft IS/MND) has been prepared by SMUD to evaluate potential environmental effects resulting from the North City Landfill Closure Project (project). Chapter 2, “Project Description,” presents the detailed project information.

This document has been prepared in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] Section 21000 et seq.) and the State CEQA Guidelines (CCR Section 15000 et seq.). Under CEQA, an IS can be prepared by a lead agency to determine if a project may have a significant effect on the environment (CEQA Guidelines Section 15063[a]), and thus to determine the appropriate environmental document. For this project, the lead agency has prepared the following analysis that identifies potential physical environmental impacts and mitigation measures that would reduce impacts to a less-than-significant level. SMUD is the lead agency responsible for complying with the provisions of CEQA.

In accordance with the provisions of CEQA, SMUD is distributing a notice of intent (NOI) to adopt a MND to solicit comments on the analysis and mitigation measures presented in this Draft IS/MND. The NOI will be distributed to property owners within a minimum of 1,000 feet of the project and 200 feet of the haul route, as well as to the State Clearinghouse/Governor’s Office of Planning and Research and each responsible and trustee agency. This Draft IS/MND will be available for review and comment from January 21, 2021 to February 22, 2021.

Written comments (including those submitted via e-mail) must be received by close of business on February 22, 2021. Letters should be addressed to:

SMUD–Environmental Services
P.O. Box 15830 MS H201
Sacramento, CA 95852-1830
Attn: Kim Crawford

E-mail comments should be addressed to kim.crawford@smud.org. Anyone with questions regarding the NOI or Draft IS/MND may call Kim Crawford at 916.732.5063.

Digital copies of the NOI and Draft IS/MND are available at https://www.smud.org/CEQA. Hard copies of the NOI and Draft IS/MND are available for public review at the following locations:

Sacramento Municipal Utility District
Customer Service Center
6301 S Street
Sacramento, CA 95817

Sacramento Municipal Utility District
East Campus Operations Center
4401 Bradshaw Road
Sacramento, CA 95827

1.3 Public Review Process

This Draft IS/MND is being circulated for a 30-day public comment period and is available at the locations identified above. Following the 30-day public review period, a final IS/MND will be prepared, presenting written responses to comments received on significant environmental issues. Before SMUD's Board of Directors makes a decision on the project, the final IS/MND will be provided to all parties commenting on the Draft IS/MND.

1.4 SMUD Board Approval Process

The SMUD Board of Directors must adopt the IS/MND and approve the mitigation monitoring and reporting program (MMRP) before it can approve the project. The project and relevant environmental documentation will be formally presented at a SMUD Environmental Resources and Customer Service Committee meeting for information and discussion. The SMUD Board of Directors will then consider adopting the final IS/MND and MMRP at its next regular meeting. Meetings of the SMUD Board of Directors are generally held on the third Thursday of each month.

1.5 Document Organization

This Draft IS/MND is organized as follows:

Chapter 1, "Introduction": This chapter provides an introduction to the environmental review process and describes the purpose and organization of this document.

Chapter 2, "Project Description": This chapter provides a detailed description of the project.

Chapter 3, "Environmental Checklist": This chapter presents an analysis of a range of environmental issues identified in the CEQA Environmental Checklist and determines whether the project would result in no impact, a less-than-significant impact, or a less-than-significant impact with mitigation incorporated. Where needed to reduce impacts to a less-than-significant level, mitigation measures are presented.

Chapter 4, "Environmental Justice Analysis": Although not required by CEQA, SMUD has elected to prepare an evaluation of potential environmental justice issues related to the project.

Chapter 5, "List of Preparers": This chapter lists the organizations and people who prepared the document.

Chapter 6, "References": This chapter lists the references used in preparation of this Draft IS/MND.

1.6 Environmental Factors Potentially Affected

Impacts on the environmental factors below are evaluated using the checklist included in Chapter 3. SMUD determined that the environmental factors checked below would be less than significant with implementation of mitigation measures. It was determined that the unchecked factors would have a less-than-significant impact or no impact.

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

1.7 Determination

On the basis of this initial evaluation:

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

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

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

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

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

K. Crawford
Signature

January 21, 2021
Date

Kim Crawford
Printed Name

Environmental Specialist
Title

Sacramento Municipal Utility District
Agency

2.0 PROJECT DESCRIPTION

SMUD is proposing a landfill closure project, including installation of a soil cover, of SMUD's approximately 12-acre North City Landfill (NCLF) site and 1.5-acres of the approximately 3-acre City of Sacramento (City) owned Lot 31 site (hereafter the "project"). The project would be performed in compliance with the requirements established by CalRecycle and CCR Title 27 solid waste regulations, and regulated by Sacramento County EMD as the Local Enforcement Agency in Sacramento County. Upon construction of the soil cover and drainage improvements, a post-remediation site monitoring and maintenance plan would be implemented to address issues such as site inspections, environmental monitoring, cover maintenance, utility construction, and maintenance of existing and future utilities.

In 2020, SMUD and the City entered into an agreement allowing SMUD to use City property identified as Lot 31, located immediately adjacent and to the east of the far northern end of the NCLF property, to be used for construction of an infiltration pond for control of stormwater runoff from the NCLF property.

2.1 Background Information

The NCLF property was historically operated as a disposal site, where burning of waste occurred, by the City from approximately 1940 to 1949. The City's discharges consisted primarily of garbage, rubbish, and street cleaning wastes. In 1950, SMUD purchased the NCLF property from the City and the Western Pacific Railroad Company for use as an electrical substation. SMUD constructed the North City substation in the early 1950s over the southern end of the City's historical landfill and used the northern portion of the property to dispose of soil and construction and demolition debris between 1980 and 1993 (Brown and Caldwell 2015).

In 2013 SMUD purchased several parcels south and southeast of the North City substation to construct a replacement substation (Station E) because the North City substation has reached its planned operational end of life. After the new Station E substation is operational, the existing North City substation would be dismantled. Dismantling the existing substation and construction of the new Station E substation were evaluated in a CEQA document prepared in 2014 (SMUD 2014), and are not subject to evaluation in this IS/MND.

Lot 31 is part of a larger area that was historically used for landfill operations and appears to be the northern edge of disposal activities. The area received construction and demolition materials prior to 1979. Between approximately 1981 and 1986 Lot 31 and the land to the south were used for a stormwater retention basin. In 1996, the City took ownership of the 3 acres of land currently known as Parcel 031, which includes Lot 31, from Blue Diamond Growers.

The limit of waste of historic landfill materials at the NCLF property is approximately 508,000 square feet or 11.66 acres and generally extends north along the Union Pacific Railroad tracks to the west and bounded by the Blue Diamond Growers property and the City's Lot 31 to the east. The limit of waste within SMUD's parcel limits is approximately 461,700 square feet (ft^2) or 10.6 acres. Lot 31 is reported to contain waste over approximately 65,300 square feet or 1.5 acres. In-place landfill materials associated with the NCLF property generally consist of 3 to 18 feet of construction and demolition debris overlying approximately 8 to 19 feet of municipal waste. This information is based upon site disposal records and has been verified through several site exploratory investigations (Brown and Caldwell 2015, Kleinfelder 2011). The NCLF property and Lot 31 do not have a final cover or liner system because neither was required by regulations associated with solid waste disposal when the sites were in use.

2.2 Project Location

The project consists of two separate parcels: the NCLF property to the west and Lot 31 to the east (hereafter the "project site"). The project site is located at 20th Street and North B Street in Sacramento, California and is bounded by the Union Pacific Railroad tracks and right-of-way to the west, the American River and levee to the north, undeveloped parcels owned by the City of Sacramento and Blue Diamond Growers to the east, and SMUD-owned property to the south and southeast (Figure 2-1). The New Era Park, Boulevard Park, and Marshall School neighborhood of Sacramento is located south of the project site.

The project site is located on Section 31 of Township 9 North, Range 5 East, of the Sacramento East U.S. Geological Survey 7.5-minute topographic quadrangle, Mount Diablo Baseline and Meridian. The centroid coordinates of the project site are 38°35'10.31" North, 121°28'23.45" West.

Regional access to the project site is obtained from Business 80. Local access to the project site is obtained through gravel roadways that connect the project site to 28th Street near Sutter's Landing Regional Park (Figure 2-1).

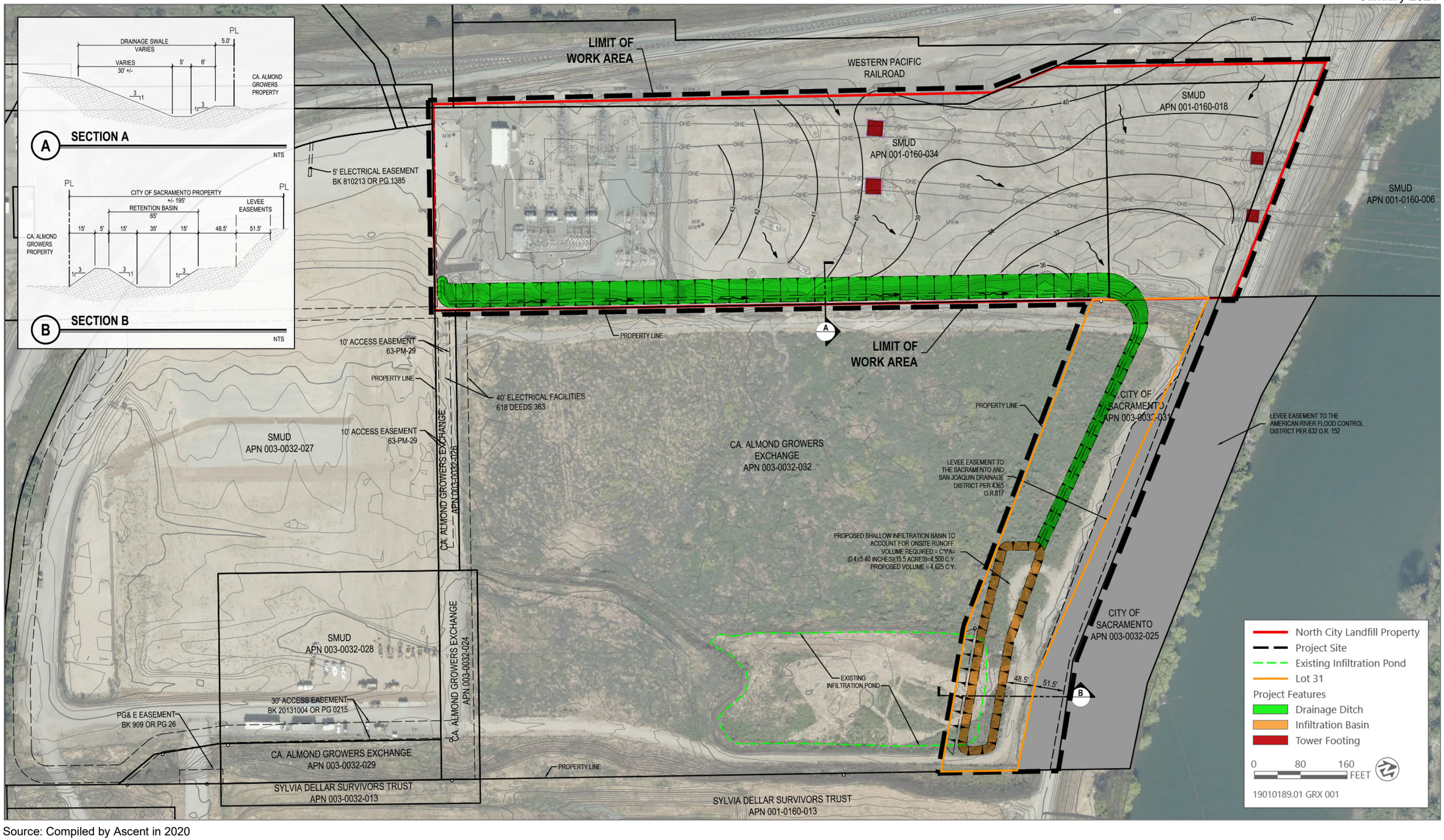
2.3 Project Description

2.3.1 Project Components

The project involves closure of two properties with historic landfill activities. Remediation of the NCLF property, including demolition of the North City substation concrete slab and piers, regrading of the site, placement of soil cover, drainage improvements, and installation of gravel maintenance road and transmission tower maintenance pads. The project also includes remediation of Lot 31, consisting of regrading the site, constructing an infiltration pond, making drainage improvements, and placing soil cover over areas that contain buried construction and demolition waste. These project features are depicted in Figure 2-2 and consist of five primary components:

Source: Compiled by Ascent in 2020

Figure 2-1 Project Location



Source: Compiled by Ascent in 2020

Figure 2-2 Project Features

- site preparation,
- concrete demolition,
- rough site grading,
- soil cover placement, and
- drainage improvements.

Site Preparation

Site preparation would include clearing and grubbing of the site where the rough grading would be necessary to construct the proposed drainage ditch and infiltration pond. In addition, the existing perimeter fences and vegetation would be removed, and soil and debris stockpiles would be relocated/consolidated to provide access to the existing landfill surface. The perimeter fences would be reinstalled after placement of the final cover and completion of the proposed drainage features.

Concrete Demolition

The concrete slab and piers from the dismantled North City substation would either be (1) broken up and removed for recycling, (2) broken up and left in place or (3) broken up and stockpiled for use in the rough grading activities.

Rough Site Grading

Substation concrete debris may be consolidated on the NCLF property over the existing landfill surface for use as part of the landfill rough grading. Waste (i.e., soil and construction and demolition debris) that is excavated as part of the landfill rough grading of the east slope of the landfill would be consolidated over the landfill surface as part of the landfill rough grading.

The site contains approximately 15,000 cubic yards of stockpiled clean soil (sampled, analyzed and accepted for use), which would be used for the rough site grading of the NCLF property. In addition, existing landfill surface up to a maximum depth of 4.75 feet may redistributed onsite to achieve the desired finished site grading. Finished rough site grading will have a minimum slope of 2 percent that would reflect the site finished grading plan, and would be 2 feet lower than final grades. All imported soils would be sampled and analyzed, the results of which would be reviewed and approved by the LEA before use on the project site.

Soil Cover Placement

Approximately 40,000 cubic yards of soil would be required for final grading and construction of the soil cover for the NCLF property, with an additional approximately 10,000 cubic yards required for the Lot 31 final grading and soil cover. Soil would be

hauled to the site at a maximum rate of 50 truck trips per day during the soil cover placement activities. All imported soils would be sampled and analyzed, the results of would be reviewed and approved by the LEA before use on the project site.

A 2-foot-thick soil cover would be placed and compacted over rough grades, resulting in a surface with a minimum slope of 2 percent to allow for drainage from the site toward the constructed drainage ditch and infiltration pond. The cap would be a monofill cover—that is, constructed as a uniform soil layer and compacted to the same requirements as the rough grading activities.

As shown in Figure 2-2, the project site contains four electrical transmission line tower footings. Upon completion of the soil cover placement, maintenance pads would be constructed around the transmission towers. Finally, gravel maintenance roads would be developed to provide access to the transmission towers and maintenance pads.

Drainage Improvements

The NCLF property would be graded so that runoff would drain primarily to the east, as depicted in Figure 2-2. East-flowing runoff would be collected in the east drainage ditch of the NCLF property and directed to the infiltration pond located on Lot 31. West-flowing runoff would be collected by the Western Pacific Railroad's surface water collection system, which has excess drainage capacity. Surface water runoff to the west would be minimized to the extent feasible. Grading along the edges of the project site would match that of the adjacent properties and would be performed such that no surface runoff would reach the American River or otherwise come into contact with waters of the state.

Drainage ditches would be designed to accommodate stormwater runoff during a 100-year storm event. They would have a minimum slope of 0.5 percent and 6 inches of freeboard. The infiltration pond on Lot 31 would be sized to provide 1 foot of freeboard and would be located outside of levee and City of Sacramento trail easements and future trail requirements. Drainage ditches would be lined with an erosion control fabric and seeded with native grasses for erosion control. The infiltration pond would remain unlined and would be seeded. The maximum approximate excavation depth required for drainage improvements would be 11.5 feet along the eastern slope of the NCLF property. The drainage ditch and infiltration pond would require a maximum cut of approximately 7 feet below ground surface.

2.3.2 Project Construction

Construction equipment and the materials staging area would be located adjacent to the project site on SMUD Station E property, located immediately south of the NCLF property. During construction, access to the site would be maintained, with the primary access for construction equipment, deliveries, and workers from 28th Street, near Sutter's Landing Regional Park. Trucks and construction equipment would enter and exit the project site along existing gravel roadways, as shown in Figure 2-3.

Source: compiled by Ascent in 2020

Figure 2-3 Proposed Haul Routes

Secondary access for the project site would be at C and 20th Streets. Construction would require an average daily worker population of approximately 10 workers, with up to approximately 30 workers during peak construction activities associated with on-site demolition, regrading, and heavy equipment deliveries. Equipment such as scrapers, dozers, compactors, loaders, and excavators would be used to construct the project.

2.3.3 Project Schedule

The project is anticipated to begin during the second quarter of 2022 and would be completed by late 2022, involving construction over a period of 6–9 months. Construction intensity and hours would be in accordance with the City's Noise Ordinance, contained in Title 8, Chapter 8.68 of the Sacramento City Code. Construction would be limited to the hours between 7 a.m. and 6 p.m. on Monday through Saturday and between the hours of 9 a.m. and 6 p.m. on Sunday.

2.3.4 On-Site Environmental Controls

2.3.4.1 Water Pollution Control Plan

As noted above, on-site drainage would be redirected toward the proposed drainage ditch and infiltration pond. Runoff from the project would not come into contact with any waters of the state or United States. Thus, there would be no construction general permit required from the State Water Resources Control Board. This project would not trigger the need for a grading permit from Sacramento County. Regardless, SMUD is committed to implement a water pollution control plan (WPCP) during construction to prevent sediment from leaving the project site. The WPCP would identify best management practices (BMPs) that address excavation areas, stockpile areas, street entrances and exits, construction vehicle maintenance areas, water tanks, dust suppression activities, and postconstruction site stabilization. The WPCP features are summarized as follows.

Excavation and fill areas: Excavation activities would be performed such that no sediment enters or exits active excavation and fill work areas. The following or similarly effective BMPs would be implemented:

- hydroseeding with native grasses,
- gravel bags,
- straw wattles and/or straw bales,
- loose straw soil covering,
- temporary drainage ditches,
- grading,

- low berms,
- silt fences, and
- lining of ditches with erosion control fabric.

Stockpile areas: As appropriate, stockpiled soil and debris would be covered when not actively in use, before forecasted rain, and during rain events to protect against wind and stormwater erosion.

Excavated soil: Excavated soil are not expected to be hauled off site. However, if excavated soil cannot be consolidated into the rough grading of the NCLF property and Lot 31, it would be sampled and the results submitted to the LEA. If hazardous waste is identified, it would remain on-site or otherwise be disposed of in accordance with direction from the LEA.

Street entrances and exits: Primary access to the project site would be obtained through existing gravel roads connected to 28th Street near Sutter's Landing Regional Park and located adjacent to the American River (Figure 2-3). Secondary access for the project site would be from C and 20th Streets. The following BMPs would be implemented to reduce distribution of sediment onto streets:

- Provide ample turning radii as part of the entrance.
- Limit the points of entrance/exit to the construction site.
- Limit the speed of vehicles to control dust.
- Properly grade each construction entrance/exit to prevent runoff from leaving the construction site.
- Route runoff from stabilized entrances/exits through a sediment-trapping device before discharge.
- Design a stabilized entrance/exit to support the heaviest vehicles and equipment that would use it.
- Select construction access stabilization materials (e.g., aggregate, asphaltic concrete, concrete) based on longevity, required performance, and site conditions.
- Do not use asphalt concrete grindings for the stabilized construction access/roadway.
- Require that all employees, subcontractors, and suppliers use the stabilized construction access.

The construction contract would include weekly inspection requirements to ensure that the following regular activities are performed:

- Sweep or vacuum the paved entrance roads to remove visible accumulated sediment.
- Remove aggregate, and separate and dispose of sediment if the construction entrance/exit is clogged with sediment.
- Keep all temporary roadway ditches clear.
- Check for damage, and repair it as needed.
- Replace gravel material when surface voids are visible.
- Remove all sediment deposited on paved roadways within 24 hours.
- Remove gravel and filter fabric at the completion of construction.

Other temporary sediment control BMPs include:

- silt fence,
- fiber rolls,
- gravel bag berm,
- sandbag barrier,
- straw bale barrier, and
- storm drain inlet protection.

Construction vehicle maintenance areas: Maintenance and servicing of construction equipment is a potential source of oils and metals. During project construction, bulk storage of fuels and oils would not occur in areas with the potential for off-site discharge. A service truck would be used to fuel construction equipment. If any maintenance is performed at the site, an area would be designated and precautions taken to minimize spillage of fuels and oils. Absorbent materials and storage bins would be available to clean up minor spills if any occur during maintenance of equipment or fueling operations. These areas would be frequently monitored for any signs of release, such as staining.

Spill prevention and control would be implemented to contain and clean up spills and prevent material discharges to the storm drain system. Spill control procedures are implemented any time chemicals or hazardous substances are stored on the construction site, including, at a minimum, the following materials:

- soil stabilizers/binders,
- dust palliatives,
- herbicides,
- growth inhibitors,
- fertilizers,
- deicing/anti-icing chemicals,
- fuels,
- lubricants, and
- other petroleum distillates.

Water tanks: Water tanks for the project would be placed on SMUD Station E property, immediately south of the NCLF property. Water tanks used to provide water for dust suppression activities would be a potential source of non-stormwater discharges from the site. When water tanks are used, they would be stored away from the site boundary, when feasible, in areas with no potential for discharge, to prevent any unexpected releases from leaving the site. In addition, tanks would be routinely inspected to verify the absence of leaks.

Dust suppression activities: Dust control water would be applied uniformly and lightly to prevent muddy, slippery, or other hazardous conditions. The application would be frequent enough to adequately control nuisance dust; however, excessive application that may affect excavation or compaction operations would be avoided.

Dust control measures would follow the *Stormwater Best Management Practice Handbook: Construction*, prepared by the California Stormwater Quality Association. In addition, the dust control measures would satisfy the requirements of the Fugitive Dust Rule 403 set forth by the Sacramento Metropolitan Air Quality Management District (SMAQMD). These measures would be consistent with the best management practices and best available control technology practices required by SMAQMD.

2.3.4.2 Soil Stockpile Management Plan

A soil stockpile management plan would be required from the contractor before movement of any stockpiled soil or any excavation. This plan would address the movement, relocation, staging, and use of soil stockpiles on the project site. The following information would be included in the plan and would be subject to review and approval by the project engineer and SMUD:

- a detailed construction schedule identifying stockpiling stages pertaining to the landfill surface;
- identification of locations where stockpiled soil may be placed/relocated to before and during construction;
- dust and erosion control measures related to the movement and use of stockpiles; and
- processing, mixing, or separation practices of stockpiled soil to provide improved uniformity.

2.3.4.3 Site Specific Health and Safety Plan

A site-specific health and safety plan (SSHSP) would be prepared before the start of construction-related activities. The SSHSP would be subject to approval by a Certified Industrial Hygienist. The contents of the SSHSP would include:

- requirements related to worker use of personal protective equipment,
- general field safety procedures,
- standard operating procedures for the handling of potentially hazardous materials, and
- worker safety training requirements.

The SSHSP also requires that all activities associated with the project would be overseen by a health and safety monitor (H&S monitor). The H&S monitor would provide safety briefings to construction workers that would address site conditions, possible hazards, and safety measures provided in the SSHSP. In addition, the H&S monitor would be charged with operation of a 4-gas meter to determine methane, oxygen, volatile organic compounds, and hydrogen sulfide concentrations. In the case that the 4-gas meter indicates high levels of noxious gases, the H&S monitor would be responsible for alerting all construction site personnel and providing direction for appropriate actions.

2.3.4.4 Post-remediation Monitoring and Maintenance Plan

Upon completion of remediation activities, a post-remediation monitoring and maintenance plan would be implemented to address issues such as:

- groundwater and landfill gas perimeter migration monitoring,
- transmission tower access and maintenance, and
- drainage and soil cover inspection and maintenance.

A landfill gas collection and control system, including a flare, would not be required because only low levels of methane have been detected at the project site. Landfill gas would be monitored post-remediation, via landfill gas monitoring probes located along the perimeter of the property, to ensure landfill gas is not migrating offsite. Future use of the site may potentially include recreation, pending deeding of the land to the City, and other utility improvements. Details and funding related to these actions are unknown at this time, cannot be known at the time of release of this document, and when they are undertaken would constitute separate efforts from the project (i.e., would be analyzed as separate project under CEQA). Thus, because a meaningful evaluation of these speculative activities is not possible, they are not discussed further in this IS/MND.

2.4 Project Objectives

The objectives of the project are to:

- remediate the NCLF property and Lot 31 in compliance with requirements established by CalRecycle and select parts of the CCR Title 27 solid waste regulations and regulated by Sacramento County EMD as the LEA,
- minimize impacts on nearby sensitive receptors,
- reduce the potential impacts on public health and the environment, and
- receive approval of remediation construction activities.

2.5 Potential Permits and Approvals Required

Elements of the project could be subject to the permitting and/or approval authority of other agencies. As the lead agency pursuant to CEQA, SMUD is responsible for considering the adequacy of this IS/MND and determining whether the project should be approved. The following agencies could require permits or approvals as part of project implementation:

- **CalRecycle:** review of the remediation plan and the post-remediation monitoring and maintenance plan
- **Sacramento County Environmental Management Department, as LEA**: approval of the remediation plan and the post-remediation monitoring and maintenance plan
- **California Regional Water Quality Control Board, Central Valley Region:** review and approval of the remediation plan and the post-remediation monitoring and maintenance plan
- **California Department of Transportation**: issues permits for movement of oversized or excessive loads on state highways

3.0 Evaluation of Environmental Impacts

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less-Than-Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less-than-significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.

   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9. The explanation of each issue should identify:

   a) the significance criteria or threshold, if any, used to evaluate each question; and

   b) the mitigation measure identified, if any, to reduce the impact to less than significance.

3.1 Aesthetics

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
I. Aesthetics.				
Except as provided in Public Resources Code Section 21099 (where aesthetic impacts shall not be considered significant for qualifying residential, mixed-use residential, and employment centers), 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 points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

3.1.1 Environmental Setting

Aesthetic resources are generally defined as both the natural and built features of the landscape that contribute to the public's experience and appreciation of the environment. Aesthetic impacts may occur depending on the extent to which a project's presence would negatively alter the perceived visual character and quality of the environment.

The project site is approximately 13.5 acres in size and is relatively flat and open. Surrounding land uses are primarily residential, recreational, or industrial in nature, although no residential uses border the project site. The nearest sensitive receptors are the single-family residences west of the project site, the closest residence being approximately 780 feet from the nearest project site boundary. Other residential receptors located more distant from the project site include single-family residences in the New Era Park neighborhood, located approximately 930 feet south of the nearest project site boundary. The project site is bounded by the Western Pacific Railroad track and right-of-way to the west, the American River and levee to the north, undeveloped parcels owned by Blue Diamond Growers and the City of Sacramento Lot 31 to the east, and SMUD-owned property to the south and southeast (Figure 2-2). The Boulevard Park neighborhood of Sacramento is located south of the project site.

The project site consists of two separate parcels: the NCLF property to the west and the City of Sacramento Lot 31 to the east. The NCLF property contains 15,000 cubic yards of stockpiled soils, sparse vegetation, concrete, and other debris. The North City substation is currently located on the project site, but will be decommissioned and dismantled as part of a different project before the start of the proposed project. High-voltage power lines traverse the NCLF property in a north/south direction. The eastern portion of the project site, City of Sacramento Lot 31, is characterized by relatively flat terrain, low-lying vegetation, and stockpiled soil. The NCLF property is located at a higher elevation than City of Sacramento Lot 31. The project site is surrounded by chain-link fencing.

Views of the project site are limited, in part because access to the site can only be gained by walking along the American River levee. Public views of the site are only available from the American River levee located along the northern boundary of the project site. Private views are available from the adjacent access roads and from the Western Pacific Railroad tracks west of the project site, including individuals aboard trains travelling to and from the downtown Sacramento. The site is not visible to travelers from across the American River because of tree coverage on the banks. Because the project site is located at on an elevated plateau compared to lands to the south, and set back from the elevated railroad grade, it is not visible from the New Era Park, Boulevard Park, and Marshall School neighborhood that are located to the south.

Views from the project site of the surrounding area are dominated by industrial land uses and vacant lots to the south and southeast. Views of the American River to the north are largely precluded by the existing levees and tree coverage along the river. Views from the project site to the west include the Western Pacific Railroad tracks and an assortment of industrial buildings and uses, while views to the south consist of construction associated with SMUD's new Station E substation and Sacramento's tree canopy from the City of Sacramento Lot 31 property and the downtown Sacramento skyline from the project site.

3.1.2 Discussion

a) Have a substantial adverse effect on a scenic vista?

Less than Significant. The project site is located in a previously disturbed area and is currently undeveloped with the exception of the existing SMUD transmission towers and the North City substation. Project implementation would include installing a soil cover and constructing drainage improvements (e.g., recontouring) across the approximately 13.5 acre project site. No new structures would be placed on the project site, and the site would be hydroseed with native grasses upon completion of the project. Upon completion of construction, the site would largely resemble existing conditions, although the project site would slope in a generally west/east direction. Nonetheless, the project would not substantially change the view of the project or surrounding areas. Further, as noted above, views of and from the project site are limited, and any project-related

changes would not prevent long-distance views from or through the area. Therefore, impacts on scenic vistas would be ***less than significant***, and no mitigation is required.

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

No Impact. There are no designated state scenic highway segments within 3 miles of the project site (Caltrans 2020). Because there are no designated state scenic highways nearby, adjacent to, or visible from the project site, the project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. The project would have ***no impact***, and no mitigation is required.

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

Less than Significant. The project is located outside of the nearby urbanized area with limited public access. The project site may be visible from certain vantage points along the American River levee to the north; however, public access to the levee is limited to bicyclists and pedestrians. It should be noted that this section of levee is not part of the American River Parkway multiuse trail and is not used by a substantial number of people. The project involves installation of a soil cover and drainage improvements. Upon completion of construction, the area would no longer contain stockpiled soil and would appear as relatively smooth soil graded to allow water to flow the west. Overall, the project site would have a visual character similar to that of the existing conditions (e.g., undeveloped land) such that views would not be substantially degraded. Therefore, the project would have a ***less-than significant*** impact on the visual character or the quality of public views of the site and its surroundings, and no mitigation is required.

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

Less than Significant. Construction activities would occur during daylight hours and would not require nighttime lighting. Construction equipment is unlikely to have reflective surfaces and would not be a substantial source of glare in the area. As no new structures would be located on the project site as part of the project, no lighting or sources of glare would result from project implementation. Therefore, the project would have a ***less-than-significant*** impact related to light and glare, and no mitigation is required.

3.2 Agriculture and Forestry Resources

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
II. Agriculture and Forest 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, as updated) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland.				
In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.				
Would the project:				
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?	☐	☐	☐	☒

3.2.1 Environmental Setting

The project area, including the project site and adjacent properties, does not contain active agricultural operations. The project site is designated as Other Land, while adjacent properties to the south and west are designated as Urban and Built-up by the Farmland Mapping and Monitoring Program (FMMP) (DOC 2018). "Other Land" is described by the FMMP as "land not included in any other mapping category." Common examples include low-density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry, or aquaculture facilities; strip mines and borrow pits; and water bodies smaller than 40 acres. Vacant and non-agricultural land, greater than 40 acres, surrounded on all sides by urban

development is also mapped as Other Land. The project site has historically consisted of vacant lands, has been used as a landfill or substation since 1940, and has not contained any agricultural operations during that time. No portions of the project site or adjacent parcels are held under Williamson Act contracts (Sacramento County 2020).

There are no areas either within or adjacent to the project site that have been zoned or otherwise designated as forest land or timberland (City of Sacramento 2019).

3.2.2 Discussion

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?

No Impact. The project site and surrounding area are not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance by the FMMP. The project site is highly disturbed land that was historically used as a landfill and a substation and has not been used for agriculture purposes for at least the last 80 years. Because implementation of the project would not result in the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use, there would be ***no impact***. No mitigation is required.

b) Conflict with existing zoning for agricultural use or a Williamson Act contract?

No Impact. The project site is zoned by Sacramento County as M-2-SPD-Heavy Industrial (City of Sacramento 2019). It is not zoned for agricultural use or subject to a Williamson Act contract. Thus, there would be ***no impact***. No mitigation is required.

c-d) 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))? Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The project site is zoned by Sacramento County as M-2-SPD-Heavy Industrial and is not zoned as forest land (as defined in PRC Section 12220(g)), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g)). Therefore, the project would not conflict with existing zoning, or cause rezoning or conversion of forest land, timberland, or timberland zoned Timberland Production. There would be ***no impact***. No mitigation is required.

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?

No Impact. The project site is surrounded by industrial and residential land uses and consists of previously disturbed land that was historically used as a landfill and a substation. The project site and nearby area do not support Farmland, and there is no forest land on or nearby the project site. Project operations would consist mainly of site maintenance and monitoring activities and would not result in indirect or direct conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. Therefore, there would be ***no impact***. No mitigation is required.

3.3 Air Quality

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant 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 on to make the following determinations.				
Are significance criteria established by the applicable air district available to rely on for significance determinations?	☒ Yes		☐ No	
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?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

3.3.1 Environmental Setting

The U.S. Environmental Protection Agency has established national ambient air quality standards (NAAQS) for six criteria air pollutants, which are known to be harmful to human health and the environment: carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter (which is categorized into particulate matter less than or equal to 10 microns in diameter [PM_{10}] and particulate matter less than or equal to 2.5 microns in diameter [$PM_{2.5}$]), and sulfur dioxide. The State of California has established the California ambient air quality standards (CAAQS) for these six pollutants, as well as for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. NAAQS and CAAQS were established to protect the public from adverse health impacts caused by exposure to air pollution. A brief description of the criteria air pollutants and their effects on health is provided in Table 3.3-1.

Table 3.3-1 Criteria Air Pollutants

Pollutant	Sources	Effects
Ozone	Ozone is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG), also sometimes referred to as volatile organic compounds by some regulating agencies, and nitrogen oxides (NO_X). The main sources of ROG and NO_X, often referred to as ozone precursors, are products of combustion processes (including motor vehicle engines) and the evaporation of solvents, paints, and fuels.	Ozone causes eye irritation, airway constriction, and shortness of breath and can aggravate existing respiratory diseases, such as asthma, bronchitis, and emphysema.
Carbon monoxide	Carbon monoxide (CO) is usually formed as the result of the incomplete combustion of fuels. The single largest source of CO is motor vehicle engines; the highest emissions occur during low travel speeds, stop-and-go driving, cold starts, and hard acceleration.	Exposure to high concentrations of CO reduces the oxygen-carrying capacity of the blood and can cause headaches, nausea, dizziness, and fatigue; impair central nervous system function; and induce angina (chest pain) in persons with serious heart disease. Very high levels of CO can be fatal.
Particulate matter	Some sources of particulate matter, such as wood burning in fireplaces, demolition, and construction activities, are more local in nature, while others, such as vehicular traffic, have a more regional effect.	Scientific studies have suggested links between fine particulate matter and numerous health problems, including asthma, bronchitis, and acute and chronic respiratory symptoms, such as shortness of breath and painful breathing. Recent studies have shown an association between morbidity and mortality and daily concentrations of particulate matter in the air.
Nitrogen dioxide	Nitrogen dioxide (NO_2) is a reddish-brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO_2.	Aside from its contribution to ozone formation, NO_2 can increase the risk of acute and chronic respiratory disease and reduce visibility.
Sulfur dioxide	Sulfur dioxide (SO_2) is a combustion product of sulfur or sulfur-containing fuels, such as coal and diesel.	SO_2 is also a precursor to the formation of particulate matter, atmospheric sulfate, and atmospheric sulfuric acid formation that could precipitate downwind as acid rain.
Lead	Leaded gasoline, lead-based paint, smelters (metal refineries), and the manufacture of lead storage batteries have been the primary sources of lead released into the atmosphere, with lead levels in the air decreasing substantially since leaded gasoline was eliminated in the United States.	Lead has a range of adverse neurotoxic health effects.

Notes: CO = carbon monoxide; NO_2 = nitrogen dioxide; NO_x = nitrogen oxides; ROG = reactive organic gases; SO_2 = sulfur dioxide.
Source: EPA 2018

The project site is located in Sacramento County within the Sacramento Valley Air Basin (SVAB). The SVAB is bounded on the north by the North East Plateau Air Basin, on the south by the San Joaquin Valley Air Basin, on the east by the southern portion of the Cascade Range and the northern portion of the Sierra Nevada, and on the west by the Coast Ranges. Sacramento County is currently designated as nonattainment for both the federal and state ozone standards, the federal $PM_{2.5}$ standard, and the state PM_{10} standard. The region is designated as in attainment or being unclassifiable for all other NAAQS and CAAQS (CARB 2019).

The Sacramento Metropolitan Air Quality Management District (SMAQMD) is the local agency responsible for air quality planning and development of air quality plans in the project area. SMAQMD maintains an attainment plan for achieving the state and federal ozone standards that was updated and approved by the SMAQMD Board and the California Air Resources Board (CARB) in 2017. The air quality plan establishes strategies to achieve compliance with the NAAQS and CAAQS ozone standards in all areas within SMAQMD's jurisdiction. There are currently no plans available for achieving the federal $PM_{2.5}$ or state PM_{10} standards. SMAQMD develops regulations and emission reduction programs to control emissions of criteria air pollutants, ozone precursors (oxides of nitrogen [NO_X] and reactive organic gases [ROG]), toxic air contaminants (TACs), and odors within its jurisdiction.

SMAQMD published the *Guide to Air Quality Assessment in Sacramento County,* which was last updated in April 2020 and provides air quality guidance for the preparation of CEQA documents. This guide establishes SMAQMD-recommended thresholds of significance for criteria air pollutants for the evaluation of air quality impacts in Sacramento County. CEQA-related air quality thresholds of significance are tied to achieving or maintaining the attainment designation with the NAAQS and CAAQS, which are scientifically substantiated, numerical concentrations of criteria air pollutants established to protect the public from adverse health impacts. For the purposes of this project, the following thresholds of significance, which are based on the SMAQMD-recommended thresholds, are used to determine whether project-generated emissions would produce a significant localized and/or regional air quality impact such that human health would be adversely affected.

Air quality impacts would be significant if the project would:

- result in construction-generated emissions of NO_X exceeding 85 pounds per day (lbs/day), PM_{10} exceeding 80 lbs/day or 14.6 tons per year (tpy), or $PM_{2.5}$ exceeding 82 lbs/day or 15 tpy;

- result in operational emissions of ROG exceeding 65 lbs/day, NO_X exceeding 65 lbs/day, PM_{10} exceeding 80 lbs/day or 14.6 tpy, or $PM_{2.5}$ exceeding 82 lbs/day or 15 tpy;

- result in carbon monoxide emissions that would violate or contribute substantially to concentrations that exceed the 1-hour CAAQS of 20 parts per million (ppm) or the 8-hour CAAQS of 9 ppm during construction and operations;

- expose any off-site sensitive receptor to a substantial incremental increase in TAC emissions that exceed 10 in one million for carcinogenic risk (i.e., the risk of contracting cancer) and/or a noncarcinogenic hazard index of 1.0 or greater; or

- create objectional odors affecting a substantial number of people.

In addition to these thresholds, all SMAQMD-recommended BMPs (and use of Best Available Control Technology (BACT)) shall be implemented to minimize emission of PM_{10} and $PM_{2.5}$. Without the application of BMPs and BACT, the threshold for PM_{10} and $PM_{2.5}$ during construction and operations is zero pounds per day.

3.3.2 Discussion

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

Less than Significant. The project involves the installation of a soil cover and construction of drainage improvements within the project site. Upon completion of the soil cover and drainage improvement and implementation of the post-remediation site monitoring and maintenance plan, vehicle trips would be minimal and infrequent. Thus, there would be no long-term increase in mobile-source emissions. Therefore, the project's long-term operational emissions of criteria air pollutants and precursors would be below the SMAQMD-recommended thresholds, would not contribute to the exceedance of the NAAQS or CAAQS in the County, and would be consistent with all applicable air quality plans.

Construction activities would occur over a period of 6–9 months, both starting and ending in 2022. Project construction would result in temporary emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ associated with construction activities (e.g., site preparation, grading), operation of off-road equipment, material delivery (up to 50 truck trips could occur per day to haul fill material to the site), and worker commute trips. Fugitive dust emissions of PM_{10} and $PM_{2.5}$ would be primarily associated with site preparation and earthwork and vary as a function of soil silt content, soil moisture, wind speed, acreage of disturbance, and unpaved vehicle miles traveled. Exhaust from off-road equipment can also contain PM_{10} and $PM_{2.5}$. Emissions of ozone precursors, ROG and NO_X, are associated primarily with construction equipment and on-road mobile exhaust. Construction activities associated with the project would likely require the use of equipment such as excavators, dozers, haul trucks (up to 50 truck trips could occur per day to haul fill material to the site), water trucks, loaders, and hammer compactors, as well as other diesel-fueled equipment, as necessary. Construction would be generally separated into five components: site preparation, concrete demolition, rough grading, soil cover placement, and drainage improvements.

Construction-generated emissions were estimated using the California Emissions Estimator Model (CalEEMod) Version 2016.3.2 computer program. Modeling was based on project-specific information, where available; reasonable assumptions based on typical construction activities; and default values in CalEEMod that are based on the project's location and land use type. As discussed in Chapter 2, soil stabilization and dust suppression activities would be used as part of the WPCP and would satisfy the requirements of Fugitive Dust Rule 403, set forth by SMAQMD, which would minimize emissions of PM_{10} and $PM_{2.5}$. These measures would be consistent with the best management practices and best available control technology practices required by SMAQMD. These activities are included in the air quality modeling. Also, as noted in Chapter 2, the project would adhere to strict daily construction hours (7 a.m. to 6 p.m. on Monday through Saturday and 9 a.m. to 6 p.m. on Sunday). The construction analysis assumes that all construction equipment would be used for 8 hours each day. Worst-case construction emissions were estimated based on anticipated construction activities that would occur simultaneously (e.g., concrete demolition, pond excavation, cover soil placement, material hauling) over a 4½-month period. Table 3.3-2 summarizes the modeled maximum daily emissions from construction activities for all pollutants. For assumptions and modeling inputs, refer to Appendix A.

Table 3.3-2 Summary of Emissions Generated during Project Construction

	Maximum Daily Emissions (lbs/day)			
	ROG	**NO_X**	**PM_{10} (exhaust/fugitive)**	**$PM_{2.5}$ (exhaust/fugitive)**
Construction-Related Emissions	3.4	41.5	1.6/48.3	1.5/7.5
SMAQMD threshold of significance[a]	No Threshold	85	80	82
Exceeds threshold?	No	No	No	No

Notes: ROG = reactive organic gases; NO_X = oxides of nitrogen; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; lbs/day = pounds per day; SMAQMD = Sacramento Metropolitan Air Quality Management District.

[a] Represents SMAQMD threshold of significance with compliance with SMAQMD Fugitive Dust Rule 403 using dust suppression activities and soil stabilization.

See Appendix A for details.

Source: Modeled by Ascent Environmental in 2020

As shown in Table 3.3-2, project construction would not generate emissions in excess of the SMAQMD thresholds for ROG, NO_X, PM_{10}, or $PM_{2.5}$. Therefore, this impact would be ***less than significant***, and no mitigation is required.

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

Less than Significant. Sacramento County is currently in nonattainment for the federal and state ozone, state PM_{10}, and federal $PM_{2.5}$ standards. As discussed above,

construction of the project would result in temporary emissions of criteria air pollutants, but project operational emissions would be negligible. Ozone impacts are the result of cumulative emissions from numerous sources that can be inside or outside the region. Ozone is formed in chemical reactions involving NO_X, ROG, and sunlight. Particulate matter (PM_{10} and $PM_{2.5}$) has the potential to cause cumulative local impacts. For example, particulate matter could cause local issues if several unrelated grading or earth-moving activities occurred simultaneously at nearby sites, especially if conditions were dry and/or involved high winds. Such a scenario is not expected because no future projects have been planned or permitted adjacent to the project site that would be under construction at the same time as the project. Additionally, the soil stabilization and dust suppression activities that would be used as part of the WPCP would satisfy the requirements of Fugitive Dust Rule 403 and, thus, would minimize emissions of PM_{10} and $PM_{2.5}$. As discussed previously, project-related emissions of NO_X, ROG, PM_{10}, and $PM_{2.5}$ would not exceed SMAQMD thresholds during construction activities. Because construction emissions would be temporary and would not exceed SMAQMD thresholds, dust suppression measures would be taken, and minimal long-term emissions would be generated during project operations, project-generated emissions would not be cumulatively considerable, and this impact would be ***less than significant***, and no mitigation is required.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less than Significant. Sensitive receptors are generally considered to include those land uses where exposure to pollutants could result in health-related risks to sensitive individuals, such as children and the elderly. Residential dwellings, schools, hospitals, playgrounds, and similar facilities are of primary concern because of the presence of individuals particularly sensitive to pollutants and the potential for these individuals to experience increased and prolonged exposure to pollutants. The nearest sensitive receptors are the single-family residences west of the project site, the closest residence being approximately 780 feet from the nearest project site boundary. Other residential receptors located more distant from the project site include single-family residences in the New Era Park neighborhood, located approximately 930 feet south of the nearest project site boundary.

In terms of existing hazardous gases on the project site associated with historical landfilling, estimates of current and future landfill gas generation from the former NCLF were modeled in 2020. This evaluation indicated that the wastes in place have largely undergone the decomposition process that would generate landfill gas, and only residual volumes of landfill gas are currently being generated. The existing decomposition rate is very low, slowly declining, and is expected to continue to decline over time, which is normal at old landfill sites. While the modeling concluded that landfill gas generation and migration potential is considered to be very low, it is possible that, during final placement of the cover system, landfill gas migration may shift based on the adjustments to the surface contours. However, as part of the project, SMUD would continue to monitor landfill gas migration using the existing landfill gas monitoring system, including during the post-remediation period to ensure methane levels at the property

boundary are in compliance with state requirements for subsurface combustible gas migration control (Miller and Minshew, pers. comm., 2020).

During construction, particulate matter from diesel construction equipment exhaust is the primary TAC of concern. As shown above in Table 3.3-2, construction-related activities would result in emissions of 1.6 lbs/day of PM_{10} and 1.5 lbs/day of $PM_{2.5}$, which would not exceed the SMAQMD thresholds. Additionally, the closest sensitive receptors are at a distance to which PM_{10} and $PM_{2.5}$ would dissipate before reaching them (780 feet away or farther). Furthermore, construction would occur temporarily and intermittently over a limited period of 6–9 months, a duration substantially shorter than the exposure period used for typical health risk calculations (i.e., 30 years). The project would also not generate substantial emissions during project operation as additional on-site activities would not occur following construction. Therefore, the project's short-term construction activities and long-term operation would not expose sensitive receptors to health risks caused by substantial or prolonged TAC concentrations. This impact would be ***less than significant***, and no mitigation is required.

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

Less than Significant. The project site is located on properties that were historically used for landfill operations and/or disposal sites from approximately 1940 to 1949, 1980, and 1993. Because of the level of regulations associated with solid waste disposal at the time it was in use, the NCLF does not have a final cover or liner system. The project would include installing a 2-foot-thick soil cover, which would trap odorous emissions under the soil and, thus, reduce odors from existing conditions. Activities associated with project operation would be limited and would not generate any new odors.

Minor odors from the use of heavy equipment during construction would be temporary and intermittent and would dissipate rapidly from the source with increases in distance. As discussed above, the nearest residential receptors are approximately 780 feet west of the nearest project site boundary, which is sufficiently distant from the project site to allow for substantial odor dissipation.

For the reasons listed above, implementation of the project would not result in exposure of a substantial number of people to objectionable odors during construction or operation. Thus, this impact would be ***less than significant***, and no mitigation is required.

3.4 Biological Resources

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant 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 Wildlife or the 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, or regulations or by the California Department of Fish and Wildlife or the 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?	☐	☐	☐	☒

3.4.1 Environmental Setting

This section describes biological resources in the project site and evaluates potential impacts on such resources as a result of project implementation. To determine the biological resources that may be subject to project impacts, Ascent biologists reviewed the following data sources:

- California Natural Diversity Database (CNDDB) (CNDDB 2020);
- California Native Plant Society Online Inventory of Rare and Endangered Plants (CNPS 2020);

- U.S. Fish and Wildlife Service (USFWS) Information, Planning, and Consultation System (USFWS 2020a); and

- USFWS National Wetlands Inventory (USFWS 2020b).

In addition, an Ascent biologist conducted a reconnaissance survey of the project site on September 17, 2020.

Vegetation and Habitat Types

The project site and the surrounding area has been historically disturbed due to levee construction and urban development. The majority of the project site supports annual grassland and had been maintained/mowed for fire control purposes prior to the September 17, 2020, site visit. Plants observed within the project site include grasses and herbs that were hydroseeded for erosion control, such as clover (*Trifolium* sp.), rabbit's foot grass (*Polypogon monspeliensis*), and Italian ryegrass (*Festuca perennis*). There is a small cluster of invasive seedlings consisting of tree-of-heaven (*Ailanthus altisima*), black locust (*Robinia* sp.), and nonnative catalpa (*Catalpa* sp.) seedlings in the north central portion of the project site. Other plants observed include wild oat (*Avena* sp.), switchgrass (*Panicum virgatum*), Bermuda grass (*Cynodon dactylon*), Italian thistle (*Carduus pycnocephalus*), blessed milkthistle (*Silybum marianum*), yellow starthistle (*Centaurea solstitialis*), hemp dogbane (*Apocynum cannabinum*), sweet pea (*Lathyrus latifolius*), Russian thistle (*Salsola tragus*), perennial pepperweed (*Lepidium latifolium*), telegraph weed (*Heterotheca grandiflora*), Himalayan blackberry (*Rubus armeniacus*), and blue elderberry (*Sambucus nigra*).

Elderberry Shrubs

A cluster of five blue elderberry shrubs was identified within 100 feet of the project site. The nearest of the elderberry shrubs within the cluster is 4 and 13 feet from the eastern property line of the project site and approximately 50 and 59 feet from the edge of the proposed infiltration pond. The identified shrubs are shown in Figure 3.4-1. Elderberry shrubs are obligate host plants for valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), listed as a threatened species under the federal Endangered Species Act (ESA). Shrubs with live stems 1 inch or greater in diameter are considered suitable habitat for the valley elderberry longhorn beetle in California's Central Valley. Sustainable populations of valley elderberry longhorn beetle also require habitat connectivity because individual beetles normally require shrub canopy spacing of less than 100 feet for dispersal. Therefore, optimal habitat for valley elderberry longhorn beetle is considered riparian woodlands with large, mostly continuous populations of mature elderberry shrubs. USFWS has designated an area of critical habitat for valley elderberry longhorn beetle approximately 0.48 mile from the project site, in woodland habitat north of the American River.

Source: Adapted by Ascent Environmental in 2020

Figure 3.4-1 Elderberry Shrubs in the Vicinity of the Project Site

Review of historical topographic maps and historical aerial imagery revealed that the project area has not been part of the riparian area of the American River for at least 120 years. The elderberry shrubs appear to have sprouted during the summer 2011. A fire in 2014 and subsequent vegetation removal thinned out the area since then.

All five elderberry shrubs are within 100 feet of proposed construction activities and have stems that are between 1 inch and 2 inches in diameter at ground level. None of the shrubs are growing in riparian habitat, and no exit holes for valley elderberry longhorn beetle were observed.

Special-Status Species

Special-status species are plants and animals that are legally protected under the ESA, California Endangered Species Act (CESA), California Fish and Game Code, or local plans, policies, and regulations or that are otherwise considered sensitive by federal, state, or local resource conservation agencies. For this IS/MND, special-status species are defined as:

- species listed or proposed for listing as threatened or endangered under the ESA;
- species designated as candidates for listing as threatened or endangered under the ESA;
- species listed, proposed for listing, or candidates for listing as threatened or endangered under CESA;
- species listed as fully protected under the California Fish and Game Code;
- animals identified by CDFW as species of special concern;
- plants considered by CDFW to be “rare, threatened or endangered in California” and assigned a California Rare Plant Ranks of 1A, presumed extinct in California; 1B, considered rare or endangered in California and elsewhere; 2A, presumed extinct in California but more common elsewhere; and 2B, considered rare or endangered in California but more common elsewhere;
- species considered a locally significant species—that is, species that are not rare from a statewide perspective but are rare or uncommon in a local context, such as in a county or region (CEQA Section 15125[c]), or that are so designated in local or regional plans, policies, or ordinances (State CEQA Guidelines Appendix G); and
- taxa (i.e., taxonomic categories or groups) that meet the criteria for listing even if they are not currently included on any list, as described in CCR Section 15380 of the State CEQA Guidelines.

Based on a review of existing data sources (CNDDB 2020; CNPS 2020; USFWS 2020a), 28 special-status wildlife species and 17 special-status plant species have potential to occur in the project area (Appendix B). Species ranges and habitat requirements were further evaluated to determine potential for occurrence on the project site. Because it is highly disturbed, the project site does not contain suitable habitat for any of the special-status plant species. Therefore, no special-status plant species are expected to occur on the project site. Refer to Appendix B for additional detail. Out of the 28 special-status wildlife species, three species are considered likely to occur in or immediately adjacent to the project site: valley elderberry longhorn beetle, Swainson's hawk (*Buteo swainsoni*), and white-tailed kite (*Elanus leucurus*).

3.4.2 Discussion

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

Less than Significant with Mitigation Incorporated. Ground disturbance associated with the project would occur within previously disturbed land, and as explained above, no special-status plants are expected to occur on the site. Therefore, the project would have no impact on special-status plant species. The project has potential to adversely affect valley elderberry longhorn beetle, Swainson's hawk, white-tailed kite, and other nesting birds. Potential impacts on these species are addressed below.

Valley Elderberry Longhorn Beetle

The project has the potential to result in incidental take of valley elderberry longhorn beetle without avoidance measures through disturbance of elderberry shrubs. Valley elderberry longhorn beetle habitat may be affected by ground disturbance within 100 feet of elderberry shrubs. A cluster of five elderberry shrubs was found between 4 and 13 feet from the eastern project boundary and between 50 and 57 feet from the proposed infiltration pond. The five elderberry shrubs are located within previously disturbed ruderal habitat that burned in 2014. Remnant stumps of larger elderberry shrubs were also observed in proximity to these five shrubs.

Some of these stumps have holes similar to exit holes, but a determination as to whether the holes were created before or after removal could not be reached. All five elderberry shrubs observed have one stem between 1 and 2 inches in diameter at ground level, and no exit holes were observed on any of the stems. All five elderberry shrubs are behind a chain-link fence. The USFWS *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (Desmocerus californicus dimorphus)* (Framework) (USFWS 2017) details a protocol for determining occupancy of valley elderberry longhorn beetle. Based on this protocol, an evaluation of valley elderberry longhorn beetle occurrences and habitat within 2,652 feet (800 meters) was conducted.

Although the project site is not within continuous riparian vegetation cover, riparian vegetation is approximately 140 feet north of the elderberry cluster along the American River. A large homeless encampment is currently present in this riparian habitat. The next nearest elderberry shrub is 525 feet (160 meters) to the east within private property. The nearest valley elderberry longhorn beetle known occurrence (CNDDB Occ. No. 281) is approximately 890 feet (277 meters) to the northwest. Occurrence number 281 dates to 2009 and is from the south bank of the American River within riparian habitat. The other two occurrences within 2,652 feet date back to 1984 and are located within the north bank of the American River (CNDDB Occ. Nos. 6 and 9) also within riparian habitat. CNDDB occurrence number 6 is part of USFWS-designated critical habitat for valley elderberry longhorn beetle. Based on the elderberry survey and analysis following the Framework, we cannot dismiss the potential for the elderberry shrubs to be occupied based on presence of old exit holes on elderberry stumps, proximity of riparian habitat, and known recent occurrences of valley elderberry longhorn beetles within 2,526 feet of the project site.

Although the project would not result in the removal of these five elderberry shrubs, the shrubs are located within 20 feet of the project footprint and the closest soil disturbance to the shrubs is approximately 50 feet; thus, there is potential for direct and indirect impacts on elderberry shrubs, such as excessive dust created by construction activities depositing on elderberry shrub leaves and grading in proximity to the shrubs causing damage to the roots. These activities could adversely affect the health and vigor of the shrubs, ultimately resulting in their death and the loss of valley elderberry longhorn beetles that inhabit the shrubs. Direct or indirect incidental take of habitat for a federally listed species is considered a potentially significant impact. With implementation of the mitigation measures, adverse impacts to VELB are not expected and take is not anticipated.

Mitigation Measure 3.4-1: Avoid Elderberry Shrubs

To maintain the health and vigor of elderberry shrubs, SMUD shall avoid the elderberry shrubs and implement the following incidental take avoidance measure:

1. *No grading would occur within 20 feet of the dripline of the elderberry shrubs.*

SMUD shall implement the following impact avoidance measures for activities conducted between 20 and 100 feet of elderberry shrubs to avoid incidental take during construction:

1. *The presence of elderberry shrubs in the construction area and vicinity will be documented on work orders, and the SMUD project manager will be informed.*

2. *A qualified biologist shall provide training for all contractors, work crews, and any on-site personnel on the status of valley elderberry longhorn beetle, its host plant and habitat, the need to avoid damaging the elderberry shrubs, and the possible penalties for non-compliance.*

3. *A 20-foot exclusion boundary around elderberry shrubs will be clearly flagged or fenced in the field and marked on construction plans, and signs will be posted with the following information: "This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment." The signs shall be clearly readable and must be maintained for the duration of construction.*

4 *The excluded zone will be designated an Environmentally Sensitive Area and a biological monitor will be required to supervise rough grading of the infiltration pond. The monitor will have the authority to stop work if personnel are out of compliance with the valley elderberry longhorn beetle avoidance measures or if there is a risk that incidental take may occur.*

5 *Watering of the site for dust suppression will help reduce the amount of dust that could affect the health and vigor of the elderberry shrubs.*

Significance after Mitigation

Implementation of Mitigation Measure 3.4-1 would minimize impacts on valley elderberry longhorn beetle by avoiding the elderberry shrubs, documenting the location of the shrubs on work orders, implementing worker environmental awareness training, fencing or flagging an avoidance area at least 20 feet from the dripline of the elderberry shrubs, watering of the site would reduce dust that could affect the health and vigor of the shrubs, and conducting biological monitoring during rough grading activities of the infiltration pond. With implementation of Mitigation Measure 3.4-1, the potential impact on valley elderberry longhorn beetle would be reduced to a ***less-than-significant*** level.

Swainson's Hawk, White-Tailed Kite, and Other Nesting Birds

The project involves landfill closure activities at the North City property, which would include demolition of the substation concrete slab and piers, regrading of the site, placement of soil cover, and drainage improvements. The closure activities proposed for Lot 31 consist of regrading the site, constructing an infiltration pond, making drainage improvements, and placing soil cover over areas that contain waste. Although construction activities would result in the temporary disturbance of foraging habitat, after the soil cover placement is complete, the project site would continue to provide and will slightly expand the available foraging habitat for Swainson's hawk and other raptors.

The demolition of the North City substation concrete slab and piers within the NCLF property would result in 3.2 acres of developed habitat reverting to grassland habitat after remediation is completed. Although the temporary disturbance to foraging habitat would occur, there is adjacent foraging habitat in parcels next to the site and along the north shore of the American River; thus, no mitigation for the temporary disturbance to foraging habitat is required.

The project site does not contain trees that could provide suitable nesting habitat for Swainson's hawk or white-tailed kite; however, trees within the American River riparian area and the New Era Park, Boulevard Park, and Marshall School and other nearby neighborhoods provide habitat suitable for these and other raptor species. White-tailed kites generally nest within 0.5 mile of foraging habitat and are rarely found away from their preferred foraging habitats, which include alfalfa and other hay crops, irrigated pastures, sugar beets, and tomatoes (Erichsen et al. 1994; Dunk 1995; CDFW 2005). Swainson's hawk nest sites are generally located within approximately two miles of suitable foraging habitat, which consists of alfalfa, disced fields, fallow fields, dryland pasture, beets, tomatoes, irrigated pasture, grains, other row crops, and uncultivated grasslands (Estep 1989, 2009). Although Swainson's hawks may forage 10 miles or more from their nest sites, foraging habitat within 1 mile of the nest is of primary importance, and reproductive success decreases for Swainson's hawks as distance from foraging habitat increases (Estep 1989; England et al. 1995, cited in Estep 2009; England et al. 1997).

There are 34 known Swainson's hawk nests within 5 miles of the project site. Of these 34 nests, four have been active within the last 5 years, and the nearest of these active nests is within the Boulevard Park neighborhood 0.59 mile south of the project site. A pair of white-tailed kites is suspected to nest in the New Era Park and Boulevard Park neighborhoods; the nearest CNDDB record is across the American River, 818 feet north of the project site. A white-tailed kite pair was observed foraging in the annual grassland east of the project site during the September 17, 2020, site visit. Although the project site does not support trees suitable for nesting raptors, the project site is adjacent to potentially suitable nesting habitat for raptors and native migratory bird species.

Native migratory bird species and their nests are afforded protection under state law even if they do not have a special-status species designation. Destruction of any bird nest or take of the nest or eggs of any bird is a violation of Section 3503 of the California Fish and Game Code. Project construction could include removal of one of the landscape trees and therefore has the potential to result in direct removal of bird nests. Additionally, construction activities occurring during the nesting season (between approximately February 1 and August 31), such as demolition, ground disturbance, and presence of construction equipment and crews, could generate noise and visual stimuli that may result in disturbance to active bird nests, if present, potentially resulting in nest abandonment. Nest abandonment may result in death of chicks or loss of eggs if the adult bird does not return to the nest. Although the loss of nests of common migratory bird or raptor species (e.g., mourning dove, house sparrow, and Cooper's hawk (*Accipiter cooperii*) would not be considered a significant impact because it would not result in a substantial effect on their populations locally or regionally, cause any population to drop below self-sustaining levels, or result in a trend toward these species being listed as threatened or endangered, destruction of any migratory bird nest is a violation of the Migratory Bird Treaty Act and Section 3503 of the California Fish and Game Code.

As noted above, there are no known occurrences of either Swainson's Hawk or white-tailed kite in the immediate vicinity of the project site. However, because several mature trees are present in the surrounding area and because occurrences of these two species nesting within urban areas have been documented, there is a potential that either species could nest near or adjacent to the project site. If so, there is a potential that construction activities at the project site could disturb active nests, resulting in nest abandonment, which would be considered a significant impact.

In addition to providing potential nesting sites for Swainson's hawk and white-tailed kite, mature trees in the general project area could support nests of common raptors, including Cooper's hawk, red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), and great horned owl (*Bubo virginianus*). In addition to common raptors, trees adjacent to the project site may also support other common nesting birds. The nests of common raptors and other common birds are protected under Sections 3503 and 3503.5 of California Fish and Game Code. As a result, this impact would be potentially significant without implementation of mitigation.

Mitigation Measure 3.4-2: Avoid or Minimize Effects on Nesting Swainson's Hawk, White-Tailed Kite, and Other Nesting Birds

The following measures shall be implemented to avoid or minimize loss of active Swainson's hawk, white-tailed kite, and other raptor nests:

- *If construction (including vegetation removal) would occur during the nesting season (between February 1 and August 31), a SMUD project biologist/biological monitor shall conduct pre-construction nesting bird surveys to determine whether birds are nesting in the work area or within 0.25 mile for Swainson's hawk and 500 feet for all other nesting birds of the project site.*

- *The pre-construction nesting bird surveys will identify on-site bird species and any nest-building behavior. If no nesting Swainson's hawks are found on or within 0.25 mile of the project site or if no nesting birds are found on or within 500 feet of the project site during the pre-construction clearance surveys, construction activities may proceed as scheduled.*

- *If pre-nesting behavior is observed but an active nest of common nesting bird has not yet been established (e.g., courtship displays but no eggs in a constructed nest), a nesting bird deterrence and removal program will be implemented. Such deterrence methods include removal of the previous year's nesting materials and removal of partially completed nests in progress. After a nest is situated and identified with eggs or young, it is considered to be "active," and the nest cannot be removed until the young have fledged.*

- *If active Swainson's hawk nests are found within the nest survey area, the construction contractor shall avoid impacts on such nests by establishing a no-disturbance buffer around the nest. Monitoring of the nest by a qualified biologist during construction activities shall be required if the activity has the potential to adversely affect the nest. Based on guidance for determining a project's potential for affecting Swainson's hawks (Swainson's Hawk Technical Advisory Committee 2000), projects in urban areas have a low risk of adversely affecting nests greater than 600 feet from project activities. Therefore, 600 feet is anticipated to be the adequate buffer size for protecting nesting Swainson's hawks from disturbances associated with the project. However, the qualified biologist shall consult with CDFW to confirm the adequacy of the no-disturbance buffer and/or whether the buffer may be reduced based on the biologist's professional judgment.*

- *If an active white-tailed kite nest or nest of a common bird species is found on or within 500 feet of the project site during construction, a "no-construction" buffer zone will be established around the active nest (usually a minimum radius of 50 feet for passerine birds and 500 feet for raptors) to minimize the potential for disturbance of the nesting activity. The project biologist/biological monitor will determine and flag the appropriate buffer size required, based on the species, specific activities being conducted, tolerances of the species, and the nest location. Project activities will resume in the buffer area when the project biologist/biological monitor has determined that the nest(s) is (are) no longer active or the biologist/biological monitor has determined that with implementation of an appropriate buffer, work activities would not disturb the bird's nesting behavior.*

- *If special-status bird species are found nesting on or within 500 feet of the project site, the project biologist/biological monitor shall notify SMUD's project manager to notify CDFW or USFWS, as appropriate, within 24 hours of the first nesting observation.*

Significance after Mitigation

Implementation of Mitigation Measure 3.4-2 would ensure that the project would not result in disturbance to or loss of nesting birds by either undertaking activities outside of nesting bird season or implementing buffers around active nests during the nesting bird season. Therefore, the impact to nesting Swainson's hawk, white-tailed kite, and other nesting birds would be reduced to a ***less-than-significant*** level.

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

No Impact. The project site does not contain riparian habitat or sensitive natural communities. All project activities would take place in previously disturbed areas. Therefore, there would be ***no impact*** on riparian habitat or other sensitive natural communities, and no mitigation is required.

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?

No Impact. The project area does not contain any wetland, stream, or other aquatic habitat that could be considered jurisdictional waters of the United States or waters of the state. The proposed drainage ditch would direct on-site runoff into the proposed shallow infiltration pond, and no runoff would occur. Therefore, there would be ***no impact*** on state-protected or federally protected wetlands or other waters of the United States or waters of the state, and no mitigation is required.

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?

No impact. A search of CDFW's California Essential Habitat Connectivity and Missing Linkages in California Landscape data did not identify any designated essential habitat connectivity areas or missing linkages on the project site or in the immediate project vicinity. Additionally, the project area does not contain any known wildlife nursery sites. The project site is located completely within previously disturbed land, and all project activities, including staging, would occur within the NCLF property. Therefore, there would be ***no impact***, and no mitigation is required.

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

Less Than Significant. All of the non-native (i.e., catalpa) or invasive trees (i.e., tree-of-heaven, black locust) that would be removed from the project site are less than 12 inches in diameter at standard height (DSH), and most are less than 2 inches in DSH. Therefore, they do not fall under the definition of private trees that would require a permit from the City of Sacramento. The removal of non-native and invasive trees from the project site is considered a ***less-than-significant*** impact, and no mitigation is required.

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

No Impact. The project site is not located within the plan area of an adopted habitat conservation plan, natural community conservation plan or other applicable and approved habitat conservation plan. As a result, it would not conflict with the provisions of any such plan. Therefore, the project would result in ***no impact***, and no mitigation is required.

3.5 Cultural Resources

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant 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 Section 15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

3.5.1 Environmental Setting

A cultural resources report was prepared by ICF for the project; see Appendix D. In October 2020, a California Historical Resources Information System records search was conducted by the North Central Information Center on the campus of California State University, Sacramento to determine whether prehistoric archaeological, historic-period archaeological, or built-environment historical resources have been previously recorded within the project site, the extent to which the project site has been previously surveyed, and the number and type of cultural resources within a 0.25-mile radius of the project site. The results indicated that there are no previously recorded resources or surveys within the project site. No previous studies have been conducted within the project site (ICF 2020).

There are two known built-environment resources located outside of the project site, but within the 0.25 mile radius. These resources consist of a segment of the Union Pacific Railroad located to the west of the project site and the South Bank American River Levee located north of the project site. One previous cultural resource study has been conducted within 0.25 miles of the project site (ICF 2020).

A pedestrian survey was conducted on October 15, 2020 and revealed one historic-period archaeological site. The site consists of a refuse dump dating between 1940-1950; previous analysis indicates that intact deposits of the site are located between 3 and 18 feet below ground surface with construction debris overlying the site. The archaeological site was evaluated for potential California Register of Historical Resources (CRHR) eligibly and recommended not eligible due to a lack of data potential and integrity of artifacts due to burn operations at the dump. Previous analysis also indicates that refuse visible on the surface is in a mixed and churned historic-period refuse with modern debris, consistent with observations during the current pedestrian survey (ICF 2020).

3.5.2 Discussion

a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

No Impact. The records search and the pedestrian survey revealed no built-environment historical resources within the project site. Therefore, there would be ***no impact*** to historical resources, and no mitigation is required.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Less than Significant with Mitigation Incorporated. A historic-period archaeological site was discovered during the pedestrian survey. More specifically, sections of the project site within SMUD's NCLF property contain historic-period and modern refuse fill (up to 31 feet). This resource was evaluated and recommended not eligible for listing on the CRHR (ICF 2020). Therefore, the site is not considered a resource under CEQA.

The City of Sacramento's Lot 31 contains some construction and demolition debris beneath the surface from historic landfill operation. In addition, areas within Lot 31 have further been substantially altered through the installation of a large stormwater retention basin at the eastern extent of the project site. Given these factors, the project site has low sensitivity for buried prehistoric archaeological resources within SMUD's NCLF property and low-to-moderate sensitivity for buried prehistoric archaeological resources within the City's Lot 31. While Lot 31 was on the northern edge of historical disposal activities and was altered by installation of a stormwater retention basin, there is a low-to-moderate potential for pockets of buried historic archaeological resources elsewhere within Lot 31. This impact would be potentially significant.

Mitigation Measure 3.5-1

In the event that a prehistoric archeological site (such as any unusual amounts of stone, bone, or shell) or a historic-period archaeological site (such as concentrated deposits of bottles or bricks with makers marks, amethyst glass, or other historic refuse), is uncovered during grading or other construction activities, all ground-disturbing activity within 100 feet of the discovery shall be halted until a qualified archaeologist can assess the significance of the find. SMUD will be notified of the potential find and a qualified archeologist shall be retained to investigate its significance. If the find is a prehistoric archeological site, the appropriate Native American group shall be notified. Any previously undiscovered resources found during construction will be recorded on appropriate California Department of Parks and Recreation 523 forms and evaluated for significance under all applicable regulatory criteria. If the archaeologist determines that the find does not meet the CRHR standards of significance for cultural resources, construction may proceed. If the find is determined to be significant by the qualified archaeologist (i.e., because the find is determined to constitute either an historical resource or a unique archaeological resource), the archaeologist shall work with SMUD to follow

accepted professional standards such as further testing for evaluation or data recovery, as necessary. If artifacts are recovered from significant historic archaeological resources, they shall be housed at a qualified curation facility. The results of the identification, evaluation, and/or data recovery program for any unanticipated discoveries shall be presented in a professional-quality report that details all methods and findings, evaluates the nature and significance of the resources, analyzes and interprets the results.

Historic-period pieces (e.g., bottles, bricks, etc.), if encountered, are only considered potentially significant and requiring evaluation pursuant to this measure within the Lot 31 portion of the project site.

Implementation of Mitigation Measure 3.5-1 would reduce potential impacts to archaeological resources discovered during project construction activities to a ***less-than-significant*** level by requiring preservation options and proper curation if significant artifacts are recovered.

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

Less than significant with mitigation incorporated. There are no known past cemeteries or burials on the project site or immediate area. However, because earthmoving activities associated with project construction would occur, there is potential to encounter buried human remains or unknown cemeteries in areas with little or no previous disturbance. This impact would be potentially significant.

Mitigation Measure 3.5-2

Consistent with the California Health and Safety Code and the California Native American Historical, Cultural, and Sacred Sites Act, if suspected human remains are found during construction, all work shall be halted in the immediate area and place an exclusion zone (lath and flagging) around the burial. The Principal Investigator will notify the City of Sacramento Police Department, who will in turn notify the county coroner to determine the nature of the remains. The coroner shall examine all discoveries of suspected human remains within 48 hours of receiving notice of a discovery on private or State lands (Health and Safety Code Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, he or she shall contact the NAHC by phone within 24 hours of making that determination (Health and Safety Code Section 7050[c]). The NAHC shall then assign a most likely descendant to serve as the main point of Native American contact and consultation. Following the coroner's findings, the MLD, in consultation with the City, shall determine the ultimate treatment and disposition of the remains.

Implementation of Mitigation Measure 3.5-2 would reduce potential impacts related to human remains to a ***less-than-significant*** level by requiring work to stop if suspected human remains are found, communication with the county coroner, and the proper identification and treatment of the remains consistent with the California Health and Safety Code and the California Native American Historical, Cultural, and Sacred Sites Act.

3.6 Energy

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant 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?	☐	☐	☐	☒

3.6.1 Environmental Setting

California relies on a regional power system composed of a diverse mix of natural gas, petroleum, renewable, hydroelectric, and nuclear generation resources:

- **Petroleum**: Petroleum products (gasoline, diesel, jet fuel) are consumed almost exclusively by the transportation sector, which is responsible for almost 90 percent of the petroleum consumed in the state (EIA 2020). In 2015, a total of 15.1 billion gallons of gasoline were sold in California (CEC 2020). To meet CARB regulations, all gasoline and diesel fuel sold in California for motor vehicles is refined to be a specific blend of motor gasoline called California Reformulated Gasoline (EIA 2020).

- **Natural gas**: While the majority of natural gas consumers in California are residential and small commercial users, these users consume only about 35 percent of natural gas in the state. Larger volume gas consumers, such as utilities for electricity generation and industrial consumers, although fewer in number, consume the remaining 65 percent of natural gas used in the state (CPUC 2020).

- **Electricity and renewables**: In 2002, Senate Bill 1078 established a renewables portfolio standard (RPS) program. The program is jointly implemented by the California Public Utilities Commission and the California Energy Commission and requires all load-serving entities to procure 60 percent of their total electricity retail sales from renewable energy sources by 2030. Most retail sellers met or exceeded their 29-percent interim RPS target in 2018, including all large investor-owned utilities, which provide electricity to 72 percent of all utility customers (CPUC 2019, EIA 2019).

- **Alternative fuels**: Conventional gasoline and diesel may be replaced (depending on the capability of the vehicle) with many alternative transportation fuels (e.g., biodiesel, hydrogen, electricity). Use of alternative fuels is encouraged through various statewide regulations and plans (e.g., Low Carbon Fuel Standard, Assembly Bill 32 Scoping Plan).

3.6.2 Discussion

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

Less than Significant. Energy would be consumed during project construction to operate and maintain construction equipment and transport construction materials. It also would be consumed for worker commutes. Levels of construction-related fuel consumption were calculated using equipment assumptions consistent with CalEEMod Version 2016.3.2 and fuel consumption factors derived from EMFAC 2011. See Appendix A for detailed calculations. An estimated 1,031 gallons of gasoline and 27,856 gallons of diesel would be consumed during project construction, accounting for both on-site equipment use and off-site vehicle travel for worker commutes and haul trips. This one-time energy expenditure required to construct the project would be nonrecoverable. However, energy needs for project construction would be temporary and would not require additional capacity or increase peak or base period demands for electricity or other forms of energy.

Monitoring and maintenance trips would be essential during implementation of the monitoring and maintenance plan for ensuring that the closed landfills remains safe for surrounding land uses, such as through the inspection of proper site drainage, monitoring of the soil cover, and monitoring of groundwater quality, and these activities would be consistent in terms of type, number, and purpose with existing activities associated with the project site. Therefore, the project would not result in an inefficient, wasteful, or unnecessary consumption of energy resources. This impact would be ***less than significant***. No mitigation is required.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency

No Impact. As discussed above, the project would not result in the inefficient, wasteful, or unnecessary consumption of energy resources. Furthermore, the project would not involve the construction or installation of any energy-consuming buildings, structures, or equipment. Thus, the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. The project would have ***no impact***, and no mitigation is required.

3.7 Geology and Soils

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant 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 California Geological Survey Special Publication 42.)	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), 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?	☐	☐	☒	☐

3.7.1 Environmental Setting

Geology

The project site is within California's Central Valley and situated on Quaternary-age fluvial and alluvial deposits. The Sacramento Valley forms the northern half of the Great Valley, which fills a northwest-trending structural depression bounded on the west by the Great Valley Fault Zone and the southern Coast Ranges and bounded on the east by the Sierra Nevada and the Foothills Fault Zone. Most of the surface of the Great Valley is covered with alluvium of Holocene and Pleistocene age, composed primarily of

sediments from the Sierra Nevada and the Coast Ranges that were carried by rivers and deposited on the valley floor.

The topography of the site is overall flat, with stockpiled soil reaching up to 10 feet tall. Landfill material consisting of construction and demolition debris and municipal waste makes up the first 20–30 feet below ground surface of the NCLF property. Quaternary-age deposits lie beneath the landfill material and are mainly composed of fluvial, poorly graded sands with intermixed gravelly beds and silty sands (Hargis +Associates 2020).

Seismicity

The Great Valley is bounded on the west by the Great Valley fault zone and the Coast Ranges and on the east by the Foothills fault zone and the Sierra Nevada. Relatively few faults in the Great Valley have been active during the last 11,700 years. The closest faults to the project alignment with evidence of displacement during Holocene time are the Dunnigan Hills Fault (approximately 35 miles to the northwest) and the Cleveland Hills Fault (approximately 60 miles to the north). In general, active faults are located along the western margin of the Central Valley (e.g., the Great Valley Fault) and within the Coast Ranges (Jennings 1994).

According to the California Geological Survey Earthquake Shaking Potential for California, the Sacramento region would experience lower levels of shaking less frequently, due to the regions distance from known, active faults. However, very infrequent earthquakes could still cause strong shaking here (CGS 2016). The occurrence of liquefaction during an earthquake can potentially cause reduction in or loss of shear strength, seismically induced settlements, formation of boils, or lateral spreading of the liquefied soil. In order for liquefaction of soils due to ground shaking to occur, it is generally accepted that subsurface soils must be in a relatively loose state, soils must be saturated, soils must be sand like (e.g., non-plastic or of very low plasticity), and the ground motion is of sufficient intensity to act as a triggering mechanism.

Because the project site is flat, slope stability, landslide, and erosion hazards do not present substantial hazards to people and property. Site-specific effects of erosion are generally limited to construction, when stormwater runoff can carry sediment into local waterways or fugitive dust emissions.

Soils

A site investigation of the project site indicated that landfill materials can be grouped into two generalized layers: a construction and demolition debris layer at the surface and an underlying municipal waste layer. The construction and demolition debris layer consists of inert materials, such as concrete, brick, wood, and metal mixed with sandy silts. The underlying municipal waste layer contains household garbage, and portions of the waste have been burned. The burned waste appears black and contains ash, metal, and deformed glass bottles. A layer of construction debris lays at a thickness of 3 to 18

feet above a municipal waste dump. Both the construction debris and municipal waste dump reach a depth of up to 31 feet below ground surface (Brown and Caldwell 2015).

In 1996, the Lot 31 parcel was divided from a larger area that was for owned by Blue Diamond. Areas within the Blue Diamond parcel were historically used for landfill operations and for discharged hydraulic wastes (Appendix D). A site investigation of the Blue Diamond parcel was completed in 2011, during which time it still encompassed the area referred to as Lot 31. Soil borings taken from areas within the current boundary of Lot 31 indicate the presence of some construction and demolition debris and native soils (Kleinfelder 2011). Native soils within the project site consist of Columbia sandy loam (NRCS 2020).

Paleontological Resources

The Society of Vertebrate Paleontology (SVP) has established guidelines for the identification, assessment, and mitigation of adverse impacts on nonrenewable paleontological resources (SVP 2010). Most practicing paleontologists in the United States adhere closely to the SVP's assessment, mitigation, and monitoring requirements as outlined in these guidelines, which were approved through a consensus of professional paleontologists and reflect the currently accepted standard practices. Many federal, state, county, and city agencies have either formally or informally adopted the SVP's standard guidelines for the mitigation of adverse construction-related impacts on paleontological resources. The SVP has helped define the value of paleontological resources and, in particular, indicates the following:

- Vertebrate fossils and fossiliferous (fossil-containing) deposits are considered significant nonrenewable paleontological resources and are afforded protection by federal, state, and local environmental laws and guidelines.
- A paleontological resource is considered to be older than recorded history, or 5,000 years before present, and is not to be confused with an archaeological resource.
- Invertebrate fossils are not significant paleontological resources unless they are present within an assemblage of vertebrate fossils or they provide undiscovered information on the origin and character of the plant species, past climatic conditions, or the age of the rock unit itself.
- A project paleontologist, special interest group, lead agency, or local government can designate certain plant or invertebrate fossils as significant.

In accordance with these principles, the SVP outlined criteria for screening the paleontological potential of rock units and established assessment and mitigation procedures tailored to such potential (SVP 2010). Table 3.5-1 lists the criteria for high-potential, undetermined, and low-potential rock units.

Table 3.5-1 Criteria for Determining Paleontological Potential

Paleontological Potential	Description
High	Geologic units from which vertebrate or significant invertebrate or plant fossils have been recovered. Only invertebrate fossils that provide new information on existing flora or fauna or on the age of a rock unit would be considered significant.
Undetermined	Geologic units for which little to no information is available.
Low	Geologic units that are not known to have produced a substantial body of significant paleontological material.

Source: SVP 2010

The project site contains quaternary-age deposits that are mainly composed of fluvial, poorly graded sands with intermixed gravelly beds and silty sands (Hargis +Associates 2020). Although not discussed in the SVP standards, artificial fills, surface soils, and high-grade metamorphic rocks do not contain paleontological resources. While such materials were originally derived from rocks, they have been altered, weathered, or reworked such that the discovery of intact fossils would be rare. Therefore, there is little potential for the project site to contain fossils or paleontological resources (SVP 2010).

3.7.2 Discussion

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

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

ii) Strong seismic ground shaking?

iii) Seismic-related ground failure, including liquefaction?

No Impact. Surface ground rupture along faults is generally limited to a linear zone a few yards wide. There are no Alquist-Priolo Earthquake Fault Zones within Sacramento County (CGS 2016). ***No impact*** would be associated with fault rupture, and no mitigation is required.

iv) Landslides?

Less than Significant. The project site is located within an area of low relief, having nearly flat terrain. Implementation of the project would involve grading and installation of drainage features within the project site. Project plans, including any recontouring for drainage control purposes, would be conducted in a manner consistent with CCR Title 27 Section 21090, which provides requirements for closure and post-closure procedures for landfills (e.g., measures related to drainage, erosion control, and slope stability). Thus, impacts related to landslides would be ***less than significant***, and no mitigation is required.

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

Less than Significant. Construction of the project would include the short-term placement of soil in stockpiles during grading activities. Stockpiled soils would be exposed to wind and water erosion that could transport sediments onto adjacent parcels. However, as part of the project, a soil stockpile management plan would be prepared and implemented at the site. This plan would address the movement, relocation, staging, and use of soil stockpiles on the project site, and would include dust and erosion control measures related to the movement and use of stockpiles that would be subject to review and approval by the project engineer and SMUD. Furthermore, CCR Title 27 Section 21090 provides requirements for closure and post-closure procedures for landfills, including drainage and erosion control and slope stability. Because these requirements require the final cover to be designed to reduce erosion throughout the minimum 30-year post-closure maintenance period and beyond this impact would be ***less than significant***, and no mitigation is required.

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, as updated), creating substantial direct or indirect risks to life or property?

Less than Significant. The project site is located within an area of low relief, having nearly flat terrain. There are no structures proposed as part of the project that could present a risk to life or property due to the presence of unstable or expansive soils. In addition, per CCR Title 27 Section 21090, the final cover at closure of the project would be designed to accommodate anticipated settlement and subsidence and to withstand the effects of seismic events throughout the minimum 30-year post-closure maintenance period and beyond. Thus, this impact would be ***less than significant***, and no mitigation is required.

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?

No Impact. The project would not require the use of septic tanks or alternative wastewater disposal systems. Thus, the project would have ***no impact*** related to whether the soil is suitable for the use of septic tanks or alternative wastewater disposal systems, and no mitigation is required.

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

Less than Significant. The project site contains quaternary-age deposits that are mainly composed of fluvial, poorly graded sands with intermixed gravelly beds and silty

sands (Hargis +Associates 2020). Although not discussed in the SVP standards, artificial fills, surface soils, and high-grade metamorphic rocks do not contain paleontological resources. While such materials were originally derived from rocks, they have been altered, weathered, or reworked such that the discovery of intact fossils would be rare. Therefore, there is little potential for the project site to contain fossils or paleontological resources (SVP 2010). Therefore, the destruction of a unique paleontological resource or site, or the destruction of a unique geological feature, would not be anticipated with project implementation. Thus, this impact would be ***less than significant***, and no mitigation is required**.**

3.8 Greenhouse Gas Emissions

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant 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?	☐	☐	☒	☐

3.8.1 Environmental Setting

Greenhouse gases (GHGs) are gases in the earth's atmosphere that trap heat through a phenomenon called the greenhouse effect. Prominent GHGs that contribute to the greenhouse effect are carbon dioxide (CO_2), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. The greenhouse effect occurs when solar radiation enters the earth's atmosphere and infrared radiation is absorbed by GHGs rather than being reflected back into space. This trapping of infrared radiation results in the warming of the atmosphere and is responsible for maintaining a habitable climate on earth. However, GHG emissions from human activities have greatly increased GHG concentrations in the atmosphere and caused levels of warming far above natural levels, resulting in global climate change. It is "extremely likely" that more than half of the observed increase in average global temperature from 1951 to 2010 was caused by anthropogenic (i.e., human-caused) increases in GHG concentrations, along with other anthropogenic forcings (IPCC 2014:5). GHG emissions contributing to global climate change are attributable, in large part, to human activities associated with on-road and off-road transportation, industrial/manufacturing activities, electricity generation and consumption, residential and commercial on-site fuel use, and agriculture and forestry.

Climate change is a global issue because GHGs are global pollutants, and even local GHG emissions contribute to global impacts. Many GHGs have long atmospheric lifetimes, from 1 to several thousand years, and persist in the atmosphere for long enough durations to be dispersed around the globe. Although the lifetime of any particular GHG molecule is dependent on multiple variables and cannot be determined with certainty, scientists have concluded that more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestration, resulting in a net increase in atmospheric CO_2 (IPCC 2013:467).

SMAQMD is the primary agency responsible for addressing air quality concerns in Sacramento County and has established quantitative significance thresholds for evaluating GHG emissions. For construction emissions generated by land development

projects, the SMAQMD threshold is 1,100 metric tons per year of CO_2 equivalent ($MTCO_2e$) (SMAQMD 2020).

3.8.2 Discussion

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

Less than Significant. Project operation would not generate substantial GHG emissions because operational activities would be limited to occasional and infrequent monitoring and maintenance. However, the project would generate GHGs during construction from the use of heavy-duty off-road construction equipment and vehicle use for worker commutes. Construction would include site preparation, concrete demolition, rough grading, soil cover placement, and drainage improvements. The project's construction-related GHG emissions were estimated using CalEEMod Version 2016.3.2. A detailed discussion of the major construction activities and model assumptions is provided in Section 3.3, "Air Quality," and model outputs are included in Appendix A. Total construction activity would result in emissions of 334 $MTCO_2e$ over a period of approximately 6–9 months, which would not exceed SMAQMD's established significance threshold of 1,100 $MTCO_2e$. Therefore, this impact would be ***less than significant***, and no mitigation is required.

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

Less than Significant. Plans, policies, and regulations adopted for the purpose of reducing GHG emissions are developed with the purpose of reducing cumulative emissions related, primarily, to long-term operational emissions. As described previously, the project would not generate substantial GHG emissions during operations, and construction-related GHG emissions would be finite and would not exceed SMAQMD's threshold for construction emissions, which were established in order to support statewide GHG emission targets. Thus, the project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing emissions of GHGs. This impact would be ***less than significant***, and no mitigation is required.

3.9 Hazards and Hazardous Materials

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant 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/or accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☒	☐
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☒	☐

3.9.1 Environmental Setting

The NCLF property is identified in the California Department of Resources Recycling and Recovery Solid Waste Information System as Facility No. 34-CR-0005, with regulatory status unpermitted and operational status closed. Available information indicates that the NCLF property historically operated as a disposal site, where burning of waste occurred, by the City from approximately 1940 to 1949.

SMUD also used the NCLF property for disposal of soil and construction and demolition debris from construction projects from 1980 through 1993. Adjacent lands to the south, east, and southeast were also historically used as disposal facilities (Brown and Caldwell 2015).

The NCLF property consisting of a layer of construction and demolition debris, which lays over municipal waste. Based on boring and test pit investigations of the NCLF property, the construction and debris layer ranges from 3 to 18 feet thick in the northern portion of the landfill and increases to 19 feet thick toward the southern edge of the property. The municipal waste layer is 8 to 19 feet thick throughout the landfill. At most locations along the west and east slopes of the NCLF property, the depth of landfill materials are 7 to 11 feet deep (Brown and Caldwell 2015).

Testing of the soil indicated the following conditions within the NCLF property (Brown and Caldwell 2015):

- **Metals**: Total and soluble testing for metals in the soil indicates that arsenic, cadmium, and lead were detected above California Human Health Screening Levels for commercial and industrial land use. These samples were found at a depth of 5 – 26 feet bgs. Solubility testing indicates that if municipal waste is excavated, copper and lead concentrations would exceed California Soluble Threshold Limit Concentrations limits; and lead would also exceed Toxicity Characteristic Leaching Procedure limits.

- **Petroleum hydrocarbons**: Testing indicates that heavier range petroleum hydrocarbons are prevalent throughout the site, from surface level to 18 feet bgs. The maximum petroleum hydrocarbon detection occurred at 18 feet below ground surface in burned waste in the northern portion of the project site. Native soils beneath the waste materials have minimal levels of contamination.

- **Semi-volatile organic compounds**: Only one of 69 semi-volatile organic compounds tested was detected in soil samples, and bis(2-ethylhexyl)phthalate detections were below the screening level. Polycyclic aromatic hydrocarbons were present at the project site in mixtures. Exceedances are distributed sporadically across the project site in both surface and subsurface samples.

- **Polychlorinated biphenyls**: Only one of eight polychlorinated biphenyl (PCB) congeners was detected in soil samples, and PCB-1260 detections were below the screening level. These results are consistent with previous investigations in 1984 and 1986, the results of which indicated that PCBs are detected sporadically at the project site in shallow soil (less than 5 feet below ground surface) at concentrations of less than 1 milligram per kilogram.

- **Dioxins/furans**: Dioxins and furans were present in two samples of burned waste but at concentrations below the screening level.

The NCLF property currently has a network of seven landfill gas monitoring wells. Four of the wells are installed in soils outside of the waste limits and the remaining wells are installed in waste materials. The wells are tested for combustible gas (methane) levels on a monthly basis. The methane levels measured at the perimeter (i.e. installed in soil) wells range from non-detect to 0.6 percent, which indicates that the NCLF property is

compliant with state requirement (less than 5 percent) for subsurface combustible gas migration control. Methane gas levels in the in-fill wells (i.e. installed in waste materials) range from 20 percent to 28 percent, during the time period of 2016 to 2020 (Miller and Minshew, pers. comm., 2020).

In 1996, the Lot 31 parcel was divided from a larger area that was for owned by Blue Diamond. Areas within the Blue Diamond parcel were historically used for landfill operations and for discharged hydraulic wastes (Appendix D). A site investigation of the Blue Diamond parcel was completed in 2011, during which time it still encompassed the area referred to as Lot 31. Soil borings taken from areas within the current boundary of Lot 31 indicate the presence of some construction and demolition debris beneath the surface toward the western edge of the parcel, and the presence of arsenic and dieldrin above environmental screening levels 1.5 feet below ground surface (Kleinfelder 2011).

The State Water Resources Control Board's GeoTracker website, which provides data relating to leaking underground storage tanks (USTs) and other types of soil and groundwater contamination, along with associated cleanup activities, did not identify any hazards related to USTs and other types of contamination on or near the project site (SWRCB 2020). The California Department of Toxic Substances Control's (DTSC's) EnviroStor website, which provides data related to hazardous materials spills and cleanups, also did not identify any hazards related to any cleanup sites on or near the project site (DTSC 2020).

With respect to schools, Courtyard Private School is located approximately 0.26 mile from the North City substation and 0.08 mile from the haul route. No other schools are located within one-quarter mile of the project site.

The nearest airport is the Sacramento Executive Airport, located approximately 5.5 miles south of the project site. The project site is not located in a Very High, High, or Moderate Fire Hazard Severity Zone (CAL FIRE 2020).

3.9.2 Discussion

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

Less than Significant. Construction activities would involve the use of hazardous materials, such as fuels, gasoline, and oil. The use and storage of these materials could potentially expose and adversely affect workers, the public, or the environment through improper handling or use, accident, environmentally unsound disposal methods, fire, explosion, or other emergencies. Exposure to hazardous materials may result in adverse health or environmental effects.

The California Highway Patrol and California Department of Transportation are responsible for enforcing regulations related to the transportation of hazardous materials on local roadways, and the use of these materials is regulated by DTSC, as

outlined in CCR Title 22. SMUD and its construction contractors would be required to comply with the California Environmental Protection Agency's Unified Program, which protects Californians from hazardous waste and hazardous materials by ensuring consistency throughout the state regarding the implementation of administrative requirements, permits, inspections, and enforcement at the local regulatory level. Regulated activities would be managed by the Sacramento County Environmental Management Department, which is the designated Certified Unified Program Agency, and in accordance with the regulations included in the Unified Program (e.g., hazardous materials release response plans and inventories, California Uniform Fire Code hazardous material management plans and inventories). Such compliance would reduce the potential for accidental release of hazardous materials during project construction.

The project would be required to comply with existing laws and regulations regarding the transportation, use, and disposal of hazardous materials. These regulations are specifically designed to protect the public health and the environment and must be adhered to during project construction and operation. Because the project would comply with applicable regulations, the impact would be ***less than significant***, and no mitigation is required.

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

Less than Significant. The project site is located on properties that were historically used as an open dump and burn dump, and most recently used to collect construction and demolition debris. Testing of soil at the project site indicates the presence of hazardous material, such as metals, semi-volatile organic compounds, pesticides, and PCBs. Samples exceeding California Human Health Screening Levels of metals, petroleum hydrocarbons, and semi-volatile organic compounds were at the surface of the NCLF property; and dieldrin and arsenic exceeding environmental screening levels were found approximately 1.5 feet below ground surface within the Lot 31 parcel. Other constituents, such as PCBs and dioxins/furans were present on the site, but at concentrations below environmental screening levels.

In addition, the general types of wastes dumped at the project site are known; however, the specific items buried from the 1940s are unknown. The components of solid waste present potential physical hazards, such as cuts from broken glass and sharp metal objects, splinters from pieces of wood, punctures, from nails and other sharp objects, and scrapes and abrasions from general handling of the solid waste. There also exists the potential for exposure to household hazardous products, such as bleach, cleansers, asbestos, and other chemicals, and potential infectious waste from domestic disposal. In addition, solid waste may emit methane, volatile organic compounds, and hydrogen sulfide during decomposition processes.

Ground-disturbing activity for the NCLF property would reach a maximum depth of 4.75 feet within the majority of the site. The maximum excavation depth, 11.5 feet, would occur along the eastern slope to prepare for construction of the drainage bench. Within Lot 31, the depth of excavation would range from approximately 7 to 3 feet, from the western to the eastern end of the site respectively. The drainage ditch would require a maximum cut of 7 feet below ground surface. Because the municipal waste level is located approximately 3 to 18 feet below ground surface, construction workers may come in contact with portions of the municipal waste layer and contaminated soils during grading activities. This may expose workers to contaminated dust emissions or wastes that contain hazardous constituents, such as asbestos or household products.

During earth moving activities, water would be applied uniformly and lightly throughout the site to to provide adequately control nuisance dust. As discussed in Section 3.3, Air Quality, the WPCP would satisfy the requirements of the Fugitive Dust Rule 403 to reduce PM emissions. This rule would also limit the amount of contaminated dust emitted by the project to the extent feasible, thus reducing the potential for inhalation of contaminated soils associated with the site.

In addition, a site-specific health and safety plan (SSHSP) would be prepared before the start of construction-related activities. The SSHSP would be subject to approval by a Certified Industrial Hygienist. The contents of the SSHSP would include:

- requirements related to worker use of personal protective equipment,
- general field safety procedures,
- standard operating procedures for the handling of potentially hazardous materials, and
- worker safety training requirements.

The SSHSP also requires that all activities associated with the project would be overseen by a health and safety monitor (H&S monitor). The H&S monitor would provide safety briefings to construction workers that would address site conditions, possible hazards, and safety measures provided in the SSHSP. In addition, the H&S monitor would be charged with operation of a 4-gas meter to determine methane, oxygen, volatile organic compounds, and hydrogen sulfide concentrations. In the case that the 4-gas meter indicates high levels of noxious gases, the H&S monitor would be responsible for alerting all construction site personnel and providing direction for appropriate actions. Thus, because an SSHSP would be implemented during construction activities, the potential for construction worker exposure to gases and hazards related to site conditions would be minimal.

Furthermore, the project involves closure of former landfills, subject to compliance with requirements established by CalRecycle and select parts of CCR Title 27 solid waste regulations and regulated by Sacramento County EMD. As noted previously, these

regulations are designed to ensure that construction-related and post-closure activities associated with the project site would not pose a threat to human health and the environment. Because long-term use of the site would be regulated under CCR Title 27, the potential for release of hazardous materials into the environment would be minimal.

In terms of existing hazardous gases on the project site associated with historical landfilling, estimates of current and future landfill generation from the NCLF were modeled in 2020. This evaluation indicates that the wastes in place have largely undergone the decomposition process and only residual volumes of landfill gas are currently being generated. The existing decomposition rate is very low, slowly declining and will continue to do so with time, which is normal at old landfill sites. In addition, the modeling concluded that landfill gas generation and migration potential is considered to be very low, but not zero. During final placement of the cover system at project site, it is possible that landfill gas migration may shift based on the adjustments to the surface contours. However, SMUD would continue to monitor landfill gas migration using existing landfill gas monitoring system, including during the post-remediation period to ensure methane levels at the property boundary are in compliance with state requirements for subsurface combustible gas migration control (Miller and Minshew, pers. comm., 2020).

In general, excavated materials are not expected to be hauled off site and would be buried within the landfill and place under the proposed cover. However, the contents of the former landfill remain unknown. In addition, while the construction and demolition debris layer of the landfill is known to be approximately 3 to 18 feet thick, the thickness throughout the site is not well known. Thus, the municipal layer could be encountered, particularly where excavation would be deeper along the drainage bench on the eastern slope of the NCLF property. As discussed above, municipal waste may contain household hazardous products, such as bleach, cleansers, asbestos, and other waste from domestic disposal that could be released into the environment. While the potential to encounter the municipal layer is considered to be low, this impact would be ***potentially significant***. With implementation of the mitigation measures, potential exposure risks would not be significant.

> **Mitigation Measure 3.9-1: Manage accidental discovery of hazardous materials**
>
> *In the event that contaminated soils or potentially hazards items are discovered during earth moving activities, all ground-disturbing activities within 50 feet shall be halted until a qualified SMUD employee or SMUD representative can assess the conditions on the site. SMUD will notify the LEA (Sacramento County EMD), if appropriate, to determine if it is appropriate to rebury the potentially hazardous materials. If it is determined that the hazardous material cannot be re-incorporated into the project site, it shall be hauled by a qualified hauler to an appropriate waste disposal facility.*

Significance after Mitigation

Implementation of Mitigation Measure 3.9-1 would minimize impacts on accidental release into the environment because if a potentially hazardous material is encountered,

it would be evaluated for reburial at the site or removal. This would ensure that any discovered hazardous materials would not be released into the environment or cause a substantial hazard to this public. Thus, this impact would be a reduced a ***less-than-significant*** level.

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

Less than Significant. The nearest school to the project site is Courtyard Private School, which is located 0.26 mile from the North City substation and 0.08 mile from the haul route. As discussed above under a), compliance with existing laws and regulations regarding the transportation, use, and disposal of hazardous materials would protect the public health and the environment during construction of the project and use of the haul routes. Existing hazardous materials on the project site, such as contaminated soils and remnants from the former municipal landfill, may present a health risk to construction workers, as discussed above under b). However, this would occur at a distance greater than 0.25 mile from the school. Therefore, this impact would be ***less than significant***, and no mitigation is required.

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

No Impact. Government Code Section 65962.5 requires that DTSC compile and maintain a list of hazardous waste facilities subject to corrective action, land designated as hazardous waste property, and hazardous waste disposals on public land. The project alignment is not located on a site included on a list of hazardous material sites (SWRCB 2020; DTSC 2020). Thus, there would be ***no impact***, and no mitigation is required.

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?

No Impact. The project site is not located within an airport land use plan or within 2 miles of any public or public use airport. There would be ***no impact***, and no mitigation is required.

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

No Impact. The project is not located in an area where it would impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan (City of Sacramento 2005). The project site is generally isolated from

the surrounding residential and industrial community and adjacent Blue Diamond plant by the Western Pacific Railroad berms to the west and south. The American River, located north of the site, forms a barrier to evacuations. Development of the project would not interfere with the emergency evacuation routes identified for the downtown area in the City of Sacramento Emergency Operations Plan. These routes include the following streets: 15th (south), 16th (north), H (west), I (west), P (west), Q (east), Capitol (east), and Capitol Mall (west) (City of Sacramento 2005). Therefore, the project site would not be used as an evacuation route in the event of an emergency, and there would be ***no impact*** on an adopted emergency response plan or emergency evacuation plan. No mitigation is required.

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

Less than Significant. The project site is located on land formerly used as a landfill that is sparsely vegetated. It is not located within any designated high fire hazard severity zones (CAL FIRE 2020). While the use of fuels and construction equipment could pose a risk to fire ignition, the potential to result in a wildland fire is low because of the location and condition of the project site. Therefore, the impact related to the exposure of people or structures to the risk of loss, injury, or death involving wildland fires would be ***less than significant***, and no mitigation is required.

3.10 Hydrology and Water Quality

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant 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 groundwater quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) Result in substantial on- or offsite erosion or siltation;	☐	☐	☒	☐
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
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?	☐	☐	☒	☐

3.10.1 Environmental Setting

Surface Water

The project site is located along the Lower American River and within the American River watershed, which encompasses approximately 1,900 square miles from the western slope of the Sierra Nevada to the City of Sacramento. The river is regulated by dams, canals, and pipelines for power generation, flood control, water supply, recreation, fisheries, and wildlife management. The project site is located approximately 150 feet south of the American River.

Water Quality

The City operates under a Phase I National Pollution Discharge Elimination System (NPDES) permit for stormwater municipal discharges to surface waters (NPDES No. CAS082597). The permit requires that the City impose water quality and watershed protection measures for all development projects. The intent of the waste discharge requirements in the permit is to attain water quality standards and protection of beneficial uses consistent with the Central Valley Regional Water Quality Control Board's Basin Plan. The NPDES permit prohibits discharges from causing violations of applicable water quality standards or result in conditions that create a nuisance or water quality impairment in receiving waters. A key component of the NPDES permit is the implementation of the Stormwater Quality Improvement Plan (SQIP), which consists of six Minimum Control elements 1) public education and outreach, 2) commercial/industrial control, 3) detection and elimination of illicit discharges, 4) construction stormwater control, 5) postconstruction stormwater control for new development and redevelopment 6) pollution prevention/good housekeeping for municipal operations). In addition, the City's Land Grading and Erosion Control Ordinance and Stormwater Management and Discharge Control Code provide additional regulation and guidance to prevent degradation of water quality.

Groundwater

The Sustainable Groundwater Management Act (SGMA) was adopted in September 2014 with implementation beginning January 1, 2015. Uncodified legislative findings of SGMA state that properly managed groundwater resources help protect communities, farms, and the environment against prolonged dry periods and climate change, thereby preserving water supplies for existing and potential beneficial uses. The project site overlays the Sacramento Valley–South American Subbasin. The California Department of Water Resources has designated this subbasin as a high-priority groundwater basin under the SGMA, requiring adoption of a groundwater sustainability plan or submittal of an alternative plan. In compliance with SGMA, the Sacramento Central Groundwater Authority has prepared a South American Subbasin Alternative Submittal (DWR 2020).

Groundwater is encountered beneath the project site in native materials consisting of sands with gravels and silts. There are six existing groundwater monitoring wells at the NCLF. Groundwater levels beneath the site are anticipated to fluctuate due to irrigation, large precipitation events, and seasonal flows in the American River, and typically range from 32 to 37 feet below ground surface in native materials consisting of sands with gravels and silts. Groundwater generally flows to the southwest across the project site at a relatively flat gradient of 0.002 foot/foot. Groundwater is not currently in contact with landfill materials (Brown and Caldwell 2015). Consistent with historic trends at the NCLF, the following regulatory exceedances are present (Hargis + Associates 2020):

- Arsenic was detected above the California Maximum Contaminant Limit (MCL)/ California Environmental Screening Level (ESL) in five wells.

- Cadmium was detected above the ESL in two wells.
- Chromium was detected about the MCL/ESL in one well.
- Cobalt was detected above the MCL in one well and above the ESL in three wells.
- Copper was detected above the ESL in four wells.
- Lead was detected above the MCL in one well and above the ESL in two wells.
- Nickel was detected above the ESL in three wells and above the MCL in one well.
- Vanadium was detected above the ESL in one well.
- Zinc was detected above the ESL in one well.

Flooding

The project site is within an area with reduced flood risk due to levee (Zone X) as identified on the Federal Emergency Management Agency (FEMA) flood maps (FEMA 2015).

3.10.2 Discussion

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

Less than Significant. As noted above in Section 3.10.1, “Environmental Setting,” the level of some contaminants in groundwater underlying the project site exceeds the MCL and ECL. However, groundwater would not be encountered during construction-related activities; thus, project implementation would not degrade groundwater quality.

On-site drainage would be redirected toward the proposed drainage ditch and infiltration pond and would not come in contact with any waters of the state or United States. All imported soils would be sampled, and before it was distributed on the site, sampling results would be reviewed and approved by the CalRecycle and Sacramento County Environmental Management Department. No contaminated soils would be used as part of the soil cover, upon which stormwater would flow. In addition, as described in Section 2.4.4.1, “Water Pollution Control Plan,” a WPCP would be implemented during construction to prevent sediment from leaving the project site. The WPCP would identify best management practices that address excavation areas, stockpile areas, street entrances and exits, construction vehicle maintenance areas, water tanks, dust suppression activities, and postconstruction site stabilization.

Therefore, the project would not affect surface water or groundwater quality, and this impact would be ***less than significant***, and no mitigation is required.

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

Less than Significant. The project would include closure of the NCLF property and construction of drainage facilities that would route runoff to an infiltration pond. Excavation activities would be limited to 11.5 feet below ground level within the NCLF property and 7 feet within Lot 31. Because groundwater sits at 32 to 37 feet below ground surface within the site, it would not be encountered during project activities. The stormwater infiltration through the pond would recharge groundwater supplies. Because soil used in the final cap of the landfill would be tested to prevent placement of contaminated soil onto the project site, polluted runoff or percolated water would not be expected.

The project would not use the site's groundwater resources to meet construction or operational water demands. Water for construction would be provided to the site by the City of Sacramento from existing water facilities. No water would be required for operation of the project. As a result, project implementation would not substantially decrease groundwater supplies or interfere with groundwater recharge. As a result, this impact would be ***less than significant***, and no mitigation is required.

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 on- or offsite erosion or siltation;

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

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?

Less than Significant. The project site would be graded so that runoff would drain in a generally west/east direction, as depicted in Figure 2-2. Easterly flowing runoff would be collected in the project infiltration pond. West-flowing runoff would be collected by the Western Pacific Railroad's surface water collection system, which has excess drainage capacity. Surface water runoff to the west would be minimized to the extent feasible. Grading along the project site edges would match that of the adjacent properties and would be performed such that no runoff would reach the American River or otherwise come into contact with waters of the state.

Thus, while the project would alter the existing drainage pattern, it would not result in substantial on- or off-site erosion or siltation, result in flooding off-site, exceed the capacity of existing or planned stormwater drainage systems, or impede or redirect

flood flows. In addition, the project site is located within an area with reduced flood risk due to levee (Zone X) as identified on FEMA flood maps (FEMA 2015), and would therefore not be subject to flood hazard. This impact would be ***less than significant***, and no mitigation is required.

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

Less than Significant. The project site is at an inland location that is outside of any ocean-related tsunami zones. The site is separated from the American River by flood control levees, thus limiting risks of flood or seiche. Thus, the project would not be at risk of flood, seiche, tsunamis, or the release of pollutants from inundation, and the impact would be ***less than significant***, and no mitigation is required.

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

Less than Significant. As discussed under (a), above, the project includes implementation of a WPCP and other features that would substantially reduce the pollution of runoff on the project site. Stormwater that drains to the infiltration pond would recharge groundwater supplies. Therefore, the project would not adversely affect surface water or groundwater quality or groundwater recharge. Thus, the project would not obstruct implementation of a water quality control plan or sustainable groundwater management plan. This impact would be ***less than significant***, and no mitigation is required.

3.11 Land Use and Planning

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant 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?	☐	☐	☐	☒

3.11.1 Environmental Setting

The project site and surrounding areas, excluding the American River, are relatively flat and open, are zoned by Sacramento County as M-2-SPD-Heavy Industrial/American River Parkway Corridor/Special Planning District-East and are identified as Public and Employment Center (Low Rise) as part of the Central City Community Plan. Surrounding land uses consist primarily of industrial or residential uses.

3.11.2 Discussion

a) Physically divide an established community?

No Impact. There is no housing on the project site, and the project would have no potential to physically divide an established community. The project site would continue to be vacant land with implementation of the project. Therefore, implementation of the project would not physically divide an established community. There would be ***no impact***, and no mitigation is required.

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

No Impact. Project construction would occur within an area zoned by Sacramento County as M-2-SPD-Heavy Industrial/American River Parkway Corridor/Special Planning District-East and identified as Public and Employment Center (Low Rise) as part of the Central City Community Plan. The project would include remediation of the NCLF property and development of an infiltration pond on the City of Sacramento Lot 31 property. Both sites are currently vacant and would remain as such with implementation of the project. Thus, the project would not result in any land use changes and would not conflict with any adopted plans, policies, or regulations adopted for avoiding or mitigating an environmental effect. Therefore, this impact would be ***no impact***, and no mitigation is required.

3.12 Mineral Resources

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant 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?	☐	☐	☐	☒

3.12.1 Environmental Setting

Existing mineral extraction activities in and around Sacramento include fine (sand) and coarse (gravel) construction aggregates, as well as clay. Construction aggregates come from two different sources: hardbed rock sources and river channel (alluvial) sources. Generally, sand, gravel, and clay are used as fill and for construction of highways and roads, streets, urban and suburban developments, canals, aqueducts, and pond linings.

Under the State Mining and Reclamation Act, areas containing economically significant mineral deposits are classified and mapped. The project site is not classified as an area that is likely to contain substantial mineral deposits (Dupras 1988; Sacramento County 2010).

3.12.2 Discussion

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?

No Impact. The project site is heavily disturbed and has historically been used as a solid waste disposal site and a substation. The site is not classified as an area containing known mineral deposits, so implementing the project would not be expected to result in the loss of known mineral resources that would be of value to the region or residents of the state (Dupras 1988; Sacramento County 2010). Therefore, the loss of a known mineral resources would not occur as a result of project implementation. ***No impact*** would occur, and no mitigation is required.

3.13 Noise

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant 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 in other applicable local, state, or federal standards?	☐	☐	☒	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

3.13.1 Environmental Setting

Acoustic Fundamentals

Acoustics is the scientific study that evaluates the perception, propagation, absorption, and reflection of sound waves. Sound is a mechanical form of radiant energy transmitted by a pressure wave through a solid, liquid, or gaseous medium. Sound that is loud, disagreeable, unexpected, or unwanted is generally defined as noise. Exposure to noise may result in physical damage to the auditory system, which may lead to gradual or traumatic hearing loss. Gradual hearing loss is caused by sustained exposure to moderately high noise levels over a period of time; traumatic hearing loss is caused by sudden exposure to extremely high noise levels over a short period. Non-auditory behavioral effects of noise on humans are primarily subjective effects, such as annoyance, nuisance, and dissatisfaction, which lead to interference with activities such as communication, sleep, and learning.

Noise is typically expressed in decibels (dB), which is a common measurement of sound energy. A decibel is logarithmic; it does not follow normal algebraic methods and cannot be directly summed. For example, a 65-dB source of sound, such as a truck, when joined by another 65-dB source results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by 3 dB). A sound level increase of 10 dB corresponds to 10 times the acoustical energy, and an increase of 20 dB equates to a 100-fold increase in acoustical energy. The human ear is not equally sensitive to loudness at all frequencies in the audible spectrum. To better relate overall

sound levels and loudness to human perception, frequency-dependent weighting networks were developed, identified as A through E. There is a strong correlation between the way humans perceive sound and A-weighted sound levels. For this reason, the A-weighted sound levels are used to predict community response to noise from the environment, including noise from transportation and stationary sources, and are expressed as A-weighted decibels. All sound levels discussed in this section are A-weighted decibels unless otherwise noted.

The intensity of environment noise fluctuates over time, and several different descriptors of time-average noise levels are used. The noise descriptors used in this chapter include:

- Equivalent Noise Level (L_{eq}): The equivalent steady-state noise level in a stated period of time that would contain the same acoustic energy as the time-varying noise level during the same period (i.e., average noise level)

- Maximum Noise Level (L_{max}): The highest instantaneous noise level during a specific time period.

Noise Generation and Attenuation

Noise can be generated by many sources, including mobile sources such as automobiles, trucks, and airplanes and stationary sources such as activity at construction sites, machinery, and commercial and industrial operations. As sound travels through the atmosphere from the source to the receiver, noise levels attenuate (i.e., decrease) depending on a variety of factors. Atmospheric conditions such as wind speed, wind direction, turbulence, temperature gradients, and humidity alter the propagation of noise and affect levels at a receiver. The presence of a barrier (e.g., topographic feature, intervening building, and dense vegetation) between the source and the receptor can provide substantial attenuation of noise levels at the receiver. Natural (e.g., berms, hills, and dense vegetation) and human-made features (e.g., buildings and walls) may function as noise barriers. To provide some context to noise levels described throughout this section, common sources of environmental noise and associated noise levels are presented in Table 3.13-1.

Table 3.13-1 Typical Noise Levels

Common Outdoor Activities	Noise Level (dB)	Common Indoor Activities
	110	Rock band
Jet flyover at 1,000 feet	100	
Gas lawnmower at 3 feet	90	
Diesel truck moving at 50 mph at 50 feet	80	Food blender at 3 feet, Garbage disposal at 3 feet
Noisy urban area, Gas lawnmower at 100 feet	70	Vacuum cleaner at 10 feet, Normal speech at 3 feet
Commercial area, Heavy traffic at 300 feet	60	
Quiet urban daytime	50	Large business office, Dishwasher in next room
Quiet urban nighttime	40	Theater, Large conference room (background)
Quiet suburban nighttime	30	Library, Bedroom at night, Concert hall (background)
Quiet rural nighttime	20	Broadcast/Recording Studio
	10	
Threshold of Human Hearing	0	Threshold of Human Hearing

Notes: dB = A-weighted decibels; mph = miles per hour
Source: Caltrans 2013

Ground Vibration

Vibration is the periodic oscillation of a medium or object with respect to a given reference point. Sources of vibration include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) and those introduced by human activity (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, (e.g., operating factory machinery) or transient in nature (e.g., trains, buses, other vehicles).

Noise Regulations

Federal

To address the human response to ground vibration, the Federal Transit Authority (FTA) has guidelines for maximum-acceptable vibration impact criteria for different types of land uses. These guidelines are presented in Table 3.13-2.

Table 3.13-2 Ground-Borne Vibration Impact Criteria for General Assessment

Land Use Category	Ground-Borne Vibration Impact Levels (VdB re 1 microinch/second)		
	Frequent Events[1]	Occasional Events[2]	Infrequent Events[3]
Category 1: Buildings where vibration would interfere with interior operations	65 [4]	65 [4]	65 [4]
Category 2: Residences and buildings where people normally sleep	72	75	80
Category 3: Institutional land uses with primarily daytime uses	75	78	83

Notes: VdB re 1 microinch/second = vibration decibels referenced to 1 microinch/second and based on the root mean square velocity amplitude.

1 "Frequent Events" is defined as more than 70 vibration events of the same source per day.

2 "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day.

3 "Infrequent Events" is defined as fewer than 30 vibration events of the same source per day.

4 This criterion is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration-sensitive manufacturing or research would require detailed evaluation to define acceptable vibration levels.

Source: FTA 2018

State

In 2013, the California Department of Transportation (Caltrans) published the Transportation and Construction Vibration Manual (Caltrans 2013). The manual provides general guidance on vibration issues associated with construction and operation of projects in relation to human perception and structural damage. Table 3.13-3 presents recommendations for levels of vibration that could result in damage to structures exposed to continuous vibration.

Table 3.13-3 Caltrans Recommendations Regarding Levels of Vibration Exposure

PPV (in/sec)	Effect on Buildings
0.4–0.6	Architectural damage and possible minor structural damage
0.2	Risk of architectural damage to normal dwelling houses
0.1	Virtually no risk of architectural damage to normal buildings
0.08	Recommended upper limit of vibration to which ruins and ancient monuments should be subjected
0.006–0.019	Vibration unlikely to cause damage of any type

Notes: in/sec = inches per second; PPV = peak particle velocity.

Source: Caltrans 2013

Local

Although SMUD is not subject to the goals and policies of the City of Sacramento, the City's 2035 General Plan Environmental Constraints Element contains noise policies and standards (e.g., exterior and interior noise-level performance standards for new projects affected by or including non-transportation noise sources, and maximum allowable noise exposure levels for transportation noise sources) and the City Noise Ordinance contains noise limits for sensitive receptors that are considered relevant to the evaluation of potential noise impacts as a result of the project. Applicable noise standards used in this analysis are summarized below.

8.68.060 Exterior Noise Standards

A. The following noise standards, unless otherwise specifically indicated in this article, shall apply to all agricultural and residential properties.

   1. From seven a.m. to ten p.m. the exterior noise standard shall be fifty-five (55) dBA.

   2. From ten p.m. to seven a.m. the exterior noise standard shall be fifty (50) dBA.

B. It is unlawful for any person at any location to create any noise which causes the noise levels when measured on agricultural or residential property to exceed for the duration of time set forth following, the specified exterior noise standards [Table 3.13-4] in any one hour by:

Table 3.13-4 Exterior Noise Standards

Cumulative Duration of the Intrusive Sound	Allowance Decibels
Cumulative period of 30 minutes per hour	0
Cumulative period of 15 minutes per hour	+5
Cumulative period of 5 minutes per hour	+10
Cumulative period of 1 minute per hour	+15
Level not to be exceeded for any time per hour	+20

C. Each of the noise limits specified in subsection B. of this section shall be reduced by 5 dBA for impulsive or simple tone noises, or for noises consisting of speech or music.

D. If the ambient noise level exceeds that permitted by any of the first four noise limit categories specified in subsection B of this section, the allowable noise limit shall be increased in 5 dBA increments in each category to encompass the ambient noise level. If the ambient noise level exceeds the fifth noise level category, the maximum ambient noise level shall be the noise limit for that category.

8.68.080 Exemptions

The following activities shall be exempted from the provisions of this chapter:

D. Noise sources due to the erection (including excavation), demolition, alteration or repair of any building or structure between the hours of seven a.m. and six p.m., on Monday, Tuesday, Wednesday, Thursday, Friday and Saturday, and between nine a.m. and six p.m. on Sunday; provided, however, that the operation of an internal combustion engine shall not be exempt pursuant to this subsection if such engine is not equipped with suitable exhaust and intake silencers which are in good working order. The director of building inspections may permit work to be done during the hours not exempt by this subsection in the case of urgent necessity and in the interest of public health and welfare for a period not to exceed three days. Application for this exemption may be made in conjunction with the application for the work permit or during progress of the work.

Existing Sensitive Receptors

The project site is in a primarily undeveloped area bounded by Western Pacific Railroad track to the west, the American River and levee to the north, and undeveloped parcels to the south and southeast. Existing noise sources include trains traveling along the Western Pacific Railroad track and boating activity along the American River.

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels, and because of the potential for nighttime noise to result in sleep disruption. The nearest noise-sensitive land uses to the project site are the single-family residences located approximately 780 feet to the west from the center edge of the project site.

3.13.2 Discussion

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

Less than Significant. The project would result in temporary increases in noise levels during construction as a result of heavy equipment movement and materials hauling, but no permanent increases in ambient noise levels would occur during post-remediation monitoring and maintenance.

Construction-related noise would result from the use of heavy-duty equipment for excavation, demolition, material hauling, and water trucks for dust suppression.

Construction noise would be short-term and temporary, and operation of heavy-duty construction equipment would be intermittent throughout the day during construction.

Based on the types of activities that would occur (e.g., excavation, fill, on--site material hauling), typical equipment such as dozers, excavators, compactors, work trucks, and haul trucks would be required. Reference noise levels for these equipment types are shown in Table 3.13-5.

Table 3.13-5 Noise Emission Levels from Construction Equipment

Equipment Type	Typical Noise Level (dBA) at 50 Feet
Compactor	83
Excavator	81
Dozer	82
Dump truck	76
Concrete/Rock Crusher	82-87

Notes: reference noise levels based on actual measured levels.

Source: FTA 2018; City of San Marcos 2011.

It was conservatively assumed that the loudest four pieces of equipment—a compactor, a dozer, a concrete/rock crusher, and an excavator—would be operating simultaneously in close proximity to each other, combining to generate a modeled maximum noise level from construction activity. Note that pieces of construction equipment move around a construction site and generally are not close to each other for safety reasons; thus, noise levels would fluctuate throughout the day, depending on the actual activity taking place and equipment used at any one location on the site.

Assuming simultaneous operation of a dozer, a compactor, a concrete/rock crusher, and an excavator and accounting for typical use factors of individual pieces of equipment and activity types along with typical attenuation rates, on-site construction-related activities could result in hourly average noise levels of approximately 83 L_{eq} and 89 dBA L_{max} at 50 feet. As described above, the nearest sensitive land uses are residences located approximately 780 feet to the west of the project site. At this distance, noise from the use of heavy-duty equipment would attenuate, from distance alone, to 57 dBA L_{eq} and 63 dBA L_{max}.

Within the City of Sacramento, the City's Municipal Code Section 8.28.060 exempts certain activities, including construction, from the City's noise standards as long as the activities are limited to the hours of 7 a.m. to 6 p.m. on Monday through Saturday and 9 a.m. to 6 p.m. on Sunday. This exemption provides that construction equipment must include appropriately maintained exhaust and intake silencers. However, the City does not specify limits in terms of maximum noise levels that may occur during the allowable construction hours.

As described in the project description, construction activities would occur during the daytime hours when construction noise is exempt. Thus, implementing the project would

not generate a substantial temporary increase in ambient noise levels in excess of allowable standards in the vicinity of the project. The impact would be ***less than significant***, and no mitigation is required.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less than Significant. Construction would result in varying degrees of temporary ground vibration and noise levels from the intermittent operation of various types of construction equipment and activities. Equipment that would be used for excavation would include dozers, excavators, haul trucks, and compactors. Of these, a large dozer would generate the highest ground vibration levels on the project site. In addition, up to 50 truck trips could occur per day to haul fill material to the site, generating vibration at receptors located near haul routes. Thus, this analysis focuses on vibration levels from the use of a dozer and haul trucks on haul routes. See Figure 2-3 for the location of haul routes.

Large dozers generate vibration levels that could result in 0.089 inch per second (in/sec) peak particle velocity (PPV) and 87 vibration decibels (VdB) at 25 feet of operational construction equipment, and loaded haul trucks can generate vibration levels of 0.076 in/sec PPV and 86 VdB at 25 feet (FTA 2006). Caltrans recommends a level of 0.2 in/sec PPV with respect to structural damage, and FTA recommends a maximum acceptable level of 75 VdB with respect to human response for residential uses (i.e., annoyance) for events that occur from 30 to 70 times per day. FTA guidance for maximum acceptable VdB levels is primarily concerned with sleep disturbance in residential areas, which can be avoided by keeping exposures at or below 75 VdB during typical sleeping hours.

Construction on the project site would be located approximately 780 feet from any sensitive land use and approximately 420 feet from the nearest structure, located west of the project site. Thus, on-site construction activities would occur beyond 50 feet from any existing structure or sensitive land use and therefore would not result in any potential for structural damage or annoyance. Truck hauling activity could result in 50 truck trips per day during the most intense period of construction. After haul trucks exit the freeway, they would use 28th Street, 29th Street, and 30th Street to access the site. Residences are located as close as 30 feet from the edge of these roadways. At 30 feet from a loaded and moving truck, vibration levels would reach 83.6 VdB and 0.068 in/sec PPV, not exceeding the recommended levels where structural damage could occur. However, vibration levels would exceed the recommended level for human annoyance (75 VdB). Nonetheless, as described above, construction activities would occur during the daytime hours when people are generally awake and less sensitive to noise levels. In addition, traffic volumes on these roads would also be higher during these times; therefore, an increase in haul trips associated with temporary construction activities would not result in new or substantially different vibration sources than already exist. Because project construction activities would not occur during typical sleep hours (i.e., construction would occur only between 7 a.m. and 6 p.m. on Monday through Friday

and between 9 a.m. and 6 p.m. on Sunday), the project would not result in the exposure of existing off-site receptors to excessive ground vibration levels. This impact would be ***less than significant***, and no mitigation is required.

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?

No Impact. There are no private airstrips or airports within 2 miles of the project site. The nearest airport is the Sacramento Executive Airport, located approximately 5.5 miles south of the project site. In addition, the project would be limited to short-term temporary construction work associated with landfill closure; thus, no new land uses where people would work or reside would be constructed. There would be ***no impact***, and no mitigation is required.

3.14 Population and Housing

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant 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?	☐	☐	☐	☒

3.14.1 Environmental Setting

The project site is located on the northern edge of Sacramento's Boulevard Park neighborhood. The surrounding land uses are characterized by existing and former industrial uses with a mix of commercial/residential/park uses located further to the south and across the American River Parkway to the north.

3.14.2 Discussion

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)?

No Impact. The project involves installation of a soil cover and construction of drainage improvements within the project site. Upon completion of construction, no new permanent jobs or residents would be located at the project site. Therefore, the project would not result in unplanned population growth, either directly or indirectly. ***No impact*** would occur, and no mitigation is required.

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

No Impact. No persons or homes would be displaced as a result of project construction or operation. Therefore, the project would have ***no impact***, and no mitigation is required.

3.15 Public Services

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

3.15.1 Environmental Setting

The project site and haul route are located north of the New Era Park, Boulevard Park, and Marshall School neighborhood in the City of Sacramento in Sacramento County. The project site is bounded by Western Pacific Railroad tracks and right-of-way to the west, the American River and levee to the north, undeveloped parcels owned by Blue Diamond Growers and the City of Sacramento to the east, and SMUD-owned property to the south and southeast. The Boulevard Park neighborhood of Sacramento is located south of the project site.

Fire Protection Services

The Sacramento Fire Department provides fire protection services to the project site, as well as the entire city. The project site is within the response zone of Fire Station #2 and Fire Station #14 (SFD 2019). Fire Station #2 is located at 1229 I Street, approximately 1 mile southwest of the project site, and Fire Station #14 is located at 1341 North C Street, approximately 0.5 mile west of the site.

Police Protection Services

The Sacramento Police Department is principally responsible for providing police protection services in the City of Sacramento, including the project site.

The project site is located within the patrol area of the Central Command and beat 3B (SPD 2016:8). The Central Command is based at the Richards Police Facility, located at 300 Richards Boulevard, approximately 1.5 miles west of the project site.

Schools

The project site is located within the Sacramento Unified School District. The closest school to the project site is the Courtyard Private School, located approximately 0.26 mile from the project site at 205 24th Street. The nearest public school is the Phoebe A. Hearst Elementary School, located at 1410 60th Street, approximately 3.2 miles southeast of the site.

Parks and Other Public Facilities

The park nearest to the project site is Ulysses S. Grant Park, a 2.37-acre neighborhood park located at 205 21st Street, approximately 0.3 mile from the site. The next closest park is Leland Stanford Park, a 2.74-acre park located at 205 27th Street, approximately 0.5 mile southeast of the project site. Sutter Landing Regional Park, approximately 166.83 acres in size, is located approximately 0.5 mile to the east of the project site and is the largest park in the area.

3.15.2 Discussion

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

Fire protection?

No Impact. Implementation of the project would not increase demand for Sacramento Fire Department fire protection services, because the project would not generate new residents, which is the driving factor for fire protection services, nor would it result in the operation of additional structures on the project site that could generate calls for service. Because the project would not increase demand for fire protection services, no construction of new or expansion of existing fire service facilities would be required. Therefore, there would be ***no impact***, and no mitigation is required.

Police protection?

No Impact. Implementation of the project would not increase demand for Sacramento Police Department police protection services, because the project would not generate new residents, which is the driving factor for police protection services, nor would it result in the operation of additional structures on the project site that could generate calls for service. Because the project would not increase demand for police protection

services, no construction of new or expansion of existing police service facilities would be required. Therefore, there would be ***no impact***, and no mitigation is required.

Schools?

No Impact. The project would not provide any new housing, so it would not generate new students in the community or result in an increase in employment opportunities that could indirectly contribute new students to the local school district. Therefore, there would be ***no impact***, and no mitigation is required.

Parks?

No Impact. The project would not provide any new structures that could result in additional residents or employees or necessitate new or expanded park facilities. Therefore, there would be ***no impact***, and no mitigation is required.

Other public facilities?

No Impact. No other public facilities in the project area could be affected by implementation of the project. Therefore, there would be ***no impact***, and no mitigation is required.

3.16 Recreation

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

3.16.1 Environmental Setting

The project site and haul route are located north of the New Era Park, Boulevard Park, and Marshall School neighborhoods in the City of Sacramento in Sacramento County. The park nearest to the project site is Ulysses S. Grant Park, a 2.37-acre neighborhood park located at 205 21st Street, approximately 0.3 mile from the site. The next closest park is Leland Stanford Park, a 2.74-acre park located at 205 27th Street, approximately 0.5 mile southeast of the project site. Sutter Landing Regional Park is an approximately 166.83-acre park and is the largest park in the area with the most amenities. It is located at 20 28th Street, approximately 0.5 mile east and southeast of the project site.

3.16.2 Discussion

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact. The project does not include any new development that could increase the use of existing parks or recreational facilities. Therefore, there would be ***no impact***, and no mitigation is required.

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

No Impact. The project does not include any new development that could necessitate new or expanded recreational facilities. Therefore, there would be ***no impact***, and no mitigation is required.

3.17 Transportation

ENVIRONMENTAL ISSUES		Potentially Significant Impact	Less Than Significant 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?	☐	☐	☐	☒

3.17.1 Environmental Setting

3.17.2 Regional access to the project site is available from Business 80, via Exit 7B (E Street). The majority of local roadways within Downtown Sacramento in the vicinity of the project site are paved two-way streets, with one lane of travel in each direction. Primary access to the project site is limited to gravel roadways that connect the project site to 28th Street near Sutter's Landing Regional Park, and secondary access for the project site would be from C and 20th Streets. Discussion

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

Less than Significant. Construction equipment and the materials staging area would be located adjacent to the project site on SMUD Station E property, located immediately south of the NCLF site. During construction, primary access to the site would be maintained, with the primary access for construction equipment, deliveries, and workers from 28th Street, near Sutter's Landing Regional Park and secondary access would be from C and 20th Streets. Trucks and construction equipment would enter and exit the project site along existing gravel roadways, as shown in Figure 2-3. The project is located in an area that is not associated with a circulation system that is available for use by the general public. The project would not affect transit, roadway, bicycle, or pedestrian programs, plans, ordinances, or policies. This impact would be ***less than significant***, and no mitigation is required.

b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3(b), which pertains to vehicle miles travelled?

Less than Significant. Temporary construction activities would result in slight increases in vehicle trips associated with worker commutes and materials (i.e., soil) delivery (a maximum of 50 truck trips per day are expected, see Section 3.13, “Noise”). However, these additional trips would occur only during the construction period. During operation, no new vehicle trips would be generated, because the project involves closure of a former landfill and development of drainage facilities. Because the project would not change the amount of development projected for the area, would be consistent with the population growth and vehicle miles traveled projections in regional and local plans, and would result in only a slight increase in vehicle miles traveled during construction, this impact would be ***less than significant***, and no mitigation is required.

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

No Impact. The project does not involve any changes in road geometry or new uses. There would be ***no impact***, and no mitigation is required.

d) Result in inadequate emergency access?

No Impact. The project involves the installation of a soil cover and construction of drainage improvements within the project site. It is not located in an area where public access is available and would not be used as an emergency evacuation route. There would be ***no impact***, and no mitigation is required.

3.18 Tribal Cultural Resources

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XVIII. Tribal Cultural Resources.				
Has a California Native American Tribe requested consultation in accordance with Public Resources Code Section 21080.3.1(b)?	☒ Yes		☐ No	
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:				
a) 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)?	☐	☐	☐	☒
b) 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?	☐	☒	☐	☐

3.18.1 Environmental Setting

Under PRC section 21080.3.1 and 21082.3, SMUD must consult with tribes traditionally and culturally affiliated with the project area that have requested formal notification and responded with a request for consultation. The parties must consult in good faith. Consultation is deemed concluded when the parties agree to measures to mitigate or avoid a significant effect on a tribal cultural resource when one is present or when a party concludes that mutual agreement cannot be reached. Mitigation measures agreed on during the consultation process must be recommended for inclusion in the environmental document.

Tribal Consultation

On August 24th and 26th, 2020, SMUD sent notification letters that the project was being addressed under CEQA, as required by PRC 21080.3.1, to the four Native American tribes that had previously requested such notifications, Wilton Rancheria, United Auburn Indian Community (UAIC), Shingle Springs Band of Miwok Indians, and Ione Band of Miwok Indians. Shingle Springs and UAIC responded requesting consultation. While the specific details of consultation are confidential pursuant to California law, consultation resulted in the conclusion that there are no known resources on the project site considered to be tribal cultural resources as defined in

PRC Section 21074; however, the area is sensitive for tribal cultural resources and mitigation measures were requested.

The cultural resources study (ICF 2020) prepared for the project included a request for a Native American Heritage Commission (NAHC) Sacred Lands File search. The NAHC search indicated that the Sacred Lands File was positive for the presence of Native American resources within the project site.

3.18.2 Discussion

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:

a) 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)?

No Impact. The project site contains no tribal cultural resources that are listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources. There would be ***no impact***, and no mitigation is required.

b) 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?

Less than Significant with Mitigation Incorporated. Consultation with UAIC and Shingle Springs revealed that the project site is considered culturally sensitive. Although the NAHC Sacred Lands File was positive, neither tribe identified a tribal cultural resource. Therefore, it is possible that yet-undiscovered tribal cultural resources could be encountered or damaged during ground-disturbing construction activities. This impact would be potentially significant.

Mitigation Measure 3.18-1: Avoid Tribal Cultural Resource; Post Ground Disturbance

A minimum of seven days prior to beginning earthwork, clearing and grubbing, or other soil disturbing activities, SMUD shall contact the Tribes with the proposed earthwork start-date and a Tribal Representative or Tribal Monitor shall be invited to inspect the project site, including any soil piles, trenches, or other disturbed areas, within the first five days of groundbreaking activity, or as appropriate for the type and size of project. During this inspection, a Tribal Representative or Tribal

Monitor may provide an on-site meeting for construction personnel information on TCRs and workers awareness brochure.

If any TCRs are encountered during this initial inspection, or during any subsequent construction activities, Mitigation Measure 3.18-2 shall be implemented.

Mitigation Measure 3.18-2: Unanticipated Discoveries of Potential TCRs

If any suspected TCRs are discovered during ground disturbing construction activities, including midden soil, artifacts, chipped stone, exotic rock (nonnative), or unusual amounts of baked clay, shell, or bone, all work shall cease within 100 feet of the find. Appropriate Tribal Representative(s) shall be immediately notified and shall determine if the find is a TCR (pursuant to PRC section 21074). The tribal representative will make recommendations for further evaluation and treatment, as necessary.

Preservation in place is the preferred alternative under CEQA and the Tribes' protocols, and every effort must be made to preserve the resources in place, including through project redesign. Culturally appropriate treatment may be, but is not limited to, processing materials for reburial, minimizing handling of cultural objects, leaving objects in place within the landscape, returning objects to a location within the project area where they will not be subject to future impacts. The Tribe does not consider curation of TCRs to be appropriate or respectful and request that materials not be permanently curated, unless approved by the Tribe. Treatment that preserves or restores the cultural character and integrity of a Tribal Cultural Resource may include Tribal Monitoring, culturally appropriate recovery of cultural objects, and reburial of cultural objects or cultural soil.

Implementation of Mitigation Measures 3.18-1 and 3.18-2 would reduce impacts to tribal cultural resources to a ***less-than-significant*** level by requiring notification of tribal representatives prior to earth-disturbing activities and, in the case of a discovery, appropriate treatment and proper care of significant tribal cultural resources.

3.19 Utilities and Service Systems

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant 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 construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have insufficient 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 that serves or may serve the project that it has inadequate capacity to serve the project's projected demand, in addition to the provider's existing commitments?	☐	☐	☐	☒
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Fail to comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

3.19.1 Environmental Setting

The project site currently contains the North City substation, which will be decommissioned before project construction begins. The project site is not served with water, stormwater, wastewater, treatment or stormwater drainage, or telecommunication facilities.

3.19.2 Discussion

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

Less than Significant. The project does not include the construction of new or expanded water, wastewater treatment, electric power, natural gas, or telecommunication facilities and therefore could not cause significant environmental effects related to the provision of these facilities. The project does include stormwater drainage improvements to accommodate a 100-year storm event. East-flowing runoff would be collected in the project infiltration pond. West-flowing runoff would be collected

by the Western Pacific Railroad's surface water collection system, which has excess drainage capacity. Surface water runoff to the west would be minimized to the extent feasible. Furthermore, the project would implement a WPCP that includes best management practices that address excavation areas, stockpile areas, street entrances and exits, construction vehicle maintenance areas, water tanks, dust suppression activities, and post-construction site stabilization to minimize stormwater runoff. The environmental impacts associated with development of the on-site stormwater drainage system are evaluated throughout this IS. Therefore, the impact would be ***less than significant***, and no mitigation is required.

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

Less than Significant. Project construction would require a small amount of water for dust suppression activities that would be provided by the City of Sacramento and stored on the site in water tanks. The project would not require new water supplies upon completion of the project. Therefore, the impact related to water supplies would be ***less than significant***, and no mitigation is required.

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

No impact. The project involves the installation of a soil cover and construction of drainage improvements within the project site. Project implementation would not result in wastewater generation or require wastewater treatment. There would be ***no impact***, and no mitigation is required.

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) Fail to comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less than Significant. The project would the installation of a soil cover and construction of drainage improvements within the project site. Substation concrete debris would be consolidated within the NCLF property for use as part of the landfill rough grading. Waste (soil and construction and demolition debris) that is excavated as part of the landfill rough grading of the east slope of the landfill would be consolidated over the landfill surface. Soil is not expected to be hauled off site, however, in the event that any excavated soil would not be consolidated into the rough grading of the project site would be sampled and submitted to the LEA. If hazardous waste is encountered, it would remain on-site or otherwise be disposed of in accordance with applicable statues and regulations, under the direction of the LEA. Thus, this impact would be ***less than significant***, and no mitigation is required.

3.20 Wildfire

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XX. Wildfire.				
Is the project located in or near state responsibility areas or lands classified as high fire hazard severity zones?		☐ Yes		☒ No
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 of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

3.20.1 Environmental Setting

The project site is located within a Local Responsibility Area that is designated as a non-Very High Fire Hazard Severity Zone (CAL FIRE 2008). However, Chapter 7, "Public Health and Safety," of the Background Report for the City of Sacramento 2035 General Plan recognizes areas near the American River to be subject to urban wildfires due to the dense tree coverage on the river shorelines (City of Sacramento 2015).

3.20.2 Discussion

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

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

No Impact. The project involves the installation of a soil cover and construction of drainage improvements within the project site. The project would not exacerbate wildfire risks because the project site is not located within a high or very high wildfire hazard zone. Construction equipment would be stored away from vegetation that could provide fire fuel if ignited. In addition, vegetation would be removed or trimmed on the project site, as needed, to ensure that construction activities do not increase risks associated with wildfires. Thus, the project would not affect the potential for wildfires to ignite or spread within areas surrounding the project site. There would be ***no impact***, and no mitigation is required.

3.21 Mandatory Findings of Significance

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant 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 an endangered, rare, or threatened species, 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 that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

3.21.1 Discussion

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?

Less than Significant with Mitigation Incorporated. As discussed in Section 3.4, "Biological Resources," of this IS/MND, ground disturbance associated with the project would occur within previously disturbed land, and as explained in Section 3.4, "Biological Resources," no special-status plants are expected to occur on the site. Therefore, the project would have no impact on special-status plant species. The project has potential to adversely affect valley elderberry longhorn beetle, Swainson's hawk, white-tailed kite, and other nesting birds. Potentially significant impacts would be reduced to a less-than-significant level with implementation of Mitigation Measures 3.4-1 and 3.4-2.

As discussed in Section 3.5, “Cultural Resources,” a historic-period archaeological site was discovered during the pedestrian survey. While this resource was not evaluated and may be eligible for the California Register of Historical Resources, intact, undisturbed deposits are located between 3 and 18 feet below ground surface. Ground-disturbing activity for the project site will extend 1 to 5 feet below ground surface and therefore would not affect the archaeological site. However, the project site has a high sensitivity for buried historic era archaeological resources. As such, it is possible that archaeological materials could be encountered during ground disturbing activities. Mitigation Measure 3.5-1 would reduce potential impacts to archaeological resources discovered during project construction activities to a ***less-than-significant*** level by requiring construction monitoring and, in the case of a discovery, preservation options (including data recovery, mapping, capping, or avoidance) and proper curation if significant artifacts are recovered.

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.)

Less than Significant with Mitigation Incorporated. Project impacts would be individually limited and not cumulatively considerable due to the site-specific nature of the potential impacts. The potentially significant impacts to biological resources and cultural resources can be reduced to a less-than-significant level with implementation of recommended mitigation measures. These impacts would primarily be related to construction activities, would be temporary in nature, and would not substantially contribute to any potential cumulative impacts associated with these topics.

Potentially significant biological resources impacts would be reduced to a less-than-significant level with implementation of Mitigation Measures 3.4-1 and 3.4-2. Potentially significant cultural resources impacts would be reduced to less-than-significant levels with implementation of Mitigation Measures 3.5-1 and 3.5-2. Potentially significant hazard and hazardous materials impacts would be reduced to a less-than-significant level with implementation of 3.9-1. Potentially significant tribal cultural resources impacts would be reduced to a less-than-significant level with implementation of Mitigation Measures 3.18-1 and 3.18-2.

The project would have no impact or less than significant impacts to the following environmental areas: aesthetics, agriculture and forestry resources, air quality, energy, geology and soils, greenhouse gas emissions, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation, utilities and service systems, and wildfire. Therefore, the project would not substantially contribute to any potential cumulative impacts for these topics. All environmental impacts that could occur as a result of the project would be reduced to a less-than-significant level through the implementation of the mitigation measures recommended in this document. Implementation of these measures would

ensure that the impacts of the project would be below established thresholds of significance and that these impacts would not combine with the impacts of other cumulative projects to result in a cumulatively considerable impact on the environment as a result of project implementation. Therefore, this impact would be ***less than significant***.

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

Less than Significant with Mitigation Incorporated. The project would have potentially significant impacts related to biological resources, cultural resources, hazards and hazardous materials, and tribal cultural resources. However, all of these impacts would be reduced to less-than-significant levels with incorporation of the mitigation measures included in the respective section discussions above. No other direct or indirect impacts on human beings were identified in this IS/MND. Therefore, this impact would be ***less than significant***.

4.0 ENVIRONMENTAL JUSTICE EVALUATION

4.1 Introduction

At present, there are no direct references to the evaluation of environmental justice (EJ) as an environmental topic in the Appendix G Environmental Checklist, CEQA statute, or State CEQA Guidelines; however, requirements to evaluate inconsistencies with general, regional, or specific plans (State CEQA Guidelines Section 15125[d]) and determine whether there is a "conflict" with a "policy" "adopted for the purpose of avoiding or mitigating an environmental effect" (Environmental Checklist Section XI[b]) can implicate EJ policies. As additional cities and counties comply with Senate Bill (SB) 1000 (2016), which requires local jurisdictions to adopt EJ policies when two or more general plan elements are amended, environmental protection policies connected to EJ will become more common.

"Environmental Justice" is defined in California law as the fair treatment and meaningful involvement of people of all races, cultures, incomes, and national origins with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies (California Government Code Section 30107.3[a]). "Fair treatment" can be defined as a condition under which "no group of people, including racial, ethnic, or socioeconomic group, shall bear a disproportionate share of negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies" (EPA 2011).

SMUD created the Sustainable Communities Initiative, which encompasses the framework of EJ, to help bring environmental equity and economic vitality to all communities in SMUD's service area with special attention to historically underserved neighborhoods. The initiative focuses on the development of holistically sustainable neighborhoods through partnerships and collaboration. The goal of this effort is to ensure the advancement of prosperity in the Sacramento region regardless of zip code or socioeconomic status by focusing on equitable access to mobility, a prosperous economy, a healthy environment, and social well-being. To support the initiative, SMUD teams are working internally and with community partners to improve equitable access to healthy neighborhood environments, energy efficiency programs and services, environmentally friendly transit modes (including electric vehicles), and energy-related workforce development and economic development prospects. To the extent these goals seek to avoid environmental impacts affecting vulnerable communities, the State CEQA Guidelines already require consideration of whether a proposed project may conflict with goals that support sustainable communities. The following analysis has been provided by SMUD, as a proactive evaluation in excess of CEQA requirements, to identify any localized existing conditions to which the project, as proposed, may worsen adverse conditions and negatively impact the local community and identifies the need for implementation of additional site or local considerations, where necessary. Environmental justice issues are being considered in this CEQA document to help

inform decision makers about whether the project supports SMUD's goal of helping to advance environmental justice and economic vitality to all communities in SMUD's service area with special attention to historically underserved neighborhoods.

4.2 Regulatory Context

California legislation, state agency programs, and guidance have been issued in recent years that aim to more comprehensively address EJ issues, including SB 1000 (2016), SB 535 (2012) and Assembly Bill (AB) 1550 (2016), AB 617 (2017), the California Department of Justice Bureau of Environmental Justice, the California Communities Environmental Health Screening Tool (CalEnviroScreen), and the Governor's Office of Planning and Research's (OPR's) 2020 General Plan Guidelines, Environmental Justice Element. In particular, SB 1000 has provided an impetus to more broadly address EJ; coupled with the existing requirements of CEQA, it is now time to elevate the coverage of significant environmental impacts in the context of EJ in environmental documents. These other bills have also provided the necessary policy direction to address EJ under CEQA.

4.2.1 Senate Bill 1000

SB 1000, which was enacted in 2016, amended California Government Code Section 65302 to require that general plans include an EJ element or EJ-related goals, policies, and objectives in other elements of general plans with respect to disadvantaged communities (DACs) beginning in 2018. The EJ policies are required when a city or county adopts or revises two or more general plan elements and the city or county contains a DAC. EJ-related policies must aim to reduce the disproportionate health risks in DACs, promote civic engagement in the public decision-making process, and prioritize improvements that address the needs of DACs (California Government Code Section 65302[h]). Policies should focus on improving the health and overall well-being of vulnerable and at-risk communities through reductions in pollution exposure, increased access to healthy foods and homes, improved air quality, and increased physical activity.

4.2.2 Senate Bill 535 and Assembly Bill 1550

Authorized by the California Global Warming Solutions Act of 2006 (AB 32), the cap-and-trade program is one of several strategies that California uses to reduce greenhouse gases (GHGs) that cause climate change. The state's portion of the cap-and-trade auction proceeds are deposited in the Greenhouse Gas Reduction Fund (GGRF) and used to further the objectives of AB 32. In 2012, the California Legislature passed SB 535 (de Leon), directing that 25 percent of the proceeds from the GGRF go to projects that provide a benefit to DACs. In 2016, the legislature passed AB 1550 (Gomez), which now requires that 25 percent of proceeds from the GGRF be spent on projects located in DACs. The law requires the investment plan to allocate (1) a minimum of 25 percent of the available moneys in the fund to projects located within and benefiting individuals living in DACs; (2) an additional minimum of 5 percent to

projects that benefit low-income households or to projects located within, and benefiting individuals living in, low-income communities located anywhere in the state; and (3) an additional minimum of 5 percent either to projects that benefit low-income households that are outside of, but within 0.5 mile of, DACs, or to projects located within the boundaries of, and benefiting individuals living in, low-income communities that are outside of, but within 0.5 mile of, DACs.

4.2.3 Assembly Bill 617

AB 617 of 2017 aims to help protect air quality and public health in communities around industries subject to the state's cap-and-trade program for GHG emissions. AB 617 imposes a new state-mandated local program to address nonvehicular sources (e.g., refineries, manufacturing facilities) of criteria air pollutants and toxic air contaminants. The bill requires the California Air Resources Board (CARB) to identify high-pollution areas and directs air districts to focus air quality improvement efforts through the adoption of community emission reduction programs in these identified areas. Currently, air districts review individual stationary sources and impose emissions limits on emitters based on best available control technology, pollutant type, and proximity to nearby existing land uses. This bill addresses the cumulative and additive nature of air pollutant health effects by requiring communitywide air quality assessment and emission reduction planning, called a community risk reduction plan in some jurisdictions. CARB has developed a statewide blueprint that outlines the process for identifying affected communities, statewide strategies to reduce emissions of criteria air pollutants and toxic air contaminants, and criteria for developing community emissions reduction programs and community air monitoring plans.

4.2.4 California Department of Justice's Bureau of Environmental Justice

In February 2018, California Attorney General Xavier Becerra announced the establishment of a Bureau of Environmental Justice within the Environmental Section at the California Department of Justice. The purpose of the bureau is to enforce environmental laws, including CEQA, to protect communities disproportionately burdened by pollution and contamination. The bureau accomplishes this through oversight and investigation and by using the law enforcement powers of the Attorney General's Office to identify and pursue matters affecting vulnerable communities.

In 2012, then Attorney General Kamala Harris published a fact sheet titled, "Environmental Justice at the Local and Regional Level," highlighting existing provisions in the California Government Code and CEQA principles that provide for the consideration of EJ in local planning efforts and CEQA. Attorney General Becerra cites the fact sheet on his web page, indicating its continued relevance.

4.2.5 California Communities Environmental Health Screening Tool

CalEnviroScreen is a mapping tool developed by the Office of Environmental Health Hazards Assessment to help identify low-income census tracts in California that are

disproportionately burdened by and vulnerable to multiple sources of pollution. It uses environmental, health, and socioeconomic information based on data sets available from state and federal government sources to produce scores for every census tract in the state. Scores are generated using 20 statewide indicators that fall into four categories: exposures, environmental effects, sensitive populations, and socioeconomic factors. The exposures and environmental effects categories characterize the pollution burden that a community faces, whereas the sensitive populations and socioeconomic factors categories define population characteristics.

CalEnviroScreen prioritizes census tracts based on their combined pollution burden and population characteristics score, from low to high. A percentile for the overall score is then calculated from the ordered values. The California Environmental Protection Agency has designated the top 25 percent of highest scoring tracts in CalEnviroScreen (i.e., those that fall in or above the 75th percentile) as DACs, which are targeted for investment proceeds under SB 535, the state's cap-and-trade program.

4.2.6 Governor's Office of Planning and Research's 2020 Updated EJ Element Guidelines

OPR published updated General Plan Guidelines in June 2020 that include revised EJ guidance in response to SB 1000. OPR has also published example policy language in an appendix document along with several case studies to highlight EJ-related policies and initiatives that can be considered by other jurisdictions. Section 4.8 of the General Plan Guidelines contains the EJ guidance. The guidelines offer recommendations for identifying vulnerable communities and reducing pollution exposure related to health conditions, air quality, project siting, water quality, and land use compatibility related to industrial and large-scale agricultural operations, childcare facilities, and schools, among other things. It provides many useful resources, including links to research, tools, reports, and sample general plans.

4.3 Sensitivity of Project Location

4.3.1 Community Description

As part of its Sustainable Communities Initiative, SMUD created and maintains the Sustainable Communities Resource Priorities Map,[1] which reflects several data sets related to community attributes that SMUD uses to identify historically underserved communities. One of the key components of the map is the California Communities Environmental Health Screening Tool (CalEnviroScreen Version 3.0), which identifies communities facing socioeconomic disadvantages or health disadvantages such as multiple sources of pollution. The Sustainable Communities Resource Priorities map provides an analysis of current data sets to indicate areas ranging from low to high sensitivity and can be used to describe the relevant socioeconomic characteristics and

[1] The Sustainable Communities Resource Priorities Map is available at https://usage.smud.org/SustainableCommunities/?_ga=2.223364443.1927542179.1598288052-1197903775.1589235097.

current environmental burdens of the project area can be described. SMUD has determined that it will evaluate EJ effects for projects located in, adjacent to, or proximate to (e.g., within 500 feet of) a high-sensitivity area as shown on the Sustainable Communities Resource Priorities Map or located in a census tract with a CalEnviroScreen score of 71% or greater.

The proposed project is located in a high sensitivity area per the Sustainable Communities Resource Priorities Map (SMUD 2020). The project area is a high sensitivity area because the project area was designated as an Opportunity Zone, a Sacramento Promise Zone, and as a Disadvantaged Communities by state Senate Bill 535, which are used as tools for targeting economic development, designated by the Healthy Sacramento Coalition as an area with consistent high rates of poor health outcomes, and designated as located in an area with a population that is highly vulnerable and susceptible to harm from exposure to a hazard, and its ability to prepare for, respond to, and recover from hazards.

The proposed project is located in a census tract with a CalEnviroScreen score of 91% or greater, which indicates the area is confronted with many burdens and vulnerabilities from environmental pollutants. The high CalEnviroScreen score is driven by environmental conditions such as multiple potential exposures to pollutants and adverse environmental conditions caused by pollution, and high health and socioeconomic vulnerability to pollution. The pollution burden of the census tract is from a high concentration of groundwater and soil cleanup sites and solid waste facilities, including the project site. The population characteristics of the census tract that contribute to a community's pollution burden and vulnerability include low birth weight, poverty and unemployment.

4.4 Environmental Conditions

This discussion references the analysis conducted in the Environmental Checklist of the IS/MND and provides additional detail with respect to the current environmental conditions in the project area. Within CalEnviroScreen, the census tract associated with the project site's score is largely driven by the identification (within CalEnviroScreen) of the North City substation and the presence of the former landfill at the project site. Additionally, the American River, located to the north of the project site, is listed as an impaired water body. The focus of this discussion is on environmental justice issues relevant to the project.

- **Aesthetics:** The visual characteristics of the project site and adjacent uses are largely vacant but previously disturbed land with some industrial land uses to the west and east. The site is publicly visible from the American River levee but is not visible from nearby roadways or residences.

- **Air Quality:** The project site is located in an area adjacent to an existing rail line and is located on former disposal sites. Nearby industrial uses can also contribute toxic air contaminants to the area during operation. Nearby receptors

are located approximately 780 feet from the edge project site, either across the American River or to the south of the existing rail line. The nearby receptors are located at lower elevation than the project site.

- **Cultural Resources and Tribal Cultural Resources:** There are no known cultural resources or tribal cultural resources on the project site.

- **Energy:** Communities near the project area have access to electric vehicles through a local car share, and the portion of the project area to the south of the site within the "home zone" where those vehicles may be parked. The project area is served by SMUD, which offers the Greenergy program, which offers electricity generated with 100 percent renewable and carbon-free resources.

- **Greenhouse Gas Emissions and Climate Change Vulnerabilities:** The project area is in an area that would likely be subject to increased heat stress from climate change. Although the project area is not in a 100-year flood zone, maximum flood depth maps indicate the area may be inundated under certain levee breach scenarios (Sacramento County 2015). Furthermore, climate change can exacerbate any issues with levees (Romero 2020).

- **Hazards and Hazardous Materials:** There are no active hazardous materials sites adjacent to the project site. As discussed in Section 3.9, Hazardous and Hazardous Materials, above, the site contains soil contaminated with metals, petroleum hydrocarbons, and semi-volatile organic compounds were at the surface of the NCLF site; and dieldrin and arsenic exceeding environmental screening levels were found approximately 1.5 feet below ground surface within the Lot 31 parcel. PCBs and dioxins/furans were also found on site, but in concentrations below environmental screening levels. Existing industrial operations in the vicinity of the project site are conducted in accordance with applicable regulations related to on-site operations and transport and storage of materials.

- **Noise:** Noise sources in the project area include vehicle and rail traffic, as well as noise associated with nearby industrial operations. No sensitive receptors (i.e., residences) are located approximately 780 feet from the edge of the project site. Due to the distance between the construction activities to the sensitive receptor, and the relative elevation difference (the project site is located at a higher elevation), noise would be expected to dissipate and not substantially affect nearby residents.

- **Public Services:** Public services such as police and fire protection are available in the area.

- **Recreation:** The nearest park is about 0.3 mile from the project site.

- **Transportation:** The project site is largely inaccessible with no paved roads or bicycle facilities or directly accessible public transit access points (e.g., light rail, bus, and train).

- **Utilities:** Due to the lack of development at the project site, no utility connections are provided on-site or within the adjacent properties to the east. The remainder of the project area is served by SMUD for electricity and by the City for storm drains and sewers.

4.5 Evaluation of the Project's Contribution to a Community's Sensitivity

As noted previously, the project would involve the recontouring and closure of NCLF and Lot 31. The project's contributions to the community's sensitivity are as follows:

- **Aesthetics:** There would be temporary and minor modification of views in the project area during construction activities due to presence of construction equipment, which is common in urban areas. The project may increase the aesthetic setting of the area because it would involve the permanent closure of the former landfill sites and allow for the potential use of the site as a recreational amenity by the City in the future, as noted in Chapter 2, "Project Description."

- **Air Quality:** Some excavation and grading would be required during recontouring and the placement of additional soil material at the project site. This would result in emissions of diesel particulate matter and fugitive dust at the project site, as discussed in Section 3.3., Air Quality, criterion (c). Considering the highly dispersive properties of diesel PM, the relatively low mass of diesel PM emissions that would be generated at any single place during project construction, and the relatively short period during which diesel-PM-emitting construction activities would take place, construction-related TACs would not expose sensitive receptors to an incremental increase in cancer risk that exceeds 10 in one million. As discussed in Chapter 2, soil stabilization and dust suppression activities would be used as part of the WPCP and would satisfy the requirements of Fugitive Dust Rule 403, set forth by SMAQMD, which would minimize emissions of PM_{10} and $PM_{2.5}$. These measures would be consistent with the best management practices and best available control technology practices required by SMAQMD.

- **Cultural Resources and Tribal Cultural Resources:** The project would not affect known cultural resources or tribal cultural resources.

- **Energy:** The project would not affect access to electricity or electric vehicles because it would not preclude access to car shares, and electrical service would be maintained throughout construction.

- **Greenhouse Gas Emissions and Climate Change Vulnerabilities:** The project would not worsen the area's flooding vulnerabilities because it would not affect the area's topography or levee system.

- **Hazards and Hazardous Materials:** The use and handling of hazardous materials during construction would be conducted in a manner consistent with existing regulations, including CCR Title 27. In addition, a SSHSP would be implemented during construction activities, which would reduce the potential for construction worker, and by consequence the surrounding communities, from exposure to hazardous materials. Upon completion of construction, no on-site operations would involve the use, transport, or disposal of potential hazardous materials. The perimeter landfill gas wells will continue to be monitored during post-closure activities to ensure methane levels at the property boundary are in compliance with state requirements for subsurface combustible gas migration control.

- **Noise:** Noise would be generated during construction, but it would be temporary, conducted in compliance with the City of Sacramento Noise Ordinance, and similar to other construction type noise that occurs in downtown Sacramento. No substantial increases in ambient noise levels at sensitive receptors in the area would occur.

- **Public Services:** As the project site is undeveloped, the project would not interrupt or otherwise affect the provision of public services to the area.

- **Recreation:** The project would not affect any parks or recreational opportunities. Future use of the site may potentially include recreation, pending deeding of the land to the City, and other utility improvements. Please note that details and funding related to these actions are unknown at this time, cannot be known at the time of release of this document, and when they are undertaken would constitute separate efforts from the project (i.e., would be analyzed as separate project under CEQA).

- **Transportation:** The project site would not affect public transit access points or bike lanes.

- **Utilities:** The project would not adversely affect provision of utilities. The existing transmission towers at the site would be maintained, and no interruption or reduction in service capacity would occur as a result of the project.

As described for each environmental resource area, the project would not contribute to the community's current sensitivity.

4.6 Summary of Environmental Justice Assessment

Per SMUD's Sustainable Communities Resource Priorities Map,2 which reflects several data sets related to community attributes that SMUD uses to identify historically underserved communities, the project site is located in a high sensitivity area (SMUD 2020), due in part to the project area's designation as an Opportunity Zone, a Sacramento Promise Zone, and as a Disadvantaged Communities by state Senate Bill 535. However, the project involves the improvement and long-term closure of a former landfill sites. Objectives of the project include remediating the NCLF and Lot 31 to be in compliance with current requirements and regulations, which are designed to ensure that construction-related and post-closure activities associated with the project site would not pose a threat to human health and the environment, to minimize potential impacts to sensitive receptors, public health and the environment by reducing infiltration and improving storm water runoff quality from the site and reducing the chance for direct contact with solid waste and waste constituents. The project will reduce potential impacts on the community by minimizing the potential for release of hazardous materials into the environment and providing a benefit to public health. As a result, the project does not have the potential to further affect the community and/or worsen existing adverse environmental conditions. Further, upon final closure of the NCLF and pending deeding of the land to the City the NLCF could repurpose the site for recreational and beneficial use to the community. Therefore, ***no existing environmental justice conditions would be worsened*** as a result of the project.

Although the project would not worsen existing environmental justice conditions, as a leader in building healthy communities, one of SMUD's Sustainable Communities goals is to help bring environmental equity and economic vitality to all communities. By investing in underserved neighborhoods and working with community partners, SMUD is part of a larger regional mission to deliver energy, health, housing, transportation, education and economic development solutions to support sustainable communities. Sustainable Communities currently has two partnerships in the project area:

- Sierra Nevada Journeys: With an investment from SMUD's Sustainable Communities, Sierra Nevada Journeys is conducting a community needs assessment in order to develop cultural relevant education materials. This information will be shared with SMUD/other local partners and will be used to develop curriculum that is pertinent to historically marginalized communities as well as inclusive of Black, Indigenous, and People of Color. The new curriculum will be deployed through Sierra Nevada Journeys' Classroom Unleashed Program.

[2] The Sustainable Communities Resource Priorities Map is available at https://usage.smud.org/SustainableCommunities/?_ga=2.223364443.1927542179.1598288052-1197903775.1589235097.

- The mission of Sierra Nevada Journeys is to deliver innovative outdoor, science-based education programs for youth to develop critical thinking skills and to inspire natural resource stewardship. More than 50 percent of the students they serve are from low-income families and 61 percent are students of color, working with Title 1 schools in the area. In addition, Sierra Nevada Journeys strong working relationships with local Tribes.

- Sacramento Native American Health Center(s): The Sacramento Native American Health Center Inc. (SNAHC) is a non-profit, Federally Qualified Health Center, located in Midtown Sacramento. The health center is committed to enhancing quality of life by providing a culturally competent, holistic, and patient-centered continuum of care. There are no tribal or ethnic requirements to receive care here.

- SNAHC is community-owned and operated; a Board of Directors governs the center. Since the grand opening the center staff has grown to meet the needs of the community, 26 percent are Native American from both local and out-of-state Tribes.

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No sources are cited in this section.

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No sources are cited in this section.

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Appendix A

Air Quality Modeling Results

North City Landfill Closure

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	15.10	Acre	15.10	657,756.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2023
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

North City Landfill Closure - Sacramento Metropolitan AQMD Air District, Annual

Project Characteristics -

Land Use - Project is a landfill closure. 'City Park' land use type is used becuase similar groundwork is done for this type of project.

Construction Phase - Demolition and grading may occur simultaneously. Equipment inputted for the grading phase shows maximum daily emissions, including equipment that would be used in demolition.

Off-road Equipment -

Off-road Equipment - Max daily equipment provided by applicant.

Off-road Equipment -

Trips and VMT - 60,000 cubic yards total divided by 16 cubic yard capacity trucks = 3750 total trips
Maximum of 30 workers per day during grading, which would require the greatest number of workers.

On-road Fugitive Dust - 5% of total haul route woud be unpaved.

Demolition -

Grading - Conservatively assumed total site acreage for ground disturbance.

Vehicle Trips - Project is construction only.

Construction Off-road Equipment Mitigation -

North City Landfill Closure - Sacramento Metropolitan AQMD Air District, Annual

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstructionPhase	NumDays	30.00	60.00
tblConstructionPhase	NumDays	10.00	23.00
tblGrading	AcresOfGrading	150.00	15.10
tblGrading	MaterialImported	0.00	60,000.00
tblOffRoadEquipment	OffRoadEquipmentType		Crushing/Proc. Equipment
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Site Preparation
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading
tblOnRoadDust	HaulingPercentPave	100.00	95.00
tblOnRoadDust	HaulingPercentPave	100.00	95.00
tblOnRoadDust	HaulingPercentPave	100.00	95.00
tblTripsAndVMT	HaulingTripNumber	500.00	0.00
tblTripsAndVMT	HaulingTripNumber	7,500.00	3,750.00
tblTripsAndVMT	WorkerTripNumber	20.00	18.00
tblTripsAndVMT	WorkerTripNumber	18.00	15.00

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	0.1672	1.8992	1.1196	3.6400e-003	3.0002	0.0702	3.0704	0.5656	0.0652	0.6308	0.0000	332.6007	332.6007	0.0617	0.0000	334.1432
Maximum	**0.1672**	**1.8992**	**1.1196**	**3.6400e-003**	**3.0002**	**0.0702**	**3.0704**	**0.5656**	**0.0652**	**0.6308**	**0.0000**	**332.6007**	**332.6007**	**0.0617**	**0.0000**	**334.1432**

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	0.1672	1.8992	1.1196	3.6400e-003	1.3719	0.0702	1.4421	0.2605	0.0652	0.3257	0.0000	332.6005	332.6005	0.0617	0.0000	334.1430
Maximum	**0.1672**	**1.8992**	**1.1196**	**3.6400e-003**	**1.3719**	**0.0702**	**1.4421**	**0.2605**	**0.0652**	**0.3257**	**0.0000**	**332.6005**	**332.6005**	**0.0617**	**0.0000**	**334.1430**

	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**	**54.27**	**0.00**	**53.03**	**53.95**	**0.00**	**48.37**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
7	**4-22-2022**	**7-21-2022**	0.8285	0.8285
8	**7-22-2022**	**9-30-2022**	1.1409	1.1409
		Highest	1.1409	1.1409

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	6.2000e-003	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.7000e-004	3.7000e-004	0.0000	0.0000	4.0000e-004
Energy	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
Mobile	0.0256	0.0995	0.2632	8.3000e-004	0.0726	6.6000e-004	0.0733	0.0195	6.2000e-004	0.0201	0.0000	75.9885	75.9885	3.6000e-003	0.0000	76.0786
Waste						0.0000	0.0000		0.0000	0.0000	0.2639	0.0000	0.2639	0.0156	0.0000	0.6538
Water						0.0000	0.0000		0.0000	0.0000	0.0000	16.8608	16.8608	8.3000e-004	1.7000e-004	16.9326
Total	**0.0318**	**0.0995**	**0.2634**	**8.3000e-004**	**0.0726**	**6.6000e-004**	**0.0733**	**0.0195**	**6.2000e-004**	**0.0201**	**0.2639**	**92.8497**	**93.1136**	**0.0200**	**1.7000e-004**	**93.6653**

2.2 Overall Operational

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	6.2000e-003	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.7000e-004	3.7000e-004	0.0000	0.0000	4.0000e-004
Energy	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
Mobile	0.0256	0.0995	0.2632	8.3000e-004	0.0726	6.6000e-004	0.0733	0.0195	6.2000e-004	0.0201	0.0000	75.9885	75.9885	3.6000e-003	0.0000	76.0786
Waste						0.0000	0.0000		0.0000	0.0000	0.2639	0.0000	0.2639	0.0156	0.0000	0.6538
Water						0.0000	0.0000		0.0000	0.0000	0.0000	16.8608	16.8608	8.3000e-004	1.7000e-004	16.9326
Total	**0.0318**	**0.0995**	**0.2634**	**8.3000e-004**	**0.0726**	**6.6000e-004**	**0.0733**	**0.0195**	**6.2000e-004**	**0.0201**	**0.2639**	**92.8497**	**93.1136**	**0.0200**	**1.7000e-004**	**93.6653**

	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**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	5/15/2022	6/15/2022	5	23	
2	Demolition	Demolition	6/16/2022	7/13/2022	5	20	
3	Grading	Grading	7/14/2022	10/5/2022	5	60	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 15.1

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Crushing/Proc. Equipment	0		85	0.78
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Grading	Off-Highway Trucks	1	8.00	402	0.38
Grading	Plate Compactors	1	8.00	8	0.43
Grading	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Crushing/Proc. Equipment	1	8.00	85	0.78

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
Site Preparation	8	18.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	7	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	12	30.00	0.00	3,750.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Water Exposed Area

3.2 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					0.2078	0.0000	0.2078	0.1142	0.0000	0.1142	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0365	0.3805	0.2265	4.4000e-004		0.0185	0.0185		0.0171	0.0171	0.0000	38.4553	38.4553	0.0124	0.0000	38.7662
Total	**0.0365**	**0.3805**	**0.2265**	**4.4000e-004**	**0.2078**	**0.0185**	**0.2263**	**0.1142**	**0.0171**	**0.1313**	**0.0000**	**38.4553**	**38.4553**	**0.0124**	**0.0000**	**38.7662**

3.2 Site Preparation - 2022

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	6.7000e-004	4.2000e-004	4.8100e-003	1.0000e-005	1.5200e-003	1.0000e-005	1.5300e-003	4.0000e-004	1.0000e-005	4.1000e-004	0.0000	1.2546	1.2546	3.0000e-005	0.0000	1.2553
Total	**6.7000e-004**	**4.2000e-004**	**4.8100e-003**	**1.0000e-005**	**1.5200e-003**	**1.0000e-005**	**1.5300e-003**	**4.0000e-004**	**1.0000e-005**	**4.1000e-004**	**0.0000**	**1.2546**	**1.2546**	**3.0000e-005**	**0.0000**	**1.2553**

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					0.0935	0.0000	0.0935	0.0514	0.0000	0.0514	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0365	0.3805	0.2265	4.4000e-004		0.0185	0.0185		0.0171	0.0171	0.0000	38.4553	38.4553	0.0124	0.0000	38.7662
Total	**0.0365**	**0.3805**	**0.2265**	**4.4000e-004**	**0.0935**	**0.0185**	**0.1120**	**0.0514**	**0.0171**	**0.0685**	**0.0000**	**38.4553**	**38.4553**	**0.0124**	**0.0000**	**38.7662**

3.2 Site Preparation - 2022

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	6.7000e-004	4.2000e-004	4.8100e-003	1.0000e-005	1.5200e-003	1.0000e-005	1.5300e-003	4.0000e-004	1.0000e-005	4.1000e-004	0.0000	1.2546	1.2546	3.0000e-005	0.0000	1.2553
Total	**6.7000e-004**	**4.2000e-004**	**4.8100e-003**	**1.0000e-005**	**1.5200e-003**	**1.0000e-005**	**1.5300e-003**	**4.0000e-004**	**1.0000e-005**	**4.1000e-004**	**0.0000**	**1.2546**	**1.2546**	**3.0000e-005**	**0.0000**	**1.2553**

3.3 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					0.0564	0.0000	0.0564	8.5300e-003	0.0000	8.5300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0264	0.2572	0.2059	3.9000e-004		0.0124	0.0124		0.0116	0.0116	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289
Total	**0.0264**	**0.2572**	**0.2059**	**3.9000e-004**	**0.0564**	**0.0124**	**0.0688**	**8.5300e-003**	**0.0116**	**0.0201**	**0.0000**	**33.9902**	**33.9902**	**9.5500e-003**	**0.0000**	**34.2289**

3.3 Demolition - 2022

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	4.9000e-004	3.1000e-004	3.4900e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.9091	0.9091	2.0000e-005	0.0000	0.9097
Total	**4.9000e-004**	**3.1000e-004**	**3.4900e-003**	**1.0000e-005**	**1.1000e-003**	**1.0000e-005**	**1.1100e-003**	**2.9000e-004**	**1.0000e-005**	**3.0000e-004**	**0.0000**	**0.9091**	**0.9091**	**2.0000e-005**	**0.0000**	**0.9097**

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					0.0254	0.0000	0.0254	3.8400e-003	0.0000	3.8400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0264	0.2572	0.2059	3.9000e-004		0.0124	0.0124		0.0116	0.0116	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289
Total	**0.0264**	**0.2572**	**0.2059**	**3.9000e-004**	**0.0254**	**0.0124**	**0.0378**	**3.8400e-003**	**0.0116**	**0.0154**	**0.0000**	**33.9902**	**33.9902**	**9.5500e-003**	**0.0000**	**34.2289**

3.3 Demolition - 2022

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	4.9000e-004	3.1000e-004	3.4900e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.9091	0.9091	2.0000e-005	0.0000	0.9097
Total	**4.9000e-004**	**3.1000e-004**	**3.4900e-003**	**1.0000e-005**	**1.1000e-003**	**1.0000e-005**	**1.1100e-003**	**2.9000e-004**	**1.0000e-005**	**3.0000e-004**	**0.0000**	**0.9091**	**0.9091**	**2.0000e-005**	**0.0000**	**0.9097**

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					0.3755	0.0000	0.3755	0.2004	0.0000	0.2004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0877	0.8056	0.5496	1.2900e-003		0.0377	0.0377		0.0351	0.0351	0.0000	112.4568	112.4568	0.0315	0.0000	113.2441
Total	**0.0877**	**0.8056**	**0.5496**	**1.2900e-003**	**0.3755**	**0.0377**	**0.4132**	**0.2004**	**0.0351**	**0.2356**	**0.0000**	**112.4568**	**112.4568**	**0.0315**	**0.0000**	**113.2441**

3.4 Grading - 2022

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	0.0125	0.4533	0.1083	1.4400e-003	2.3513	1.4600e-003	2.3528	0.2400	1.3900e-003	0.2414	0.0000	140.0801	140.0801	8.0400e-003	0.0000	140.2810
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	2.9100e-003	1.8300e-003	0.0209	6.0000e-005	6.6100e-003	5.0000e-005	6.6500e-003	1.7600e-003	4.0000e-005	1.8000e-003	0.0000	5.4546	5.4546	1.3000e-004	0.0000	5.4579
Total	**0.0154**	**0.4552**	**0.1292**	**1.5000e-003**	**2.3580**	**1.5100e-003**	**2.3595**	**0.2418**	**1.4300e-003**	**0.2432**	**0.0000**	**145.5347**	**145.5347**	**8.1700e-003**	**0.0000**	**145.7389**

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					0.1690	0.0000	0.1690	0.0902	0.0000	0.0902	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0877	0.8056	0.5496	1.2900e-003		0.0377	0.0377		0.0351	0.0351	0.0000	112.4567	112.4567	0.0315	0.0000	113.2440
Total	**0.0877**	**0.8056**	**0.5496**	**1.2900e-003**	**0.1690**	**0.0377**	**0.2067**	**0.0902**	**0.0351**	**0.1253**	**0.0000**	**112.4567**	**112.4567**	**0.0315**	**0.0000**	**113.2440**

3.4 Grading - 2022

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	0.0125	0.4533	0.1083	1.4400e-003	1.0748	1.4600e-003	1.0763	0.1126	1.3900e-003	0.1140	0.0000	140.0801	140.0801	8.0400e-003	0.0000	140.2810
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	2.9100e-003	1.8300e-003	0.0209	6.0000e-005	6.6100e-003	5.0000e-005	6.6500e-003	1.7600e-003	4.0000e-005	1.8000e-003	0.0000	5.4546	5.4546	1.3000e-004	0.0000	5.4579
Total	**0.0154**	**0.4552**	**0.1292**	**1.5000e-003**	**1.0815**	**1.5100e-003**	**1.0830**	**0.1144**	**1.4300e-003**	**0.1158**	**0.0000**	**145.5347**	**145.5347**	**8.1700e-003**	**0.0000**	**145.7389**

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	0.0256	0.0995	0.2632	8.3000e-004	0.0726	6.6000e-004	0.0733	0.0195	6.2000e-004	0.0201	0.0000	75.9885	75.9885	3.6000e-003	0.0000	76.0786
Unmitigated	0.0256	0.0995	0.2632	8.3000e-004	0.0726	6.6000e-004	0.0733	0.0195	6.2000e-004	0.0201	0.0000	75.9885	75.9885	3.6000e-003	0.0000	76.0786

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	28.54	343.53	252.77	194,773	194,773
Total	28.54	343.53	252.77	194,773	194,773

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

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.562895	0.037862	0.207220	0.115570	0.017815	0.005092	0.018559	0.023754	0.002009	0.001969	0.005819	0.000618	0.000817

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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	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
NaturalGas Unmitigated	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

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
Total		**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**

5.2 Energy by Land Use - NaturalGas

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
Total		**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**

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
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

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
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	6.2000e-003	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.7000e-004	3.7000e-004	0.0000	0.0000	4.0000e-004
Unmitigated	6.2000e-003	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.7000e-004	3.7000e-004	0.0000	0.0000	4.0000e-004

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.1800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.7000e-004	3.7000e-004	0.0000	0.0000	4.0000e-004
Total	**6.2000e-003**	**0.0000**	**1.9000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**3.7000e-004**	**3.7000e-004**	**0.0000**	**0.0000**	**4.0000e-004**

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.1800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.7000e-004	3.7000e-004	0.0000	0.0000	4.0000e-004
Total	**6.2000e-003**	**0.0000**	**1.9000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**3.7000e-004**	**3.7000e-004**	**0.0000**	**0.0000**	**4.0000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	16.8608	8.3000e-004	1.7000e-004	16.9326
Unmitigated	16.8608	8.3000e-004	1.7000e-004	16.9326

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 17.9914	16.8608	8.3000e-004	1.7000e-004	16.9326
Total		**16.8608**	**8.3000e-004**	**1.7000e-004**	**16.9326**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 17.9914	16.8608	8.3000e-004	1.7000e-004	16.9326
Total		**16.8608**	**8.3000e-004**	**1.7000e-004**	**16.9326**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.2639	0.0156	0.0000	0.6538
Unmitigated	0.2639	0.0156	0.0000	0.6538

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	1.3	0.2639	0.0156	0.0000	0.6538
Total		**0.2639**	**0.0156**	**0.0000**	**0.6538**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	1.3	0.2639	0.0156	0.0000	0.6538
Total		**0.2639**	**0.0156**	**0.0000**	**0.6538**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

tblProjectCharacteristics

ProjectNar	LocationSc	EMFAC_IE	WindSpee	Precipitatic	ClimateZo	Urbanizatic	Operationa	UtilityCom	CO2Intens
North City	AD	SMAQMD	3.5	58	6	Urban	2023	Sacrament	590.31

CH4Intens	N2OIntens	TotalPopul	TotalLotAc	UsingHistc	ConstructionPhaseStartDate
0.029	0.006	0	15.1	0	2020/10/22

PollutantSe	PollutantFu	PollutantName
1	Reactive C	ROG
1	Nitrogen O	NOX
1	Carbon Mo	CO
1	Sulfur Dio	SO2
1	Particulate	PM10
1	Particulate	PM2_5
1	Fugitive PI	PM10_FUG
1	Fugitive PI	PM25_FUG
1	Biogenic C	CO2_BIO
1	Non-Bioge	CO2_NBIO
1	Carbon Di	CO2
1	Methane ((	CH4
1	Nitrous Ox	N2O
1	CO2 Equiv	CO2E

tblLandUse

LandUseT	LandUseS	LandUseU	LandUseS	LotAcreag	LandUseS	Population	BuildingSp	GreenSpa	RecSwimm
Recreation	City Park	15.1	Acre	15.1	657756	0	0	1	0

ıingAreaAllowEdit

tblConstructionPhase

PhaseNum	PhaseNam	PhaseTyp	PhaseStar	PhaseEnd	NumDays\	NumDays	PhaseDescription
1	Site Prepa	Site Prepa	2022/05/1	2022/06/1	5	23	
2	Demolition	Demolition	2022/06/1	2022/07/1	5	20	
3	Grading	Grading	2022/07/1	2022/10/0	5	60	

PhaseNam	OffRoadEc	OffRoadEc	UsageHou	HorsePow	LoadFactor
Site Prepa	Crushing/F	0		85	0.78
Site Prepa	Rubber Tir	3	8	247	0.4
Site Prepa	Tractors/L	4	8	97	0.37
Demolition	Concrete/I	1	8	81	0.73
Demolition	Excavators	3	8	158	0.38
Demolition	Rubber Tir	2	8	247	0.4
Grading	Crushing/F	1	8	85	0.78
Grading	Excavators	1	8	158	0.38
Grading	Graders	0	8	187	0.41
Grading	Off-Highwa	1	8	402	0.38
Grading	Plate Com	1	8	8	0.43
Grading	Rubber Tir	2	8	247	0.4
Grading	Scrapers	0	8	367	0.48
Grading	Tractors/L	0	8	97	0.37

PhaseNam	WorkerTrip	VendorTrip	HaulingTri	WorkerTrip	VendorTrip	HaulingTri	WorkerVeh	VendorVeh	HaulingVel
Site Prepa	18	0	0	10	6.5	20	LD_Mix	HDT_Mix	HHDT
Demolition	15	0	0	10	6.5	20	LD_Mix	HDT_Mix	HHDT
Grading	30	0	3750	10	6.5	20	LD_Mix	HDT_Mix	HHDT

hicleClass

PhaseNam	WorkerPer	VendorPer	HaulingPe	RoadSiltLc	MaterialSil	MaterialMc	AverageVe	MeanVehicleSpeed
Site Prepa	100	100	95	0.1	8.5	0.5	2.4	40
Demolition	100	100	95	0.1	8.5	0.5	2.4	40
Grading	100	100	95	0.1	8.5	0.5	2.4	40

PhaseNam	Demolition	DemolitionUnitAmount
Demolition	Building Sc	109842

PhaseNam	MaterialIm	MaterialEx	GradingSiz	ImportExp	MeanVehic	AcresOfGr	MaterialMc	MaterialMc	MaterialSil
Site Prepa	0	0	Cubic Yarc	0	7.1	0	7.9	12	6.9
Grading	60000	0	Cubic Yarc	0	7.1	15.1	7.9	12	6.9

tContent

PhaseNam	Architectur	Architectur	EF_Reside	ConstArea	EF_Reside	ConstArea	EF_Nonres	ConstArea	EF_Nonres

ConstArea EF_Parkin ConstArea_Parking

ParkingLotAcreage

VehicleTrip	VehicleTrip	WD_TR	ST_TR	SU_TR	HW_TL	HS_TL	HO_TL	CC_TL	CW_TL
City Park	Acre	1.89	22.75	16.74	0	0	0	5	10

CNW_TL	PR_TP	DV_TP	PB_TP	HW_TTP	HS_TTP	HO_TTP	CC_TTP	CW_TTP	CNW_TTP
6.5	66	28	6	0	0	0	48	33	19

Season	EmissionT	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD
A	CH4_IDLE	0	0	0	0	0.00517	0.00344	0.015806	0.50919
A	CH4_RUN	0.003872	0.009692	0.005641	0.010641	0.020043	0.009119	0.005692	0.069533
A	CH4_STRI	0.005115	0.014951	0.007613	0.017487	0.019625	0.007985	0.054004	0.093645
A	CO_IDLEX	0	0	0	0	0.143266	0.121424	0.343403	1.893389
A	CO_RUNE	0.572212	1.226282	0.784719	1.213742	1.216959	0.680635	0.428145	0.93946
A	CO_STRE	1.138809	2.967602	1.639753	3.081904	2.567867	1.225353	5.976655	2.992625
A	CO2_NBIC	0	0	0	0	9.206249	14.2012	147.3269	4064.594
A	CO2_NBIC	242.0461	302.9197	342.3686	464.3396	695.6784	713.7902	1200.171	1610.633
A	CO2_NBIC	55.4937	69.71889	78.66336	105.74	30.59646	24.0207	56.30559	8.783517
A	NOX_IDLE	0	0	0	0	0.085569	0.107803	0.554634	18.66173
A	NOX_RUN	0.046515	0.116626	0.076319	0.140027	1.854876	1.173998	1.346216	2.301582
A	NOX_STR	0.066937	0.168034	0.131065	0.273642	0.993295	0.497154	11.37169	19.80865
A	PM10_IDL	0	0	0	0	0.00099	0.00127	0.000498	0.023608
A	PM10_PM	0.03675	0.03675	0.03675	0.03675	0.07644	0.08918	0.13034	0.059442
A	PM10_PM	0.008	0.008	0.008	0.008	0.010116	0.010759	0.012	0.034497
A	PM10_RU	0.00174	0.002538	0.001738	0.001828	0.020654	0.016921	0.004163	0.00828
A	PM10_STI	0.002284	0.003285	0.002355	0.002482	0.00094	0.000418	0.000726	0.000078
A	PM25_IDL	0	0	0	0	0.000947	0.001215	0.000477	0.022587
A	PM25_PM	0.01575	0.01575	0.01575	0.01575	0.03276	0.03822	0.05586	0.025475
A	PM25_PM	0.002	0.002	0.002	0.002	0.002529	0.00269	0.003	0.008624
A	PM25_RU	0.001603	0.00234	0.001598	0.001685	0.019715	0.016166	0.003978	0.007921
A	PM25_STI	0.0021	0.003021	0.002165	0.002282	0.000865	0.000384	0.000668	0.000071
A	ROG_DIUI	0.041048	0.148494	0.060425	0.093972	0.003526	0.001235	0.001397	0.000132
A	ROG_HTS	0.099899	0.292218	0.128536	0.201911	0.112287	0.037746	0.051115	0.004749
A	ROG_IDLE	0	0	0	0	0.01632	0.013454	0.023545	0.484388
A	ROG_RES	0.028154	0.092005	0.045099	0.071326	0.001419	0.000535	0.000598	0.000063
A	ROG_RUN	0.009754	0.024263	0.013995	0.026646	0.144157	0.118189	0.050204	0.086171
A	ROG_RUN	0.036994	0.185923	0.073261	0.119295	0.352215	0.079551	0.02756	0.000649
A	ROG_STR	0.068989	0.20163	0.102669	0.235838	0.26467	0.107692	0.361869	0.07909
A	SO2_IDLE	0	0	0	0	0.000092	0.000138	0.001417	0.038077
A	SO2_RUN	0.002424	0.003044	0.00343	0.004651	0.006826	0.006942	0.011519	0.014979
A	SO2_STRI	0.000574	0.000749	0.000814	0.001112	0.000354	0.000263	0.000668	0.000137
A	TOG_DIUI	0.041048	0.148494	0.060425	0.093972	0.003526	0.001235	0.001397	0.000132
A	TOG_HTS	0.099899	0.292218	0.128536	0.201911	0.112287	0.037746	0.051115	0.004749
A	TOG_IDLE	0	0	0	0	0.022537	0.017841	0.032867	0.560914
A	TOG_RES	0.028154	0.092005	0.045099	0.071326	0.001419	0.000535	0.000598	0.000063
A	TOG_RUN	0.01417	0.0353	0.020408	0.038761	0.176084	0.137806	0.060167	0.163947
A	TOG_RUN	0.036994	0.185923	0.073261	0.119295	0.352215	0.079551	0.02756	0.000649
A	TOG_STR	0.075533	0.220757	0.112409	0.258207	0.289781	0.117909	0.396202	0.086594
S	CH4_IDLE	0	0	0	0	0.00517	0.00344	0.014687	0.479864
S	CH4_RUN	0.004527	0.011246	0.006575	0.012412	0.020629	0.009273	0.00583	0.069593
S	CH4_STRI	0.004172	0.012174	0.006206	0.014253	0.018414	0.007527	0.050708	0.087759
S	CO_IDLEX	0	0	0	0	0.143266	0.121424	0.238079	1.375819
S	CO_RUNE	0.732581	1.533101	0.999278	1.539133	1.242237	0.687258	0.435828	0.950349
S	CO_STRE	0.934392	2.42023	1.345236	2.527315	2.36357	1.131448	5.501938	2.752042
S	CO2_NBIC	0	0	0	0	9.206249	14.2012	156.2059	4306.075
S	CO2_NBIC	268.8017	335.0037	379.3311	513.1818	695.6784	713.7902	1200.171	1610.633
S	CO2_NBIC	55.4937	69.71889	78.66336	105.74	30.59646	24.0207	56.30559	8.783517
S	NOX_IDLE	0	0	0	0	0.085569	0.107803	0.572493	19.26204
S	NOX_RUN	0.042318	0.104707	0.069197	0.126685	1.726237	1.097677	1.255219	2.159419

S	NOX_STR	0.062236	0.156019	0.121867	0.254356	0.929197	0.468337	11.31646	19.79354
S	PM10_IDL	0	0	0	0	0.00099	0.00127	0.00042	0.019902
S	PM10_PM	0.03675	0.03675	0.03675	0.03675	0.07644	0.08918	0.13034	0.059442
S	PM10_PM	0.008	0.008	0.008	0.008	0.010116	0.010759	0.012	0.034497
S	PM10_RU	0.00174	0.002538	0.001738	0.001828	0.020654	0.016921	0.004163	0.00828
S	PM10_STI	0.002284	0.003285	0.002355	0.002482	0.00094	0.000418	0.000726	0.000078
S	PM25_IDL	0	0	0	0	0.000947	0.001215	0.000402	0.019041
S	PM25_PM	0.01575	0.01575	0.01575	0.01575	0.03276	0.03822	0.05586	0.025475
S	PM25_PM	0.002	0.002	0.002	0.002	0.002529	0.00269	0.003	0.008624
S	PM25_RU	0.001603	0.00234	0.001598	0.001685	0.019715	0.016166	0.003978	0.007921
S	PM25_STI	0.0021	0.003021	0.002165	0.002282	0.000865	0.000384	0.000668	0.000071
S	ROG_DIUI	0.105199	0.384679	0.152781	0.236365	0.009008	0.003127	0.00359	0.000344
S	ROG_HTS	0.121753	0.377292	0.155963	0.239979	0.137271	0.045448	0.061713	0.005588
S	ROG_IDLE	0	0	0	0	0.01632	0.013454	0.021933	0.456491
S	ROG_RES	0.071164	0.236171	0.110957	0.173434	0.003583	0.001326	0.001528	0.000164
S	ROG_RUN	0.011379	0.028117	0.016308	0.031053	0.145608	0.118568	0.050547	0.086319
S	ROG_RUN	0.036201	0.181935	0.07153	0.116803	0.350851	0.079249	0.027677	0.00066
S	ROG_STR	0.056264	0.164188	0.083689	0.192228	0.248336	0.101509	0.339787	0.07412
S	SO2_IDLE	0	0	0	0	0.000092	0.000138	0.0015	0.040339
S	SO2_RUN	0.002694	0.003369	0.003802	0.005144	0.006827	0.006942	0.011519	0.014979
S	SO2_STRI	0.00057	0.000739	0.000809	0.001101	0.000351	0.000261	0.00066	0.000133
S	TOG_DIUI	0.105199	0.384679	0.152781	0.236365	0.009008	0.003127	0.00359	0.000344
S	TOG_HTS	0.121753	0.377292	0.155963	0.239979	0.137271	0.045448	0.061713	0.005588
S	TOG_IDLE	0	0	0	0	0.022537	0.017841	0.030601	0.528609
S	TOG_RES	0.071164	0.236171	0.110957	0.173434	0.003583	0.001326	0.001528	0.000164
S	TOG_RUN	0.016539	0.040921	0.023783	0.045181	0.178201	0.13836	0.060668	0.164163
S	TOG_RUN	0.036201	0.181935	0.07153	0.116803	0.350851	0.079249	0.027677	0.00066
S	TOG_STR	0.061601	0.179763	0.091629	0.210461	0.271897	0.11114	0.372024	0.081152
W	CH4_IDLE	0	0	0	0	0.00517	0.00344	0.016934	0.549687
W	CH4_RUN	0.003666	0.009265	0.00534	0.010123	0.019412	0.008953	0.005538	0.069468
W	CH4_STRI	0.006139	0.018067	0.009132	0.021035	0.021099	0.008539	0.058156	0.101574
W	CO_IDLEX	0	0	0	0	0.143266	0.121424	0.452347	2.608129
W	CO_RUNE	0.541461	1.172461	0.743703	1.154922	1.190256	0.673627	0.41979	0.927697
W	CO_STRE	1.419435	3.724872	2.042992	3.849718	2.848223	1.35263	6.6405	3.337243
W	CO2_NBIC	0	0	0	0	9.206249	14.2012	135.4057	3731.119
W	CO2_NBIC	234.8743	294.3197	332.4609	451.2476	695.6784	713.7902	1200.171	1610.633
W	CO2_NBIC	55.4937	69.71889	78.66336	105.74	30.59646	24.0207	56.30559	8.783517
W	NOX_IDLE	0	0	0	0	0.085569	0.107803	0.529999	17.83275
W	NOX_RUN	0.051923	0.130691	0.085377	0.156721	1.902453	1.200082	1.375683	2.349376
W	NOX_STR	0.075286	0.188902	0.147398	0.307725	1.076132	0.53456	11.4438	19.82836
W	PM10_IDL	0	0	0	0	0.00099	0.00127	0.000607	0.028726
W	PM10_PM	0.03675	0.03675	0.03675	0.03675	0.07644	0.08918	0.13034	0.059442
W	PM10_PM	0.008	0.008	0.008	0.008	0.010116	0.010759	0.012	0.034497
W	PM10_RU	0.00174	0.002538	0.001738	0.001828	0.020654	0.016921	0.004163	0.00828
W	PM10_STI	0.002284	0.003285	0.002355	0.002482	0.00094	0.000418	0.000726	0.000078
W	PM25_IDL	0	0	0	0	0.000947	0.001215	0.00058	0.027483
W	PM25_PM	0.01575	0.01575	0.01575	0.01575	0.03276	0.03822	0.05586	0.025475
W	PM25_PM	0.002	0.002	0.002	0.002	0.002529	0.00269	0.003	0.008624
W	PM25_RU	0.001603	0.00234	0.001598	0.001685	0.019715	0.016166	0.003978	0.007921
W	PM25_STI	0.0021	0.003021	0.002165	0.002282	0.000865	0.000384	0.000668	0.000071
W	ROG_DIUI	0.011573	0.039595	0.018074	0.028649	0.001027	0.000381	0.000412	0.000039

W	ROG_HTS	0.099564	0.295101	0.127913	0.201159	0.116962	0.038468	0.051254	0.004823
W	ROG_IDLE	0	0	0	0	0.01632	0.013454	0.025259	0.522913
W	ROG_RES	0.00682	0.022047	0.011166	0.017849	0.000377	0.000146	0.000155	0.000015
W	ROG_RUN	0.009245	0.02321	0.01325	0.025374	0.142596	0.117778	0.049823	0.08601
W	ROG_RUN	0.043138	0.224882	0.087939	0.142276	0.388504	0.088012	0.030766	0.000712
W	ROG_STR	0.082788	0.243655	0.123154	0.283698	0.284542	0.115152	0.389695	0.085787
W	SO2_IDLE	0	0	0	0	0.000092	0.000138	0.001304	0.034953
W	SO2_RUN	0.002352	0.002957	0.003331	0.00452	0.006826	0.006942	0.011519	0.014979
W	SO2_STRI	0.000579	0.000762	0.000821	0.001125	0.00036	0.000265	0.000679	0.000143
W	TOG_DIUI	0.011573	0.039595	0.018074	0.028649	0.001027	0.000381	0.000412	0.000039
W	TOG_HTS	0.099564	0.295101	0.127913	0.201159	0.116962	0.038468	0.051254	0.004823
W	TOG_IDLE	0	0	0	0	0.022537	0.017841	0.03525	0.605525
W	TOG_RES	0.00682	0.022047	0.011166	0.017849	0.000377	0.000146	0.000155	0.000015
W	TOG_RUN	0.013427	0.033762	0.019321	0.0369	0.173807	0.137206	0.059611	0.163712
W	TOG_RUN	0.043138	0.224882	0.087939	0.142276	0.388504	0.088012	0.030766	0.000712
W	TOG_STR	0.090642	0.266768	0.134838	0.310606	0.311537	0.126077	0.426667	0.093926

OBUS	UBUS	MCY	SBUS	MH
0.011931	0	0	0.834884	0
0.010933	1.969082	0.441183	0.010099	0.033253
0.031854	0.079009	0.164545	0.06599	0.02578
0.249443	0	0	6.830771	0
0.729712	8.439148	19.91016	0.60682	2.335828
6.396834	11.85699	10.12699	6.269046	5.968751
118.5104	0	0	1187.625	0
1341.42	1878.934	168.568	1087.786	1228.373
68.27788	137.9407	47.30221	45.81238	59.78225
0.25804	0	0	9.969933	0
1.019122	5.932551	1.153694	4.022255	1.528632
2.797892	13.42459	0.318192	13.59226	0.885419
0.000024	0	0	0.009579	0
0.13034	0.521506	0.01176	0.7448	0.13034
0.012	0.012	0.004	0.010733	0.012858
0.002784	0.055041	0.001927	0.022157	0.029122
0.000793	0.00115	0.003482	0.000635	0.001132
0.000023	0	0	0.009165	0
0.05586	0.223503	0.00504	0.3192	0.05586
0.003	0.003	0.001	0.002683	0.003215
0.002644	0.052628	0.001804	0.021185	0.027804
0.000729	0.001058	0.003284	0.000584	0.001041
0.002107	0.007161	1.407134	0.003493	1.259914
0.023373	0.101233	0.913839	0.026735	0.083417
0.033609	0	0	0.811861	0
0.000673	0.002861	0.666913	0.001126	0.316141
0.057715	0.489782	2.343782	0.099803	0.107981
0.052587	0.020986	0.66822	0.011988	0.024159
0.394348	1.065528	2.246354	0.330315	0.347671
0.001143	0	0	0.011563	0
0.013069	0.010081	0.002079	0.010476	0.012202
0.000795	0.001598	0.000705	0.000567	0.000702
0.002107	0.007161	1.407134	0.003493	1.259914
0.023373	0.101233	0.913839	0.026735	0.083417
0.046685	0	0	1.168357	0
0.000673	0.002861	0.666913	0.001126	0.316141
0.073106	2.519962	2.869644	0.118519	0.148256
0.052587	0.020986	0.66822	0.011988	0.024159
0.431761	1.166619	2.44353	0.361653	0.380656
0.01191	0	0	0.834518	0
0.011247	1.971554	0.431532	0.010323	0.03489
0.02962	0.06905	0.137684	0.052579	0.023866
0.2416	0	0	6.706507	0
0.747422	8.502616	20.13411	0.619451	2.433438
5.759744	9.414312	9.114969	4.171115	5.343078
124.5566	0	0	1244.76	0
1341.42	1878.934	168.568	1087.786	1228.373
68.27788	137.9407	47.30221	45.81238	59.78225
0.266268	0	0	10.28854	0
0.940553	5.501902	0.965604	3.749904	1.39217

2.727475	13.29339	0.291786	13.55309	0.827649
0.00002	0	0	0.008075	0
0.13034	0.521506	0.01176	0.7448	0.13034
0.012	0.012	0.004	0.010733	0.012858
0.002784	0.055041	0.001927	0.022157	0.029122
0.000793	0.00115	0.003482	0.000635	0.001132
0.000019	0	0	0.007726	0
0.05586	0.223503	0.00504	0.3192	0.05586
0.003	0.003	0.001	0.002683	0.003215
0.002644	0.052628	0.001804	0.021185	0.027804
0.000729	0.001058	0.003284	0.000584	0.001041
0.005323	0.018366	3.901683	0.008773	3.249056
0.026723	0.131834	1.489561	0.029024	0.101363
0.033186	0	0	0.808933	0
0.001657	0.007273	2.163142	0.002749	0.826313
0.058491	0.495898	2.276581	0.100357	0.112031
0.052258	0.020103	0.654588	0.010417	0.023967
0.366691	0.931215	1.879506	0.263184	0.321865
0.0012	0	0	0.012108	0
0.01307	0.010082	0.00208	0.010476	0.012203
0.000784	0.001555	0.000677	0.000531	0.000691
0.005323	0.018366	3.901683	0.008773	3.249056
0.026723	0.131834	1.489561	0.029024	0.101363
0.046203	0	0	1.165023	0
0.001657	0.007273	2.163142	0.002749	0.826313
0.074239	2.528886	2.790628	0.119327	0.154165
0.052258	0.020103	0.654588	0.010417	0.023967
0.40148	1.019563	2.044566	0.288153	0.352402
0.011961	0	0	0.83539	0
0.010579	1.966653	0.464148	0.009873	0.031538
0.034334	0.09073	0.203889	0.079501	0.028029
0.260275	0	0	7.002373	0
0.710345	8.37522	21.9319	0.594377	2.232554
7.177022	14.99214	12.14164	8.693179	6.777295
110.161	0	0	1108.726	0
1341.42	1878.934	168.568	1087.786	1228.373
68.27788	137.9407	47.30221	45.81238	59.78225
0.246678	0	0	9.52995	0
1.050068	6.074713	1.267648	4.106439	1.590468
2.889462	13.5795	0.349153	13.63292	0.960465
0.000029	0	0	0.011656	0
0.13034	0.521506	0.01176	0.7448	0.13034
0.012	0.012	0.004	0.010733	0.012858
0.002784	0.055041	0.001927	0.022157	0.029122
0.000793	0.00115	0.003482	0.000635	0.001132
0.000028	0	0	0.011152	0
0.05586	0.223503	0.00504	0.3192	0.05586
0.003	0.003	0.001	0.002683	0.003215
0.002644	0.052628	0.001804	0.021185	0.027804
0.000729	0.001058	0.003284	0.000584	0.001041
0.000727	0.002392	0.271186	0.001229	0.357074

0.023271	0.103257	0.933866	0.026577	0.091645
0.034194	0	0	0.815904	0
0.0002	0.000957	0.1079	0.000342	0.086407
0.05684	0.48377	2.490714	0.099243	0.103735
0.057193	0.026205	0.780186	0.015291	0.025823
0.425046	1.223599	2.783821	0.397944	0.377997
0.001063	0	0	0.01081	0
0.013069	0.010079	0.002116	0.010475	0.0122
0.000808	0.001653	0.000754	0.000607	0.000716
0.000727	0.002392	0.271186	0.001229	0.357074
0.023271	0.103257	0.933866	0.026577	0.091645
0.04735	0	0	1.17296	0
0.0002	0.000957	0.1079	0.000342	0.086407
0.071829	2.511189	3.044437	0.117701	0.142061
0.057193	0.026205	0.780186	0.015291	0.025823
0.465372	1.339686	3.027974	0.435699	0.413859

RoadPerce	RoadSiltLo	MaterialSil	MaterialMo	MobileAve	MeanVehic	CARB_PM_VMT
100	0.1	4.3	0.5	2.4	40	1

Woodstove	NumberCc	NumberCa	NumberNc	NumberPe	Woodstove	WoodstoveWoodMass

Fireplaces	NumberW	NumberGa	NumberPr	NumberNo	FireplaceH	FireplaceD	FireplaceWoodMass

ROG_EF	ROG_EF_	ROG_EF_PesticidesFertilizers
2.14E-05	3.54E-07	5.15E-08

Area_EF_I	Area_Resi	Area_EF_I	Area_Resi	Area_EF_I	Area_Nonr	Area_EF_I	Area_Nonr	Reapplicat	Area_EF_I
100	0	100	0	100	0	100	0	10	100

Area_Parking
0

NumberSn	NumberSummerDays
0	250

EnergyUse	T24E	NT24E	LightingEle	T24NG	NT24NG
City Park	0	0	0	0	0

WaterLanc	WaterLanc	IndoorWat	OutdoorW	ElectricityI	ElectricityI	ElectricityI	ElectricityI	SepticTanI	AerobicPe
City Park	Acre	0	17991368	2117	111	1272	1911	0	100

Anaerobic	AnaDigest	AnaDigestCogen	CombDigestGasPercent
0	15	85	

SolidWaste	SolidWaste	SolidWaste	LandfillNo	LandfillCa	LandfillCaptureGasEnergyRecovery
City Park	Acre	1.3	6	94	0

Vegetation	Vegetation	AcresBegi	AcresEnd	CO2peracre

BroadSpec	NumberOf	CO2perTree

tblConstEquipMitigation

ConstMitig	FuelType	Tier	NumberOf	TotalNumb	DPF	OxidationCatalyst
Concrete/I	Diesel	No Change	0	1	No Change	0
Crushing/F	Diesel	No Change	0	2	No Change	0
Excavators	Diesel	No Change	0	4	No Change	0
Graders	Diesel	No Change	0	1	No Change	0
Off-Highwa	Diesel	No Change	0	3	No Change	0
Plate Com	Diesel	No Change	0	1	No Change	0
Rubber Tir	Diesel	No Change	0	7	No Change	0
Scrapers	Diesel	No Change	0	2	No Change	0
Tractors/L	Diesel	No Change	0	6	No Change	0

SoilStabiliz	SoilStabiliz	SoilStabiliz	ReplaceGr	ReplaceGr	ReplaceGr	WaterExpo	WaterExpo	WaterExpo	WaterExpo
1	55	55	0	0	0	1	2	55	55

WaterUnpa	WaterUnpa	WaterUnpa	WaterUnpa	CleanPavedRoadPercentReduction
0	0	0.5	40	0

tblLandUseMitigation

ProjectSet	IncreaseD	IncreaseD	IncreaseD	IncreaseDi	ImproveW	ImproveW	ImproveDe	ImproveDe	IncreaseTr

IncreaseTr	IntegrateB	IntegrateB	ImprovePe	ImprovePe	ProvideTra	ProvideTra	ProvideTra	Implement	LimitParkir

LimitParkir	UnbundleF	UnbundleF	OnStreetM	OnStreetM	ProvideBR	ProvideBR	ExpandTra	ExpandTra	IncreaseTr

IncreaseTr IncreaseTransitFrequencyHeadwaysPercentReduction

Implement	Implement	Implement	TransitSub	TransitSub	TransitSub	Implement	Implement	Workplace	Workplace
0			0			0		0	

Workplace	Encourage	Encourage	Encourage	Encourage	MarketCon	MarketCon	Employee\	Employee\	Employee\
0					0		0		2

ProvideRic	ProvideRic	Implement	ImplementSchoolBusProgramPercentFamilyUsing
	0		0

Landscape	Landscape	Landscape	Landscape	Landscape	Landscape	UseLowVC	UseLowVC	UseLowVC	UseLowVC
0		0		0		0	100	0	100

UseLowVC	UseLowVC	UseLowVC	UseLowVC	HearthOnl	NoHearthC	UseLowVC	UseLowVC	UseLowVOC	PaintPark
0	100	0	100	0	0	0	0	100	

kingValue

ExceedTitl	ExceedTitl	InstallHigh	InstallHigh	OnSiteRer	KwhGener	KwhGener	PercentOfI	PercentOfElectricityUs

seGenerated

tblApplianceMitigation

Appliance	PercentImprovement
ClothWasher	30
DishWasher	15
Fan	50
Refrigerator	15

ApplyWate	ApplyWate	ApplyWate	UseReclai	PercentOu	PercentInd	UseGreyW	PercentOu	PercentInd	InstallLowF
0			0			0			0

PercentRe	InstallLowF	PercentRe	InstallLowF	PercentRe	InstallLowF	PercentRe	TurfReduc	TurfReduc	TurfReduc
32	0	18	0	20	0	20	0		

tblWaterMitigation

UseWaterE	UseWaterE	WaterEffici	MAWA	ETWU
0	6.1	0		

InstituteRe InstituteRecyclingAndCompostingServicesWastePercentReduction

OperOffRc	OperOffRc	OperHours	OperDaysI	OperHorse	OperLoadF	OperFuelType

FleetMixLa	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS
City Park	0.562895	0.037862	0.20722	0.11557	0.017815	0.005092	0.018559	0.023754	0.002009

UBUS	MCY	SBUS	MH
0.001969	0.005819	0.000618	0.000817

tblStationaryGeneratorsPumpsUse

GeneratorS	NumberOf	GeneratorS	HorsePow	Load_Fact	HoursPerD	HoursPerY	GeneratorsPumpsEquipmentDes

cription

BoilerEqui	NumberOf	BoilerFuel	BoilerRatir	DailyHeatI	AnnualHea	BoilerEquipmentDescription

tblStationaryUserDefined

UserDefine	UserDefine	TOG_lb_d	TOG_tpy	ROG_lb_d	ROG_tpy	CO_lb_day	CO_tpy	NOX_lb_d	NOX_tpy

SO2_lb_da	SO2_tpy	PM10_lb_d	PM10_tpy	PM2_5_lb_	PM2_5_tpy	CO2_lb_da	CO2_tpy	CH4_lb_da	CH4_tpy

Generators	TOG_EF	TOG_EF_I	ROG_EF	ROG_EF_	CO_EF	CO_EF_U	NOX_EF	NOX_EF_I	SO2_EF

SO2_EF_U	PM10_EF	PM10_EF_U	PM2_5_EF	PM2_5_EF_U	CO2_EF	CO2_EF_U	CH4_EF	CH4_EF_UOM

BoilerEqui	TOG_EF	TOG_EF_I	ROG_EF	ROG_EF_	CO_EF	CO_EF_U	NOX_EF	NOX_EF_I	SO2_EF

SO2_EF_U	PM10_EF	PM10_EF_U	PM2_5_EF	PM2_5_EF_U	CO2_EF	CO2_EF_U	CH4_EF	CH4_EF_UOM

SubModule	PhaseName	Season	Remarks
1			
3			Project is a landfill closure. 'City Park' land use type is used becuase similar gr
4			Demolition and grading may occur simultaneously. Equipment inputted for the
5	Demolition		
5	Grading		Max daily equipment provided by applicant.
5	Site Preparation		
6			60,000 cubic yards total divided by 16 cubic yard capacity trucks = 3750 total t
7			5% of total haul route woud be unpaved.
8			
9			Conservatively assumed total site acreage for ground disturbance.
12			Project is construction only.
25			

grading phase shows maximum daily emissions, including equipment that would be used in demolition.

:rips Maximum of 30 workers per day during grading, which would require the greatest number of workers.

Instructions: Input all construction equipment by each phase and phase length and use CalEEMod outputs for amount, usage hours, horsepower, and load factor.

Phase 1 Construction Offroad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	Number of days	Diesel Fuel Usage
Site Preparation	Rubber Tired Dozers	3	8	247	0.4	23	2,727
Site Preparation	Tractors/Loaders/Backhoes	4	8	97	0.37	23	1,321
Grading	Plate compactor	1	8.00	8	0.43	60	83
Grading	Excavators	1	8.00	158	0.38	60	1,441
Grading	Crushing/ Proc. Equipment	1	8.00	85	0.78	60	1,591
Grading	Off-Highway trucks	1	8.00	402	0.38	60	3,666
Grading	Rubber Tired Dozers	2	8.00	247	0.40	60	4,742
Demolition	Excavators	3	8.00	158	0.38	20	1,441
Demolition	Concrete/ Industrial Saw	1	8.00	81	0.73	20	473
Demolition	Rubber Tired Dozers	2	8.00	247	0.40	20	1,581
						TOTAL	15,018

Notes: Equipment assumptions are consistent with CalEEMod. Fuel usage average of 0.05 gallons of diesel fuel per horsepower-hour is from the SCAQMD CEQA Air Quality Handbook, Table A9-3E.

Trips and VMT

Phase Name	Daily Worker Trip	Daily Vendor Trip	Daily Hauling Trip	Days per Year	Total Worker Trips	Total Vendor Trips	Total Haul Trips	Worker Trip Length (miles)	Vendor Trip Length (miles)	Haul Trip Length (miles)	Total Worker Trip Length (miles)	Total Vendor Trip Length (miles)	Total Haul Trip Length (miles)	Total gallons of gasoline	Total gallons of diesel
Demolition	15	0	0	20	300	0	0	10.00	6.50	20.00	3000	0.00	-	123	0
Site Preparation	18	0	0	23	414	0	0	10.00	6.50	20.00	4,140.00	0.00	-	170	0
Grading	30	0	63	60	1,800	0	3750	10.00	6.50	20.00	18,000.00	0.00	75,000.00	738	12,838
													TOTAL	1,031	12,838

Notes: Consistent with CalEEMod, worker vehicles assumed to be gasoline and 50% LDA, 25% LDT1, and 25% LDT2. Vendor and haul trips are assumed to be 100% diesel Heavy-Duty Trucks (T7).

Instructions: Input EMFAC run for LDA, LDT1, LTD2 for gas, and T7 tractor construction for diesel into temp

EMFAC2014 (v1.0.7) Emissions Inventory
Region Type: County
Region: Sacramento
Calendar Year: 2018
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumpti

Region	CalYr	VehClass	MdlYr	Speed miles/hr	Fuel	Population vehicles
Sacramento	2018	LDA	Aggregated	Aggregated	GAS	534,423
Sacramento	2018	LDT1	Aggregated	Aggregated	GAS	48,969
Sacramento	2018	LDT2	Aggregated	Aggregated	GAS	192,934
Sacramento	2018	T7 tractor construction	Aggregated	Aggregated	DSL	124

Notes: Consistent with CalEEMod, worker vehicles assumed to be

plate below.

ion

VMT miles/day	Trips trips/day	Fuel gas 1,000 gallons/day	Diesel gas 1,000 gallons/day	Miles per gallon	Gasoline miles per gallon
19,389,304	3,354,318	713.1	0.00	27.19	24.38
1,599,959	294,575	69.9	0.00	22.89	
7,333,600	1,209,109	362.1	0.00	20.26	
10,857	0	0.00	1.86	5.84	

e gasoline and 50% LDA, 25% LDT1, and 25% LDT2. Vendor trips are assumed to be 100% diesel Heavy-Duty Trucks (T7).

Diesel miles per gallon
5.84

North City Landfill Closure

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	15.10	Acre	15.10	657,756.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2023
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

North City Landfill Closure - Sacramento Metropolitan AQMD Air District, Summer

Project Characteristics -

Land Use - Project is a landfill closure. 'City Park' land use type is used becuase similar groundwork is done for this type of project.

Construction Phase - Demolition and grading may occur simultaneously. Equipment inputted for the grading phase shows maximum daily emissions, including equipment that would be used in demolition.

Off-road Equipment -

Off-road Equipment - Max daily equipment provided by applicant.

Off-road Equipment -

Trips and VMT - 60,000 cubic yards total divided by 16 cubic yard capacity trucks = 3750 total trips
Maximum of 30 workers per day during grading, which would require the greatest number of workers.

On-road Fugitive Dust - 5% of total haul route woud be unpaved.

Demolition -

Grading - Conservatively assumed total site acreage for ground disturbance.

Vehicle Trips - Project is construction only.

Construction Off-road Equipment Mitigation -

North City Landfill Closure - Sacramento Metropolitan AQMD Air District, Summer

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstructionPhase	NumDays	30.00	60.00
tblConstructionPhase	NumDays	10.00	23.00
tblGrading	AcresOfGrading	150.00	15.10
tblGrading	MaterialImported	0.00	60,000.00
tblOffRoadEquipment	OffRoadEquipmentType		Crushing/Proc. Equipment
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Site Preparation
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading
tblOnRoadDust	HaulingPercentPave	100.00	95.00
tblOnRoadDust	HaulingPercentPave	100.00	95.00
tblOnRoadDust	HaulingPercentPave	100.00	95.00
tblTripsAndVMT	HaulingTripNumber	500.00	0.00
tblTripsAndVMT	HaulingTripNumber	7,500.00	3,750.00
tblTripsAndVMT	WorkerTripNumber	20.00	18.00
tblTripsAndVMT	WorkerTripNumber	18.00	15.00

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	3.4491	41.5457	22.6617	0.0935	105.7714	1.6135	107.0772	16.2068	1.4844	17.4250	0.0000	9,534.8570	9,534.8570	1.4525	0.0000	9,571.1686
Maximum	**3.4491**	**41.5457**	**22.6617**	**0.0935**	**105.7714**	**1.6135**	**107.0772**	**16.2068**	**1.4844**	**17.4250**	**0.0000**	**9,534.8570**	**9,534.8570**	**1.4525**	**0.0000**	**9,571.1686**

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	3.4491	41.5457	22.6617	0.0935	48.2976	1.6135	49.6034	7.4843	1.4844	8.7026	0.0000	9,534.8570	9,534.8570	1.4525	0.0000	9,571.1686
Maximum	**3.4491**	**41.5457**	**22.6617**	**0.0935**	**48.2976**	**1.6135**	**49.6034**	**7.4843**	**1.4844**	**8.7026**	**0.0000**	**9,534.8570**	**9,534.8570**	**1.4525**	**0.0000**	**9,571.1686**

North City Landfill Closure - Sacramento Metropolitan AQMD Air District, Summer

	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**	**54.34**	**0.00**	**53.68**	**53.82**	**0.00**	**50.06**	**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	0.0340	1.0000e-005	1.5400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.3000e-003	3.3000e-003	1.0000e-005		3.5200e-003
Energy	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
Mobile	0.5910	1.7228	5.1938	0.0160	1.3440	0.0118	1.3558	0.3592	0.0110	0.3702		1,617.4343	1,617.4343	0.0723		1,619.2420
Total	**0.6250**	**1.7228**	**5.1953**	**0.0160**	**1.3440**	**0.0118**	**1.3558**	**0.3592**	**0.0110**	**0.3702**		**1,617.4376**	**1,617.4376**	**0.0723**	**0.0000**	**1,619.2456**

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	0.0340	1.0000e-005	1.5400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.3000e-003	3.3000e-003	1.0000e-005		3.5200e-003
Energy	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
Mobile	0.5910	1.7228	5.1938	0.0160	1.3440	0.0118	1.3558	0.3592	0.0110	0.3702		1,617.4343	1,617.4343	0.0723		1,619.2420
Total	**0.6250**	**1.7228**	**5.1953**	**0.0160**	**1.3440**	**0.0118**	**1.3558**	**0.3592**	**0.0110**	**0.3702**		**1,617.4376**	**1,617.4376**	**0.0723**	**0.0000**	**1,619.2456**

	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**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	5/15/2022	6/15/2022	5	23	
2	Demolition	Demolition	6/16/2022	7/13/2022	5	20	
3	Grading	Grading	7/14/2022	10/5/2022	5	60	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 15.1

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Crushing/Proc. Equipment	0		85	0.78
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Grading	Off-Highway Trucks	1	8.00	402	0.38
Grading	Plate Compactors	1	8.00	8	0.43
Grading	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Crushing/Proc. Equipment	1	8.00	85	0.78

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
Site Preparation	8	18.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	7	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	12	30.00	0.00	3,750.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Water Exposed Area

3.2 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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836		3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**18.0663**	**1.6126**	**19.6788**	**9.9307**	**1.4836**	**11.4143**		**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

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
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
Worker	0.0673	0.0332	0.4959	1.3400e-003	0.1369	9.0000e-004	0.1378	0.0363	8.3000e-004	0.0372		133.0184	133.0184	3.3000e-003		133.1009
Total	**0.0673**	**0.0332**	**0.4959**	**1.3400e-003**	**0.1369**	**9.0000e-004**	**0.1378**	**0.0363**	**8.3000e-004**	**0.0372**		**133.0184**	**133.0184**	**3.3000e-003**		**133.1009**

3.2 Site Preparation - 2022

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					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836	0.0000	3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**8.1298**	**1.6126**	**9.7424**	**4.4688**	**1.4836**	**5.9524**	**0.0000**	**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

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
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
Worker	0.0673	0.0332	0.4959	1.3400e-003	0.1369	9.0000e-004	0.1378	0.0363	8.3000e-004	0.0372		133.0184	133.0184	3.3000e-003		133.1009
Total	**0.0673**	**0.0332**	**0.4959**	**1.3400e-003**	**0.1369**	**9.0000e-004**	**0.1378**	**0.0363**	**8.3000e-004**	**0.0372**		**133.0184**	**133.0184**	**3.3000e-003**		**133.1009**

3.3 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					5.6363	0.0000	5.6363	0.8534	0.0000	0.8534			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553		3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**	**5.6363**	**1.2427**	**6.8790**	**0.8534**	**1.1553**	**2.0087**		**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

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
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
Worker	0.0561	0.0277	0.4133	1.1100e-003	0.1141	7.5000e-004	0.1149	0.0303	6.9000e-004	0.0310		110.8487	110.8487	2.7500e-003		110.9174
Total	**0.0561**	**0.0277**	**0.4133**	**1.1100e-003**	**0.1141**	**7.5000e-004**	**0.1149**	**0.0303**	**6.9000e-004**	**0.0310**		**110.8487**	**110.8487**	**2.7500e-003**		**110.9174**

3.3 Demolition - 2022

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					2.5364	0.0000	2.5364	0.3840	0.0000	0.3840			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553	0.0000	3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**	**2.5364**	**1.2427**	**3.7790**	**0.3840**	**1.1553**	**1.5393**	**0.0000**	**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

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
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
Worker	0.0561	0.0277	0.4133	1.1100e-003	0.1141	7.5000e-004	0.1149	0.0303	6.9000e-004	0.0310		110.8487	110.8487	2.7500e-003		110.9174
Total	**0.0561**	**0.0277**	**0.4133**	**1.1100e-003**	**0.1141**	**7.5000e-004**	**0.1149**	**0.0303**	**6.9000e-004**	**0.0310**		**110.8487**	**110.8487**	**2.7500e-003**		**110.9174**

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					12.5179	0.0000	12.5179	6.6806	0.0000	6.6806			0.0000			0.0000
Off-Road	2.9246	26.8543	18.3195	0.0430		1.2565	1.2565		1.1711	1.1711		4,132.0808	4,132.0808	1.1572		4,161.0100
Total	**2.9246**	**26.8543**	**18.3195**	**0.0430**	**12.5179**	**1.2565**	**13.7743**	**6.6806**	**1.1711**	**7.8517**		**4,132.0808**	**4,132.0808**	**1.1572**		**4,161.0100**

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	0.4123	14.6360	3.5156	0.0483	93.0253	0.0478	93.0732	9.4657	0.0458	9.5114		5,181.0788	5,181.0788	0.2898		5,188.3237
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
Worker	0.1122	0.0554	0.8265	2.2300e-003	0.2282	1.5000e-003	0.2297	0.0605	1.3800e-003	0.0619		221.6974	221.6974	5.5000e-003		221.8349
Total	**0.5245**	**14.6914**	**4.3421**	**0.0505**	**93.2535**	**0.0493**	**93.3029**	**9.5262**	**0.0471**	**9.5733**		**5,402.7762**	**5,402.7762**	**0.2953**		**5,410.1586**

3.4 Grading - 2022

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					5.6330	0.0000	5.6330	3.0063	0.0000	3.0063			0.0000			0.0000
Off-Road	2.9246	26.8543	18.3195	0.0430		1.2565	1.2565		1.1711	1.1711	0.0000	4,132.0808	4,132.0808	1.1572		4,161.0100
Total	**2.9246**	**26.8543**	**18.3195**	**0.0430**	**5.6330**	**1.2565**	**6.8895**	**3.0063**	**1.1711**	**4.1774**	**0.0000**	**4,132.0808**	**4,132.0808**	**1.1572**		**4,161.0100**

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	0.4123	14.6360	3.5156	0.0483	42.4364	0.0478	42.4842	4.4175	0.0458	4.4633		5,181.0788	5,181.0788	0.2898		5,188.3237
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
Worker	0.1122	0.0554	0.8265	2.2300e-003	0.2282	1.5000e-003	0.2297	0.0605	1.3800e-003	0.0619		221.6974	221.6974	5.5000e-003		221.8349
Total	**0.5245**	**14.6914**	**4.3421**	**0.0505**	**42.6646**	**0.0493**	**42.7139**	**4.4780**	**0.0471**	**4.5252**		**5,402.7762**	**5,402.7762**	**0.2953**		**5,410.1586**

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	0.5910	1.7228	5.1938	0.0160	1.3440	0.0118	1.3558	0.3592	0.0110	0.3702		1,617.4343	1,617.4343	0.0723		1,619.2420
Unmitigated	0.5910	1.7228	5.1938	0.0160	1.3440	0.0118	1.3558	0.3592	0.0110	0.3702		1,617.4343	1,617.4343	0.0723		1,619.2420

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	28.54	343.53	252.77	194,773	194,773
Total	28.54	343.53	252.77	194,773	194,773

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

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.562895	0.037862	0.207220	0.115570	0.017815	0.005092	0.018559	0.023754	0.002009	0.001969	0.005819	0.000618	0.000817

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	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
NaturalGas Unmitigated	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

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
Total		**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**

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
Total		**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**

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	0.0340	1.0000e-005	1.5400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.3000e-003	3.3000e-003	1.0000e-005		3.5200e-003
Unmitigated	0.0340	1.0000e-005	1.5400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.3000e-003	3.3000e-003	1.0000e-005		3.5200e-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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0339					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4000e-004	1.0000e-005	1.5400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.3000e-003	3.3000e-003	1.0000e-005		3.5200e-003
Total	**0.0340**	**1.0000e-005**	**1.5400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**3.3000e-003**	**3.3000e-003**	**1.0000e-005**		**3.5200e-003**

6.2 Area by SubCategory

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0339					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4000e-004	1.0000e-005	1.5400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.3000e-003	3.3000e-003	1.0000e-005		3.5200e-003
Total	**0.0340**	**1.0000e-005**	**1.5400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**3.3000e-003**	**3.3000e-003**	**1.0000e-005**		**3.5200e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

North City Landfill Closure

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	15.10	Acre	15.10	657,756.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2023
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

North City Landfill Closure - Sacramento Metropolitan AQMD Air District, Winter

Project Characteristics -

Land Use - Project is a landfill closure. 'City Park' land use type is used becuase similar groundwork is done for this type of project.

Construction Phase - Demolition and grading may occur simultaneously. Equipment inputted for the grading phase shows maximum daily emissions, including equipment that would be used in demolition.

Off-road Equipment -

Off-road Equipment - Max daily equipment provided by applicant.

Off-road Equipment -

Trips and VMT - 60,000 cubic yards total divided by 16 cubic yard capacity trucks = 3750 total trips
Maximum of 30 workers per day during grading, which would require the greatest number of workers.

On-road Fugitive Dust - 5% of total haul route woud be unpaved.

Demolition -

Grading - Conservatively assumed total site acreage for ground disturbance.

Vehicle Trips - Project is construction only.

Construction Off-road Equipment Mitigation -

North City Landfill Closure - Sacramento Metropolitan AQMD Air District, Winter

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstructionPhase	NumDays	30.00	60.00
tblConstructionPhase	NumDays	10.00	23.00
tblGrading	AcresOfGrading	150.00	15.10
tblGrading	MaterialImported	0.00	60,000.00
tblOffRoadEquipment	OffRoadEquipmentType		Crushing/Proc. Equipment
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Site Preparation
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading
tblOnRoadDust	HaulingPercentPave	100.00	95.00
tblOnRoadDust	HaulingPercentPave	100.00	95.00
tblOnRoadDust	HaulingPercentPave	100.00	95.00
tblTripsAndVMT	HaulingTripNumber	500.00	0.00
tblTripsAndVMT	HaulingTripNumber	7,500.00	3,750.00
tblTripsAndVMT	WorkerTripNumber	20.00	18.00
tblTripsAndVMT	WorkerTripNumber	18.00	15.00

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	3.4531	42.0896	22.7755	0.0924	105.7714	1.6135	107.0790	16.2068	1.4844	17.4267	0.0000	9,426.8883	9,426.8883	1.4649	0.0000	9,463.5108
Maximum	**3.4531**	**42.0896**	**22.7755**	**0.0924**	**105.7714**	**1.6135**	**107.0790**	**16.2068**	**1.4844**	**17.4267**	**0.0000**	**9,426.8883**	**9,426.8883**	**1.4649**	**0.0000**	**9,463.5108**

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	3.4531	42.0896	22.7755	0.0924	48.2976	1.6135	49.6052	7.4843	1.4844	8.7043	0.0000	9,426.8883	9,426.8883	1.4649	0.0000	9,463.5108
Maximum	**3.4531**	**42.0896**	**22.7755**	**0.0924**	**48.2976**	**1.6135**	**49.6052**	**7.4843**	**1.4844**	**8.7043**	**0.0000**	**9,426.8883**	**9,426.8883**	**1.4649**	**0.0000**	**9,463.5108**

North City Landfill Closure - Sacramento Metropolitan AQMD Air District, Winter

	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**	**54.34**	**0.00**	**53.67**	**53.82**	**0.00**	**50.05**	**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	0.0340	1.0000e-005	1.5400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.3000e-003	3.3000e-003	1.0000e-005		3.5200e-003
Energy	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
Mobile	0.4283	1.8210	4.9414	0.0144	1.3440	0.0120	1.3560	0.3592	0.0112	0.3704		1,462.7331	1,462.7331	0.0728		1,464.5533
Total	**0.4623**	**1.8210**	**4.9429**	**0.0144**	**1.3440**	**0.0120**	**1.3560**	**0.3592**	**0.0112**	**0.3704**		**1,462.7364**	**1,462.7364**	**0.0728**	**0.0000**	**1,464.5568**

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	0.0340	1.0000e-005	1.5400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.3000e-003	3.3000e-003	1.0000e-005		3.5200e-003
Energy	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
Mobile	0.4283	1.8210	4.9414	0.0144	1.3440	0.0120	1.3560	0.3592	0.0112	0.3704		1,462.7331	1,462.7331	0.0728		1,464.5533
Total	**0.4623**	**1.8210**	**4.9429**	**0.0144**	**1.3440**	**0.0120**	**1.3560**	**0.3592**	**0.0112**	**0.3704**		**1,462.7364**	**1,462.7364**	**0.0728**	**0.0000**	**1,464.5568**

	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**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	5/15/2022	6/15/2022	5	23	
2	Demolition	Demolition	6/16/2022	7/13/2022	5	20	
3	Grading	Grading	7/14/2022	10/5/2022	5	60	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 15.1

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Crushing/Proc. Equipment	0		85	0.78
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Grading	Off-Highway Trucks	1	8.00	402	0.38
Grading	Plate Compactors	1	8.00	8	0.43
Grading	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Crushing/Proc. Equipment	1	8.00	85	0.78

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
Site Preparation	8	18.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	7	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	12	30.00	0.00	3,750.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Water Exposed Area

3.2 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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836		3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**18.0663**	**1.6126**	**19.6788**	**9.9307**	**1.4836**	**11.4143**		**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

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
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
Worker	0.0621	0.0410	0.4212	1.1700e-003	0.1369	9.0000e-004	0.1378	0.0363	8.3000e-004	0.0372		116.8311	116.8311	2.9000e-003		116.9035
Total	**0.0621**	**0.0410**	**0.4212**	**1.1700e-003**	**0.1369**	**9.0000e-004**	**0.1378**	**0.0363**	**8.3000e-004**	**0.0372**		**116.8311**	**116.8311**	**2.9000e-003**		**116.9035**

3.2 Site Preparation - 2022

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					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836	0.0000	3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**8.1298**	**1.6126**	**9.7424**	**4.4688**	**1.4836**	**5.9524**	**0.0000**	**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

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
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
Worker	0.0621	0.0410	0.4212	1.1700e-003	0.1369	9.0000e-004	0.1378	0.0363	8.3000e-004	0.0372		116.8311	116.8311	2.9000e-003		116.9035
Total	**0.0621**	**0.0410**	**0.4212**	**1.1700e-003**	**0.1369**	**9.0000e-004**	**0.1378**	**0.0363**	**8.3000e-004**	**0.0372**		**116.8311**	**116.8311**	**2.9000e-003**		**116.9035**

3.3 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					5.6363	0.0000	5.6363	0.8534	0.0000	0.8534			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553		3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**	**5.6363**	**1.2427**	**6.8790**	**0.8534**	**1.1553**	**2.0087**		**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

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
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
Worker	0.0518	0.0342	0.3510	9.8000e-004	0.1141	7.5000e-004	0.1149	0.0303	6.9000e-004	0.0310		97.3592	97.3592	2.4100e-003		97.4196
Total	**0.0518**	**0.0342**	**0.3510**	**9.8000e-004**	**0.1141**	**7.5000e-004**	**0.1149**	**0.0303**	**6.9000e-004**	**0.0310**		**97.3592**	**97.3592**	**2.4100e-003**		**97.4196**

3.3 Demolition - 2022

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					2.5364	0.0000	2.5364	0.3840	0.0000	0.3840			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553	0.0000	3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**	**2.5364**	**1.2427**	**3.7790**	**0.3840**	**1.1553**	**1.5393**	**0.0000**	**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

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
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
Worker	0.0518	0.0342	0.3510	9.8000e-004	0.1141	7.5000e-004	0.1149	0.0303	6.9000e-004	0.0310		97.3592	97.3592	2.4100e-003		97.4196
Total	**0.0518**	**0.0342**	**0.3510**	**9.8000e-004**	**0.1141**	**7.5000e-004**	**0.1149**	**0.0303**	**6.9000e-004**	**0.0310**		**97.3592**	**97.3592**	**2.4100e-003**		**97.4196**

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					12.5179	0.0000	12.5179	6.6806	0.0000	6.6806			0.0000			0.0000
Off-Road	2.9246	26.8543	18.3195	0.0430		1.2565	1.2565		1.1711	1.1711		4,132.0808	4,132.0808	1.1572		4,161.0100
Total	**2.9246**	**26.8543**	**18.3195**	**0.0430**	**12.5179**	**1.2565**	**13.7743**	**6.6806**	**1.1711**	**7.8517**		**4,132.0808**	**4,132.0808**	**1.1572**		**4,161.0100**

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	0.4249	15.1670	3.7540	0.0475	93.0253	0.0496	93.0749	9.4657	0.0475	9.5131		5,100.0890	5,100.0890	0.3029		5,107.6616
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
Worker	0.1036	0.0683	0.7020	1.9500e-003	0.2282	1.5000e-003	0.2297	0.0605	1.3800e-003	0.0619		194.7185	194.7185	4.8300e-003		194.8391
Total	**0.5285**	**15.2353**	**4.4559**	**0.0495**	**93.2535**	**0.0511**	**93.3047**	**9.5262**	**0.0488**	**9.5750**		**5,294.8075**	**5,294.8075**	**0.3077**		**5,302.5008**

3.4 Grading - 2022

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					5.6330	0.0000	5.6330	3.0063	0.0000	3.0063			0.0000			0.0000
Off-Road	2.9246	26.8543	18.3195	0.0430		1.2565	1.2565		1.1711	1.1711	0.0000	4,132.0808	4,132.0808	1.1572		4,161.0100
Total	**2.9246**	**26.8543**	**18.3195**	**0.0430**	**5.6330**	**1.2565**	**6.8895**	**3.0063**	**1.1711**	**4.1774**	**0.0000**	**4,132.0808**	**4,132.0808**	**1.1572**		**4,161.0100**

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	0.4249	15.1670	3.7540	0.0475	42.4364	0.0496	42.4860	4.4175	0.0475	4.4650		5,100.0890	5,100.0890	0.3029		5,107.6616
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
Worker	0.1036	0.0683	0.7020	1.9500e-003	0.2282	1.5000e-003	0.2297	0.0605	1.3800e-003	0.0619		194.7185	194.7185	4.8300e-003		194.8391
Total	**0.5285**	**15.2353**	**4.4559**	**0.0495**	**42.6646**	**0.0511**	**42.7157**	**4.4780**	**0.0488**	**4.5269**		**5,294.8075**	**5,294.8075**	**0.3077**		**5,302.5008**

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	0.4283	1.8210	4.9414	0.0144	1.3440	0.0120	1.3560	0.3592	0.0112	0.3704		1,462.7331	1,462.7331	0.0728		1,464.5533
Unmitigated	0.4283	1.8210	4.9414	0.0144	1.3440	0.0120	1.3560	0.3592	0.0112	0.3704		1,462.7331	1,462.7331	0.0728		1,464.5533

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	28.54	343.53	252.77	194,773	194,773
Total	28.54	343.53	252.77	194,773	194,773

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

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.562895	0.037862	0.207220	0.115570	0.017815	0.005092	0.018559	0.023754	0.002009	0.001969	0.005819	0.000618	0.000817

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	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
NaturalGas Unmitigated	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

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
Total		**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**

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
Total		**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**

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	0.0340	1.0000e-005	1.5400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.3000e-003	3.3000e-003	1.0000e-005		3.5200e-003
Unmitigated	0.0340	1.0000e-005	1.5400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.3000e-003	3.3000e-003	1.0000e-005		3.5200e-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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0339					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4000e-004	1.0000e-005	1.5400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.3000e-003	3.3000e-003	1.0000e-005		3.5200e-003
Total	**0.0340**	**1.0000e-005**	**1.5400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**3.3000e-003**	**3.3000e-003**	**1.0000e-005**		**3.5200e-003**

6.2 Area by SubCategory

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0339					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4000e-004	1.0000e-005	1.5400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.3000e-003	3.3000e-003	1.0000e-005		3.5200e-003
Total	**0.0340**	**1.0000e-005**	**1.5400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**3.3000e-003**	**3.3000e-003**	**1.0000e-005**		**3.5200e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix B

Biological Resource Database Information

Table 1 Special-Status Plant Species Evaluated for the Project

Species Name	Legal Status[1] Federal/ State/CRPR	Habitat and Distribution	Potential for Occurrence within the Project Site[2]
Alkali milk-vetch *Astragalus tener var. tener*	--/--/1B.2	Low ground, alkali flats, and flooded lands; in annual grassland or in playas or vernal pools. 0–551 feet in elevation. Blooms March–June.	**Not expected to occur:** The project site does contain low ground, alkali flats or flooded lands in annual grassland, playas or vernal pools suitable for this species.
Bristly sedge *Carex comosa*	--/--2B.1	Wetland. Marshes and swamps, coastal prairie, valley and foothill grassland. Lake margins, wet places; site below sea level is on a Delta island. -16–5,315 feet in elevation. Blooms May–September.	**Not expected to occur:** The project site does not contain wetland habitat suitable for this species.
Pappose tarplant *Centromadia parryi* ssp. *parryi*	--/--/1B.2	Chaparral, coastal prairie, meadows and seeps, coastal salt marsh, valley and foothill grassland. Vernally mesic, often alkaline sites. 7–1,378 feet in elevation. Blooms May–November.	**Not expected to occur:** The project site does not contain vernally mesic alkaline habitat suitable for this species.
Peruvian dodder *Cuscuta obtusiflora var. glandulosa*	--/--/2B.2	Wetland. Marshes and swamps (freshwater). Freshwater marsh. 49–919 feet in elevation. Blooms July–October.	**Not expected to occur:** The project site does not support wetland habitat suitable for this species.
Dwarf downingia *Downingia pusilla*	--/--/2B.2	Wetland. Valley and foothill grassland (mesic sites), vernal pools. Vernal lake and pool margins with a variety of associates. In several types of vernal pools. 3–1,608 feet in elevation. Blooms March–May.	**Not expected to occur:** The project site does not support wetland habitat suitable for this species.
Boggs Lake hedge-hyssop *Gratiola heterosepala*	--/SE/1B.2	Wetland. Marshes and swamps (freshwater), vernal pools. Clay soils; usually in vernal pools, sometimes on lake margins. 33–7792 feet in elevation. Blooms April–August.	**Not expected to occur:** The project site does not support wetland habitat suitable for this species.
Woolly rose-mallow *Hibiscus lasiocarpos* var. *occidentalis*	--/--/1B.2	Wetland. Marshes and swamps (freshwater). Moist, freshwater-soaked riverbanks and low peat islands in sloughs; can also occur on riprap and levees. In California, known from the delta watershed. 0–509 feet in elevation. Blooms June–September.	**Not expected to occur:** The project site does not support wetland habitat suitable for this species.
Northern California black walnut *Juglans hindsii*	--/--/1B.1	Typically found in riparian forest and riparian woodland ranging from 0-1,443 feet in elevations. Blooms from April-May.	**Not expected to occur:** No walnut species was observed during reconnaissance surveys of the project site.
Ahart's dwarf rush *Juncus leiospermus* var. *ahartii*	--/--/1B.2	Annual herb typically found in mesic areas within valley and foothill grassland at elevation ranging from 98-751 feet. Blooms from March-May.	**Not expected to occur:** The project site is outside of the elevational range of the species and the project site does not support wetland habitat suitable for this species.
Legenere *Legenere limosa*	--/--/1B.1	Annual herb typically found in vernal pools at elevations ranging from 3-2,887 feet. Blooms from April-June.	**Not expected to occur:** The project site does not support wetland habitat suitable for this species.
Heckard's pepper-grass *Lepidium latipes* var. *heckardi*	--/--/1B.2	Annual herb typically found in alkaline flats within valley and foothill grassland at	**Not expected to occur:** Due to the historical disturbance of the site,

Table 1 Special-Status Plant Species Evaluated for the Project

Species Name	Legal Status[1] Federal/ State/CRPR	Habitat and Distribution	Potential for Occurrence within the Project Site[2]
		elevation ranging from 6-656 feet. Blooms March to May.	there are no alkaline soils that provide suitable habitat for this species.
Mason's lilaopsis *Lilaeopsis masonii*	--/CR/1B.1	Wetland. Freshwater and brackish marshes, riparian scrub. Tidal zones, in muddy or silty soil formed through river deposition or riverbank erosion. 0–33 feet in elevation. Blooms April–November.	**Not expected to occur:** The project site does not support wetland habitat suitable for this species.
Slender Orcutt grass *Orcuttia tenuis*	FT/CE/1B.1	Annual herb typically found in vernal pools at elevation ranging from 114–5,774 feet in elevation. Blooms May–September, sometimes till October.	**Not expected to occur:** The project site does not support vernal pool or wetland habitat suitable for this species.
Sacramento Orcutt grass *Orcuttia viscida*	FE/CE/1B.1	Annual herb typically found in vernal pools between 98–328 feet in elevation. Blooms April-July, sometimes till September.	**Not expected to occur:** The project site does not support vernal pool habitat suitable for this species.
Sanford's arrowhead *Sagittaria sanfordii*	--/--/1B.2, NBHCP	Wetland. Marshes and swamps. In standing or slow-moving freshwater ponds, marshes, and ditches. 0–2,133 feet in elevation. Blooms May–October (November).	**Not expected to occur:** The project site does not support wetland habitat suitable for this species.
Suisun Marsh aster *Sumphyotrichun lenthum*	--/--/1B.1	Perennial rhizomatous herb (emergent) typically found in marshes and swamps (assorted shallow habitat) between 0-9.8 feet in elevation. Sometimes blooms as early as April but typically between May-November.	**Not expected to occur:** The project site does not support marsh and swamp habitat suitable for this species.
Saline clover *Trifolium hydrophilum*	--/--/1B.2	Alkaline vernal pools at elevations ranging from 0-685 feet. Blooms from April-June.	**Not expected to occur:** The project site does not support wetland habitat suitable for this species.

Notes: CRPR = California Rare Plant Rank; CNDDB = California Natural Diversity Database

[1] Legal Status Definitions

Federal:
E Endangered (legally protected by ESA)
T Threatened (legally protected by ESA)

State:
E Endangered (legally protected by CESA)
T Threatened (legally protected by CESA)
R Rare (legally protected by CNPPA)

California Rare Plant Ranks:
1B Plant species considered rare or endangered in California and elsewhere (protected under CEQA, but not legally protected under ESA or CESA)
2B Plant species considered rare or endangered in California but more common elsewhere (protected under CEQA, but not legally protected under ESA or CESA)

Threat Ranks:
0.1 Seriously threatened in California (over 80% of occurrences threatened; high degree and immediacy of threat)
0.2 Moderately threatened in California (20-80% occurrences threatened; moderate degree and immediacy of threat)
0.3 Not very threatened in California (less than 20% of occurrences threatened; low degree and immediacy of threat or not current threats known)

[2] Potential for Occurrence Definitions

Not expected to occur: Species is unlikely to be present within the plan area due to poor habitat quality, lack of suitable habitat features, or restricted current distribution of the species.

May occur: Suitable habitat is available within the plan area; however, there are little to no other indicators that the species might be present.

Likely to occur: All of the species life history requirements can be met by habitat present on the site, and populations/occurrences are known to occur in the immediate vicinity.

Sources: CNDDB 2020; CNPS 2020; Baldwin et al. 2012.

Baldwin, B., D. Goldman, D. Keil, R. Patterson, and T. Rosatti (editors). 2012. The Jepson Manual: Vascular Plants of California. Second Edition. Berkeley, California: University of California Press.

Appendix C

Noise Modeling Results

Construction Source Noise Prediction Model

Location	Distance to Nearest Receptor in feet	Combined Predicted Noise Level (L_{eq} dBA)
Threshold	131	75.0
Location 1	1000	57.3
Location 2	1500	53.8

Equipment	Reference Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Dozer	82	0.4
Excavator	81	0.4
Compactor (ground)	83	0.2
Rock/Concrete Crusher	85	0.2

Ground Type	hard
Source Height	8
Receiver Height	5
Ground Factor[2]	0.00

Predicted Noise Level [3]	L_{eq} dBA at 50 feet[3]
Dozer	78.0
Excavator	77.0
Compactor (ground)	76.0
Rock/Concrete Crusher	78.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
83.4

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, January 2006. Table 1.

[2] Based on Table 4-26 from the Federal Transit Noise and Vibration Impact Assessment, 2018 (pg 86).

[3] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2018 (pg 176 and 177).

$L_{eq}(equip) = E.L.+10*\log(U.F.) - 20*\log(D/50) - 10*G*\log(D/50)$

Where: E.L. = Emission Level;

U.F.= Usage Factor;

G = Constant that accounts for topography and ground effects (FTA 2018: pg 86); and

D = Distance from source to receiver.

Construction Source Noise Prediction Model

Location	Distance to Nearest Receptor in feet	Combined Predicted Noise Level (L_{max} dBA)
Threshold	252	75.0
Townhome Residences	1000	63.0
Rainbow Daycare	1500	59.5

Equipment	Reference Emission Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Compactor (ground)	83	1
Dozer	82	1
Excavator	81	1
Rock/Concrete Crusher	85	1

Ground Type	HARD
Source Height	8
Receiver Height	5
Ground Factor[2]	0.00

Predicted Noise Level [3]	L_{max} dBA at 50 feet[3]
Compactor (ground)	83.0
Dozer	82.0
Excavator	81.0
Rock/Concrete Crusher	85.0

Combined Predicted Noise Level (L_{max} dBA at 50 feet)
89.0

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, January 2006. Table 1.

[2] Based on Table 4-26 from the Federal Transit Noise and Vibration Impact Assessment, 2018 (pg 86).

[3] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2018 (pg 176 and 177).

$L_{eq}(equip) = E.L.+10*\log(U.F.) - 20*\log(D/50) - 10*G*\log(D/50)$

Where: E.L. = Emission Level;

U.F.= Usage Factor;

G = Constant that accounts for topography and ground effects (FTA 2018: pg 86); and

D = Distance from source to receiver.

Distance Propagation Calculations for Stationary Sources of Ground Vibration

KEY: Orange cells are for input.

Grey cells are intermediate calculations performed by the model.

Green cells are data to present in a written analysis (output).

STEP 1: Determine units in which to perform calculation.

— If vibration decibels (VdB), then use Table A and proceed to Steps 2A and 3A.

— If peak particle velocity (PPV), then use Table B and proceed to Steps 2B and 3B.

STEP 2A: Identify the vibration source and enter the reference vibration level (VdB) and distance.

STEP 3A: Select the distance to the receiver.

Table A. Propagation of vibration decibels (VdB) with distance

Noise Source/ID	Reference Noise Level			Attenuated Noise Level at Receptor		
	vibration level (VdB)	@	distance (ft)	vibration level (VdB)	@	distance (ft)
loaded trucks	86	@	25	74.6	@	60
large dozer	87	@	25	79.3	@	45

The Lv metric (VdB) is used to assess the likelihood for vibration to result in human annoyance.

STEP 2B: Identify the vibration source and enter the reference peak particle velocity (PPV) and distance.

STEP 3B: Select the distance to the receiver.

Table B. Propagation of peak particle velocity (PPV) with distance

Noise Source/ID	Reference Noise Level			Attenuated Noise Level at Receptor		
	vibration level (PPV)	@	distance (ft)	vibration level (PPV)	@	distance (ft)
loaded trucks	0.089	@	25	0.068	@	30
large dozer	0.076	@	25	0.164	@	15

The PPV metric (in/sec) is used for assessing the likelihood for the potential of structural damage.

Notes:

Computation of propagated vibration levels is based on the equations presented on pg. 185 of FTA 2018. Estimates of attenuated vibration levels do not account for reductions from intervening underground barriers or other underground structures of any type, or changes in soil type.

Sources:

Federal Transit Administration. 2018. Transit Noise and Vibration Impact Assessment. FTA Report No. 0123. Prepared by John A. Volpe National Transportation Systems Center, Cambridge, MA. Available: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf. Accessed April 8, 2020.

Appendix D

Cultural Resources Report

CULTURAL RESOURCES INVENTORY REPORT FOR THE NORTH CITY LANDFILL PROJECT, SACRAMENTO COUNTY, CALIFORNIA

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January 2021

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ICF. 2021. *Cultural Resources Inventory Report for the North City Landfill Project, Sacramento County, California*. January. Sacramento, CA. Prepared for the Sacramento Municipal Utility District, Sacramento, CA.

Contents

List of Acronyms and Abbreviations ii

Page

Introduction 1
Project Location and Setting 1
Project Description 2
Regulatory Setting 8
Area of Potential Effects 8
Cultural Setting 10
    Archaeological Context 11
    Historic Context 14
Methods 17
    Records Search and Other Sources 17
    Native American Correspondence 18
    Field Methods 18
Results of Identification and Evaluation Efforts 21
    Archaeology 21
    Built Environment 21
Conclusions and Recommendations 21
    Archaeological Resources 21
    Built Environment Resources 22
    Inadvertent Discovery of Archaeological Resources 22
    Inadvertent Discovery of Human Remains 22
References 24

Appendix A Figures

Figure 1. Project Vicinity

Figure 2. Project Site and Construction Staging Location

Figure 3. Historic Refuse Deposits within Project Area

Appendix B Sacred Lands Search Request

Appendix C Records Search Results

Appendix D DPR 523 Form

Acronyms and Abbreviations

SMUD	Sacramento Municipal Utility District
NCLF	North City Landfill
LEA	local enforcement agency
BMPs	best management practices
SMAQMD	Sacramento Metropolitan Air Quality Management District
CEQA	California Environmental Quality Act
CRHR	California Register of Historical Resources
PRC	Public Resources Code
NRHP	National Register of Historic Places
AB	Assembly Bill
APE	area of potential effects
BP	Before Present
NAHC	Native American Heritage Commission

Introduction

The Sacramento Municipal Utility District (SMUD) is proposing a landfill closure project, including the installation of a soil cover of SMUD's approximately 12 acre North City Landfill (NCLF) site, and 1.5 acres of the approximately 3 acre City of Sacramento (City) owned Lot 31 site (hereafter the "Project"). In support of this effort, ICF has prepared a cultural resources inventory of areas which would be directly affected by project construction. This effort consisted of pre-field research including a Sacred lands request and records search, and of a pedestrian survey of all areas which would be affected by construction activity.

No cultural resources were identified within the APE as a result of pre-field research, but field survey identified a historic refuse deposit, the North City Landfill, dating between 1940–1949 within SMUD's NCLF site.

While North City Landfill is largely intact, with undisturbed deposits are located 3-18 feet below ground surface, it is likely ineligible for listing on the CRHR due to a lack of data potential and integrity of artifacts due to burn operations at the dump. In addition, excavation for proposed project activity within the APE would impact less than 1% of the total volume of the dump deposit, and therefore would not constitute an adverse effect on the resource.

Project Description

SMUD is proposing remediation, including a soil cover, of the approximately 12-acre NCLF site and the approximately 1.5-acre City of Sacramento (City) Lot 31 disposal site (Lot 31). Remediation would be performed in compliance with the requirements established by CalRecycle and the California Code of Regulations (CCR) Title 27 solid waste regulations, and regulated by Sacramento County EMD as the Local Enforcement Agency in Sacramento County. Upon completion of remediation activities, a postremediation site monitoring and maintenance plan would be implemented to address issues such as site inspections, environmental monitoring, cover maintenance, utility construction, and maintenance of existing and future utilities.

Landfill activity at the site occurred from approximately 1940 to 1949. In 1950, SMUD purchased the NCLF property from the City. SMUD constructed the North City substation in the early 1950s over the southern end of the City's historic landfill and used the northern portion of the property to dispose of construction and demolition debris between 1980 and 1993 (Brown and Caldwell 2015). Portions of Lot 31, adjacent to the east were used for dump activities beginning in 1949 and ending in the 1970s (City of Sacramento 2008:15-16) The NCLF and Lot 31 do not have a final cover or liner system because neither was required by regulations associated with solid waste disposal when the sites were in use. The North City substation has reached its planned operational end of life, and SMUD is replacing the substation with the new Station E substation to improve operational reliability as part of a separate effort. After the new Station E substation is operational, the existing North City substation would be dismantled. Demolition of the existing substation and construction of the new Station E were evaluated in a CEQA document prepared in 2014 and are not subject to evaluation in this report.

In 2020, SMUD and the City entered into an agreement allowing SMUD to use City property identified as Lot 31, located immediately adjacent to the far north end of the NCLF site, to be used for construction of a stormwater infiltration basin for control of stormwater runoff from the NCLF.

Project Location and Setting

The NCLF is located at 20th Street and North B Street in Sacramento, California (Appendix A, Figure 1). The project site is bounded by the Western Pacific Railroad track and right-of-way to the west, the American River and levee to the north, undeveloped parcels owned by Blue Diamond Growers and the City of Sacramento Lot 31 to the east, and SMUD-owned property to the south and southeast. The Boulevard Park neighborhood of Sacramento is located south of the project site.

The project site is located on Section 31 of Township 9 North, Range 5 East, of the Sacramento East U.S. Geological Survey 7.5-minute topographic quadrangle, Mount Diablo Baseline and Meridian. The centroid coordinates of the project site are 38°35'10.31" North, 121°28'23.45" West.

Regional access to the project site is obtained from Business 80. Local access to the project site is obtained through gravel roadways that connect the project site to 28th Street near Sutter's Landing Regional Park.

Project Components

The project involves closure of two properties with historic landfill activities. Remediation of the NCLF property, including demolition of the North City substation concrete slab and piers, regrading of the site, placement of soil cover, drainage improvements, and installation of gravel maintenance road and transmission tower maintenance pads. The project also includes remediation of Lot 31, consisting of regrading the site, constructing an infiltration pond, making drainage improvements, and placing soil cover over areas that contain buried construction and demolition waste. These project consist of five primary components:

- site preparation,
- concrete demolition,
- rough site grading,
- soil cover placement, and
- drainage improvements.

Site Preparation

Site preparation would include clearing and grubbing of the site where the rough grading would be necessary to construct the proposed drainage ditch and infiltration pond. In addition, the existing perimeter fences would be removed vegetation would be removed and soil and debris stockpiles would be relocated/consolidated to provide access to the existing landfill surface. The perimeter fences would be reinstalled after placement of the final cover and completion of the proposed drainage features.

Concrete Demolition

The concrete slab and piers from the dismantled North City substation would be either be (1) broken up and removed for recycling, (2) broken up and left in place or (3) broken up and stockpiled for use in the rough grading activities.

Rough Site Grading

Substation concrete debris may be consolidated on the NCLF property over the existing landfill surface for use as part of the landfill rough grading. Waste (e.g., soil and construction and demolition debris) that is excavated as part of the landfill rough grading of the east slope of the landfill would be consolidated over the landfill surface as part of the landfill rough grading.

The site contains approximately 15,000 cubic yards of stockpiled clean soil (sampled, analyzed and accepted for use), which would be used for the rough site grading of the NCLF property. In addition, existing landfill surface up to a maximum depth of 4.75 feet may redistributed onsite to achieve the desired finished site grading. Finished rough site grading will have a minimum slope of 2 percent that would reflect the site finished grading plan, and will be 2 feet lower than final grades. All imported soils would be sampled and analyzed, the results of which would be reviewed and approved by the LEA before use on the project site.

Soil Cover Placement

Approximately 40,000 cubic yards of soil would be required for final grading and construction of the soil cover for the NCLF property, with an additional approximately 10,000 cubic yards required for the Lot 31 final grading and soil cover resulting in a maximum of 50 truck trips per day during the soil cover placement. All imported soils would be sampled and analyzed, the results of would be reviewed and approved by the LEA before use on the project site.

A 2-foot-thick soil cover would be placed and compacted over rough grades, resulting in a surface with a minimum slope of 2 percent to allow for drainage from the site toward the constructed drainage ditch and infiltration pond. The cap would be a monofill cover—that is, constructed as a uniform soil layer and compacted to the same requirements as the rough grading activities.

The project site contains four electrical transmission line tower footings. Upon completion of the soil cover placement, maintenance pads would be constructed around the transmission towers and gravel maintenance road would be constructed to provide access to the transmission towers and maintenance pads.

Drainage Improvements

The NCLF property would be graded so that runoff would drain primarily to the east. East-flowing runoff would be collected in the east drainage ditch of the NCLF property and directed to the infiltration pond located on Lot 31. West-flowing runoff would be collected by the Western Pacific Railroad's surface water collection system, which has excess drainage capacity. Surface water runoff to the west would be minimized to the extent feasible. Grading along the edges of the project site would match that of the adjacent properties and would be performed such that no surface runoff would reach the American River or otherwise come into contact with waters of the state.

Drainage ditches would be designed to accommodate stormwater runoff during a 100-year storm event. They would have a minimum slope of 0.5 percent and 6 inches of freeboard. The infiltration pond on Lot 31 would be sized to provide 1 foot of freeboard and would be located outside of levee and City of Sacramento trail easements and future trail requirements. Drainage ditches would be lined with an erosion control fabric and seeded with native grasses for erosion control. The infiltration pond would remain unlined and would be seeded. The maximum approximate excavation depth required for drainage improvements

would be 11.5 feet along the eastern slope of the NCLF property. The drainage ditch and infiltration pond would require a maximum cut of approximately 7 feet below ground surface.

Construction Activities

Construction equipment and the materials staging area would be located adjacent to the project site on SMUD Station E property, located immediately south of the NCLF property. During construction, access to the site would be maintained, with the primary access for construction equipment, deliveries, and workers from 28th Street, near Sutter's Landing Regional Park. Trucks and construction equipment would enter and exit the project site along existing gravel roadways. Secondary access for the project site would be at C and 20th Streets. Construction would require an average daily worker population of approximately 10 workers, with up to approximately 30 workers during peak construction activities associated with on-site demolition, regrading, and heavy equipment deliveries. Equipment such as scrapers, dozers, compactors, loaders, and excavators would be used to construct the project.

Project Schedule

The project is anticipated to begin during the second quarter of 2022 and would be completed by late 2022, involving construction over a period of 6–9 months. Construction intensity and hours would be in accordance with the City's Noise Ordinance, contained in Title 8, Chapter 8.68 of the Sacramento City Code. Construction would be limited to the hours between 7 a.m. and 6 p.m. on Monday through Saturday and between the hours of 9 a.m. and 6 p.m. on Sunday.

On-Site Environmental Controls

Water Pollution Control Plan

As noted above, on-site drainage would be redirected toward the proposed drainage ditch and infiltration pond. Runoff from the project would not come into contact with any waters of the state or United States. Thus, there would be no construction general permit required from the State Water Resources Control Board. This project would not trigger the need for a grading permit from Sacramento County. Regardless, SMUD is committed to implement a water pollution control plan (WPCP) during construction to prevent sediment from leaving the project site. The WPCP would identify best management practices (BMPs) that address excavation areas, stockpile areas, street entrances and exits, construction vehicle maintenance areas, water tanks, dust suppression activities, and postconstruction site stabilization. The WPCP features are summarized as follows.

Excavation and fill areas: Excavation activities would be performed such that no sediment enters or exits active excavation and fill work areas. The following or similarly effective BMPs would be implemented:

- Hydroseeding with native grasses
- Gravel bags
- Straw wattles and/or straw bales
- Loose straw soil covering
- Temporary drainage ditches

- Grading
- Low berms
- Silt fences
- Lining ditches with erosion control fabric

Stockpile areas: As appropriate, stockpiled soil and debris would be covered when not actively in use, before forecasted rain, and during rain events to protect against wind and stormwater erosion.

Excavated soil: Excavated soil are not expected to be hauled off site. However, if excavated soil cannot be consolidated into the rough grading of the NCLF property and Lot 31, it would be sampled and the results submitted to the LEA. If hazardous waste is identified, it would remain on-site or otherwise be disposed of in accordance with direction from the LEA.

Street entrances and exits: Primary access to the project site would be obtained through existing gravel roads connected to 28th Street near Sutter's Landing Regional Park and located adjacent to the American River (Figure 2-3). Secondary access for the project site would be from C and 20th Streets. The following BMPs would be implemented to reduce distribution of sediment onto streets:

- Provide ample turning radii as part of the entrance.
- Limit the points of entrance/exit to the construction site.
- Limit the speed of vehicles to control dust.
- Properly grade each construction entrance/exit to prevent runoff from leaving the construction site.
- Route runoff from stabilized entrances/exits through a sediment-trapping device before discharge.
- Design a stabilized entrance/exit to support the heaviest vehicles and equipment that would use it.
- Select construction access stabilization materials (e.g., aggregate, asphaltic concrete, concrete) based on longevity, required performance, and site conditions.
- Do not use asphalt concrete grindings for the stabilized construction access/roadway.
- Require that all employees, subcontractors, and suppliers use the stabilized construction access.

The construction contract would include weekly inspection requirements to ensure that the following regular activities are performed.

- Sweep or vacuum the paved entrance roads to remove visible accumulated sediment.
- Remove aggregate, and separate and dispose of sediment if the construction entrance/exit is clogged with sediment.
- Keep all temporary roadway ditches clear.
- Check for damage, and repair it as needed.
- Replace gravel material when surface voids are visible.
- Remove all sediment deposited on paved roadways within 24 hours.
- Remove gravel and filter fabric at the completion of construction.

Other temporary sediment control BMPs include:

- Silt fence
- Fiber rolls
- Gravel bag berm
- Sandbag barrier
- Straw bale barrier
- Storm drain inlet protection

Construction vehicle maintenance areas: Maintenance and servicing of construction equipment is a potential source of oils and metals. During project construction, bulk storage of fuels and oils would not occur in areas with the potential for off-site discharge. A service truck would be used to fuel construction equipment. If any maintenance is performed at the site, an area would be designated and precautions taken to minimize spillage of fuels and oils. Absorbent materials and storage bins would be available to clean up minor spills if any occur during maintenance of equipment or fueling operations. These areas would be frequently monitored for any signs of release, such as staining.

Spill prevention and control would be implemented to contain and clean up spills and prevent material discharges to the storm drain system. Spill control procedures are implemented any time chemicals or hazardous substances are stored on the construction site, including, at a minimum, the following materials:

Soil stabilizers/binders

- Dust palliatives
- Herbicides
- Growth inhibitors
- Fertilizers
- Deicing/anti-icing chemicals
- Fuels
- Lubricants
- Other petroleum distillates

Water tanks: Water tanks for the project would be placed on SMUD Station E property, immediately south of the NCLF property. Water tanks used to provide water for dust suppression activities would be a potential source of non-stormwater discharges from the site. When water tanks are used, they would be stored away from the site boundary, when feasible, in areas with no potential for discharge, to prevent any unexpected releases from leaving the site. In addition, tanks would be routinely inspected to verify the absence of leaks.

Dust suppression activities: Dust control water would be applied uniformly and lightly to prevent muddy, slippery, or other hazardous conditions. The application would be frequent enough to adequately control nuisance dust; however, excessive application that may affect excavation or compaction operations would be avoided.

Dust control measures would follow the *Stormwater Best Management Practice Handbook: Construction* (California Stormwater Quality Association 2015). In addition, the dust control measures would satisfy the requirements of the Fugitive Dust Rule 403 set forth by the Sacramento Metropolitan Air Quality Management District (SMAQMD). These measures would be consistent with the best management practices and best available control technology practices required by SMAQMD.

Soil Stockpile Management Plan

A soil stockpile management plan would be required from the contractor before movement of any stockpiled soil or any excavation. This plan would address the movement, relocation, staging, and use of soil stockpiles on the project site. The following information would be included in the plan and would be subject to review and approval by the project engineer and SMUD:

- A detailed construction schedule identifying stockpiling stages pertaining to the landfill surface
- Identification of locations where stockpiled soil may be placed/relocated to before and during construction
- Dust and erosion control measures related to the movement and use of stockpiles
- Processing, mixing, or separation practices of stockpiled soil to provide improved uniformity

Site Specific Health and Safety Plan

A site-specific health and safety plan (SSHSP) would be prepared before the start of construction-related activities. The SSHSP would be subject to approval by a Certified Industrial Hygienist. The contents of the SSHSP would include:

- Minimum worker training requirements
- Requirements related to worker use of protective equipment
- General field safety procedures
- Standard operating procedures for the handling of potentially hazardous materials
- Worker safety education requirements

The SSHSP also requires that all activities associated with the project would be overseen by a health and safety monitor (H&S monitor). The H&S monitor would provide safety briefings to construction workers that would address site conditions, possible hazards, and safety measures provided in the SSHSP. In addition, the H&S monitor would be charged with operation of a 4-gas meter to determine methane, oxygen, volatile organic compounds, and hydrogen sulfide concentrations. In the case that the 4-gas meter indicates high levels of noxious gases, the H&S monitor would be responsible for alerting all construction site personnel and providing direction for appropriate actions.

Postremediation Monitoring and Maintenance Plan

Upon completion of remediation activities, a postremediation monitoring and maintenance plan would be implemented to address issues such as:

- Groundwater and landfill gas perimeter migration monitoring
- Transmission tower access and maintenance
- Drainage and soil cover inspection and maintenance

A landfill gas collection and control system, including a flare, would not be required because only low levels of methane have been detected at the project site. Landfill gas will be monitored post-remediation via landfill gas monitoring probes located along the perimeter of the property to ensure landfill gas is not migrating offsite. Future use of the site may potentially include recreation, pending deeding of the land to the City, and other utility improvements. Details and funding related to these actions are unknown at this time, cannot be known at the time of release of this document, and when they are undertaken would constitute separate efforts from the project (i.e., would be analyzed as separate project under CEQA). Thus, because a meaningful evaluation of these speculative activities is not possible, they are not discussed further in this IS/MND.

Regulatory Setting

The following regulation is applicable to the proposed project. This project has no federal nexus and is governed by CEQA regulations.

California Environmental Quality Act

CEQA requires public or private projects financed or approved by public agencies to assess the effects of the project on historical resources. *Historical resources* are defined as buildings, sites, structures, objects, or districts, each of which may have historical, architectural, archaeological, cultural, or scientific significance. CEQA requires that, if the project would result in an effect that may cause a substantial adverse change in the significance of a historical resource, alternative plans or measures to mitigate the effect must be considered; however, only significant historical resources need to be addressed. Therefore, the significance of cultural resources must be determined. The steps listed below are normally taken during a cultural resources investigation for CEQA compliance.

- Identify cultural resources.
- Evaluate the significance of the resources.
- Evaluate the effects of the project on significant resources.
- Develop and implement measures to mitigate the effects of the project on significant resources.

The CEQA Guidelines are administrative regulations governing implementation of CEQA, and define three ways that a property may qualify as a significant historical resource for the purposes of CEQA review as listed below.

- The resource is listed in or determined eligible for listing in the California Register of Historical Resources (CRHR).
- The resource is included in a local register of historical resources, as defined in California Public Resources Code (PRC) Section 5020.1(k), or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g), unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- The lead agency determines the resource to be significant as supported by substantial evidence in light of the whole record (i.e., Title 14 of the California Code of Regulations, Division 6, Chapter 3 § 15064.5[a]).

Each of these ways of qualifying as a significant historical resource for the purposes of CEQA is related to the eligibility criteria for inclusion in the CRHR (per PRC §§ 5020.1[k], 5024.1, 5024.1[g]). A

historical resource may be eligible for inclusion in the CRHR if it meets any of the following criteria listed below.

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

Properties that are listed in or eligible for listing in the NRHP are considered eligible for listing in the CRHR, and thus are significant historical resources for the purpose of CEQA (per PRC Section 5024.1[d][1]).

Assembly Bill 52

Assembly Bill (AB) 52 (Chapter 532, Statutes of 2014) established policy that "a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment" under CEQA (per PRC Section 21084.2). AB 52 acknowledged that CEQA did not previously "directly include California Native American tribes' knowledge and concerns," which resulted in significant impacts to tribal cultural resources and sacred places. To remedy this, AB 52 established a requirement for a formal consultation process with California Native American tribes for projects subject to CEQA. AB 52 took effect on July 1, 2015 and Appendix G of the CEQA Guidelines was updated accordingly. The process for complying requires that California Native American tribes request lead agencies to notify them of proposed projects. A lead agency that receives such requests must notify the requesting tribes of new projects within 14 days of commencing the CEQA process. The tribe must respond to the notice and request consultation within 30 days of receipt, and the lead agency must initiate consultation within 30 days of receiving the request. This process is separate from consultation procedures under other state cultural resources law.

California State Law Governing Human Remains

California law sets forth special rules that prescribe specific courses of action that apply where human remains are encountered during project construction. These rules are set forth in Pub. Resources Code Section 5097.97, State CEQA Guidelines Section 15064.5(e), and California Health and Safety Code (Health & Safety Code) Section 7050.5.

State CEQA Guidelines Section 15064.5(e) states the following:

- In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:
    - There will be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:
        - The coroner of the county in which the remains are discovered is contacted to determine that no investigation of the cause of death is required (as required under Health & Safety Code § 7050.5).

- If the coroner determines the remains to be Native American:
  - The coroner will contact the Native American Heritage Commission within 24 hours.
  - The Native American Heritage Commission will identify the person or persons it believes to be the most likely descended from the deceased Native American.
  - The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods (as provided in PRC § 5097.98).

- Where the following conditions occur, PRC Section 5097.98(e) applies and the landowner or his authorized representative will rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.
  - If the Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.
  - The descendant identified fails to make a recommendation.
  - The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission.

Area of Potential Effects

The cultural resource area of potential effects (APE) for the proposed project is shown in Appendix A, Figure 3. The APE follows the maximum possible area of ground disturbance resulting drainage improvements from the proposed undertaking. The APE runs approximately 1,200 feet in a roughly north-south alignment across the western edge of SMUD's North City Landfill property. This section of the APE is approximately 50 feet wide and extends to a maximum depth of 4.75 feet within the top deck of the site and up to 11.5 feet along the eastern slope for the drainage bench. The portion of the APE within the City's Lot 31 is approximately 800 feet in a roughly east-west alignment. This portion of the APE is between 25 and 125 feet wide and extends to a maximum depth of 7 feet along the western end of the site and of three feet at the eastern end of the site where the proposed retention basin connects to the existing sedimentation basin.

Cultural Setting

The following setting and cultural context discussions focus on the patterns of development in the vicinity of the project area and specific resources in the APE. This includes prehistoric and historic narratives of cultural change and use of the project area, as well as an ethnographic account of the Native American populations who occupied the area prior to European contact.

Archaeological Context

Prehistoric Context

The taxonomic framework of the Sacramento Valley is described in the following sections in terms of chronology, with archaeological patterns discussed where they apply, following Fredrickson (1973). Fredrickson used the term *pattern* to describe an "adaptive mode extending across one or more regions, characterized by particular technological skills and devices, and particular economic modes." Three patterns were introduced: Windmiller, Berkeley, and Augustine. These patterns, although generally corresponding to the Early, Middle, and Late horizons within the Central Valley, were conceptually different and free of spatial and temporal constraints. In Fredrickson's view, periods served as arbitrary intervals that could be used to compare patterns over space and time. Only with the clear identification of pervasive temporal patterns would periods acquire specific archaeological meaning.

Paleo-Indian (13,550 to 10,550 Before Present)

At the end of the Pleistocene, circa 13,550–10,550 Before Present (BP), parts of the Sierra Nevada adjacent to the Central Valley were covered with large glaciers (West et al. 2007:27), and the Central Valley provided a major transportation route for animals and people. This transportation corridor, perhaps rivaled only by maritime coastal travel (Erlandson et al. 2007), was undoubtedly used heavily by early Californians.

Although rare, archaeological remains of this early period have been reported in and around the Central Valley. Johnson (1967:283–284) presents evidence for some use of the Mokelumne River area, under what is now Camanche Reservoir, during the late Pleistocene. Archaeologists working at Camanche Reservoir also found a number of lithic cores and a flake that are associated with Pleistocene gravels. These archaeological remains were grouped into what is called the Farmington Complex, characterized by core tools and large, reworked percussion flakes. Geoarchaeological investigations at CA-STA-69 (in the vicinity of Farmington Complex–type site CASTA-44) indicate that the Farmington Complex assemblage is contained completely in Holocene alluvial terrace deposits, not Pleistocene glacial outwash deposits. These findings raise the question of whether reinvestigation of other Farmington Complex assemblages will reveal a Holocene assemblage, as opposed to the late Pleistocene (Rosenthal and Meyer 2004:96; Rosenthal et al. 2007:151).

The economy of the Central Valley residents during the late Pleistocene is thought to have been based on the hunting of large Pleistocene mammals. Although no direct evidence of this exists in the Central Valley, the similarity of the artifact assemblages to those of other locations in western North America lends some support to the notion of a large-game economic focus. Much of the Pleistocene megafauna became extinct at the Pleistocene/Holocene transition. These extinctions were caused by warming temperatures, rising sea levels, and changing precipitation patterns. As the Central Valley gradually became both warmer and drier, pine forests were replaced with vegetation similar to that found today. To survive without large game, people had to change their food procurement strategies to make use of a more diverse range of smaller plants and animals.

Lower Archaic (10,550 to 7550 BP)

During the lower Archaic, people relied on a wider range of smaller resources. This meant that people needed access to larger areas of land to hunt and collect the food and other resources than they had

previously required. This likely manifested by small groups of people moving through the valley, foothills, and Sierra Nevada to take advantage of seasonally available resources and resources limited to particular ecozones. This mobile foraging strategy was essential to their survival.

Reliance on a diverse number of smaller plants and animals had several consequences. First, people had to move around from one area to another to take advantage of the seasonal availability of particular resources. Second, large areas of land were needed to ensure that enough resources were available during all times of the year. Third, more specialized tools were necessary to procure and process the wider range of plants and animals that were being used. This generalized subsistence strategy worked well for the inhabitants of the Central Valley for many millennia.

During the Lower Archaic Period, beginning approximately 10,550 BP, a shift to a more specialized subsistence strategy began, focusing on ways of increasing the amount of food that could be produced from smaller portions of land. This change can be at least partially corroborated by the increasing numbers of people living in the Central Valley, which is indicated by a much more abundant archaeological record, as well as by dietary stress, as indicated by dental pathologies (Moratto 1984:203–204). As the population slowly increased, it became more difficult for people to obtain seasonally available resources across large areas of land.

Middle Archaic (7,550 to 2,550 BP)

The beginnings of the intensification emerging in the Lower Archaic manifested even more so in the Middle Archaic. The regional pattern representing the Middle Archaic is the Windmiller Pattern (4500–2800 BP). The Windmiller Pattern was initially based on the assemblage at the Windmiller site (CA-SAC-107). The Windmiller Pattern shows evidence of a mixed economy of game procurement and use of wild plant foods. Artifacts and faunal remains at Windmiller sites include seeds, a variety of small game, and fish. The archaeological record contains numerous projectile points and a wide range of faunal remains. Hunting was not limited to terrestrial animals, as evidenced by fishing hooks and spears that have been found in association with the remains of sturgeon (*Acipenser* sp.), salmon (*Oncorhynchus* sp.), and other fish. Plants also were used, as indicated by groundstone artifacts and clay balls that were used for boiling acorn mush. The bone tool industry appears minimal, but includes awls, needles, and flakers. Other characteristic artifacts include charmstones, quartz crystals, bone awls and needles, and abalone (*Haliotis* sp.) and olive snail (*Olivella* sp.) shell beads and ornaments. Trade is reflected in the material from which utilitarian, ornamental, and ceremonial objects were produced.

Windmiller Pattern origins are believed to be linked to the arrival of Utian peoples (ancestors to the Maidu) from outside California, who were adapted to riverine and wetland environments (Moratto 1984). Windmiller sites are concentrated on low rises or knolls in the floodplains of major creeks or rivers. Such locations provided protection from seasonal flooding and proximity to riverine, marsh, and valley grassland biotic communities. Burials following this pattern consisted of formal cemeteries, both within and separate from villages, suggesting a degree of sedentism. Burials appear in a ritual context that included the use of red ochre, often rich grave offerings, and ventral extension with a predominantly western orientation, although other burial positions, such as dorsal extension and flexed, and cremations are also known (Moratto 1984).

During the Middle Archaic, the Central Valley population increased, and inhabitants responded in two ways. First, they used the delta marshlands, which were much more extensive and richer in food resources than they are today. Second, they increased the use of the acorn as a food source. The acorn had been used before this time, but it became a much more predominant resource with specialized

procurement and processing technologies. People following these strategies were more sedentary than they had been in the past, and village sites were found throughout the valley along rivers and near other areas with permanent sources of water. An economic shift from a foraging to a collecting strategy likely occurred during the Middle Archaic.

Another regional pattern found during the Middle Archaic is the Berkeley Pattern (3500–2500 BP) (Fredrickson 1973). Although Windmiller Pattern sites seem to occur with more frequency in or near the Delta, Berkeley Pattern sites tend to be more prevalent farther north. Berkeley Pattern sites are more numerous and widely distributed than Windmiller sites; they are characterized by deep midden deposits, suggesting intensified occupation and a broadened subsistence base. The Berkeley Pattern also has a greater emphasis on the exploitation of the acorn as a staple. This greater dependence is reflected in a reduction in the number of handstones and millingstones and an increase in the number of mortars and pestles. Although gathered resources gained importance during this period, the continued presence of projectile points and atlatls (spear-throwers) in the archaeological record indicates that hunting was still an important activity (Fredrickson 1973). Fishing technology improved and diversified, suggesting greater reliance on riverine and estuarine resources. This pattern is also noted for its especially well-developed bone industry and such technological innovations as ribbon flaking of chipped stone artifacts.

Artifacts and practices shared by Berkeley Pattern and Windmiller Pattern material culture include mortars and millingstones, quartz crystals, charmstones, projectile points, shell beads and ornaments, and bone tools. New elements include steatite beads, tubes and ear ornaments, slate pendants, and burial of the dead in flexed positions with variable orientation or cremations accompanied by fewer grave goods. This period saw near-exclusive use of flexed burials for interment of the deceased (Moratto 1984; Rosenthal et al. 2007:155). The use of grave goods generally declined (Moratto 1984), and trade continued to be important (Beardsley 1948; Fredrickson 1973; Heizer and Fenenga 1939; Lillard et al. 1939; Moratto 1984).

A restricted land base, coupled with a more specialized resource base, meant that people had to develop economic relationships with other groups of people with different specialized resources living in other areas. Although resources and commodities were being exchanged throughout the region before this period, more extensive and more frequently used economic networks developed during this time with the archaeological record indicating the exchange of shell and lithic materials (Rosenthal et al. 2007:155).

Upper Archaic (2,550 BP to AD 1100) and Emergent (AD 1100 to Historic Period)

The Middle Archaic-Upper Archaic transition, which took place at the beginning of the Upper Archaic Period, corresponds with a dramatic climatic shift to cooler, wetter conditions. These conditions resulted in filling of inland lakes and greater freshwater flow through the Sacramento River Delta. Overall, the Upper Archaic is characterized by a proliferation and increased distinction of artifact types, burial positions, and specialized technologies, such as widespread manufacture of ceremonial blades, obsidian biface blanks, *Olivella* and *Haliotis* beads and ornaments, and groundstone netsinkers (Rosenthal et al. 2007).

Dominant food resources in the Central Valley during the Upper Archaic consisted of acorns, salmon, shellfish, rabbit, and deer. In general, settlements became increasingly larger and of a more sedentary nature. A generalized subsistence pattern with a high degree of technological specialization, termed

the Augustine Pattern (1200 BP to Historic Period), is first evident during the Lower Archaic (Fredrickson 1973). Development of the Augustine Pattern apparently was stimulated by the southward expansion of Wintuan populations into the Sacramento Valley (Moratto 1984). The Augustine Pattern reflects a change in subsistence and land use patterns to those of the ethnographically known people of the historic period. This pattern exhibits a great elaboration of ceremonial and social organization, including the development of social stratification. Exchange became well developed, and an even more intensive emphasis was placed on the use of the acorn, as evidenced by the presence of shaped mortars and pestles and numerous hopper mortars in the archaeological record.

Other notable elements of the artifact assemblage associated with the Augustine Pattern include flanged tubular smoking pipes, harpoons, clam shell disc beads, bone awls for basketry, bone whistles, stone pipes, and an especially elaborate baked clay industry that includes figurines and pottery vessels known as Cosumnes Brownware. The presence of small projectile point types, referred to as the Gunther Barbed series, indicates the use of bow and arrow. Other traits associated with the Augustine Pattern include the introduction of preinterment burning of offerings in a grave pit during a mortuary ritual, increased village sedentism, maintenance of extensive exchange networks, population growth, and an incipient monetary economy in which beads were used as a standard of exchange (Moratto 1984). Burials were flexed with variable orientation and generally lacked grave goods (Beardsley 1948; Fredrickson 1973; Moratto 1984; Ragir 1972).

The trends toward specialization, exchange, and spatial circumscription that characterized prior periods continued in the Emergent Period. Population continued to increase, and group territories continued to become smaller and more defined. Patterns in the activities, social relationships, belief systems, and material culture continued to develop during this period and took forms similar to those described by the first Europeans that entered the area.

Ethnographic Context

Nisenan

The project is located within the lands occupied and used by the Nisenan, or Southern Maidu. The language of the Nisenan, which includes several dialects, is classified in the Maiduan family of the Penutian linguistic stock (Kroeber 1925; Shipley 1978). The western boundary of Nisenan territory was the western bank of the Sacramento River. The eastern boundary was "the line in the Sierra Nevada mountains where the snow lay on the ground all winter" (Littlejohn 1928).

Nisenan settlement locations depended primarily on elevation, exposure, and proximity to water and other resources. Permanent villages usually were located on low rises along major watercourses. Village size ranged from three houses to 40 or 50. Houses were domed structures covered with earth and tule or grass and measured 3.0–4.6 meters (9.8–15 feet) in diameter. Brush shelters were used in summer and at temporary camps during food-gathering rounds. Larger villages often had semi-subterranean dance houses that were covered in earth and tule or brush, with a central smoke hole at the top and an east-facing entrance. Another common village structure was a granary used for storing acorns (Wilson and Towne 1978).

The Nisenan occupied permanent settlements from which specific task groups set out to harvest the seasonal bounty of flora and fauna that the rich valley environment provided. The Valley Nisenan economy involved riparian resources—in contrast to the Hill Nisenan, whose resource base consisted

primarily of acorn and game procurement. The only domestic plant was native tobacco (*Nicotiana* sp.), but many wild species were closely husbanded. The acorn crop from the blue oak (*Quercu*s douglasii) and black oak (*Q. kelloggii*) was so carefully managed that this activity served as the equivalent of agriculture. Acorns could be stored in anticipation of winter shortfalls in resource abundance. Deer, rabbit, and salmon were the chief sources of animal protein in the Nisenan diet, but many other insect and animal species were taken when available.

Religion played an important role in Nisenan life. The Nisenan believe that all natural objects were endowed with supernatural powers. Two kinds of shamans existed: curing shamans and religious shamans. Curing shamans had limited contact with the spirit world and diagnosed and healed illnesses. Religious shamans gained control over the spirits through dreams and esoteric experiences (Wilson and Towne 1978).

As with other California Native American groups, the arrival of miners responding to the gold rush of 1849 had a devastating effect on the Valley Nisenan. This diverse group of new people in search of gold brought diseases that decimated the Nisenan population. Those Nisenan who survived were subjected to violence and prejudice at the hands of the miners, and the Nisenan eventually were pushed out of their ancestral territory.

Historic Context

The earliest overland exploration of the San Francisco Bay Area was completed in 1772 by the Fages-Crespi Expedition (Fages 1911). The expedition traveled up the east side of the Bay from what is now Milpitas, and then north through present-day Pinole before turning eastward and passing along the south side of the Sacramento–San Joaquin Delta. In 1775, the Ayala Expedition traveled up the Sacramento–San Joaquin Delta in search of suitable locations to establish missions, and, in 1776, the Anza–Font Expedition followed a route similar to that taken by the Fages–Crespi Expedition. Because of the distance from San Francisco and the relative isolation of the Yolo Basin, native groups living near the project area initially would have been unaffected by the sporadic Spanish explorations. However, eventually "missionization" gravely affected even isolated groups through the rapid spread of epidemic diseases.

In the 1840s, Mexico took over rule of California from Spain and the mission system was abandoned. Mission lands were divided and land grants or *ranchos* were established. These lands were predominantly used to graze cattle and other livestock. Deterioration of relations between the United States and Mexico led to the Mexican War, ending with relinquishment of California to the United States under the Treaty of Guadalupe Hidalgo in 1848. The formation of the new state of California and onset of the American Period brought rapid change to the region. The California Gold Rush of 1848 initiated population growth in the region, and the focus of land use shifted from ranching to agriculture in order to feed the swelling population of miners in the Sierra Nevada foothills.

Sacramento

Sacramento was established in 1849 at the confluence of the Sacramento and American Rivers. The area presently known as Old Sacramento was initially shaped by the bustling commercial activity along the riverfront embarcadero at the foot of present-day I and J Streets. The initial portions of the embarcadero were built by Captain John Augustus Sutter to serve the shipping needs of the fort that he established 2 miles east of the riverfront.

With the discovery of gold at Coloma in January 1848, the embarcadero became a gateway for thousands of miners heading to the gold fields in the Sierra Nevada foothills. Miners disembarked in Sacramento because the large ships that carried them could not travel on the narrower American River. From Sacramento, most miners walked the remaining distance to the gold fields. That same year, Sutter's son, John A. Sutter, Jr., employed Captain W. H. Warner to survey and lay out a 30-block square section for the new city of Sacramento adjacent to the embarcadero site. Streets were laid out in an orthogonal grid aligned with the portion of Front Street along the east bank of the Sacramento River. The plat featured standardized blocks each measuring 340 by 320 feet and alleys generally running along an east/west axis (Hallam 2008).

Looming as a constant threat to the new city were floods from the area's rivers. Sacramento was situated only a few feet above sea level just south of the confluence of the Sacramento and the American Rivers. A natural levee on the eastern bank of the Sacramento provided minor protection from that river's regular winter and spring floods. In 1850, a disastrous flood inundated the city and prompted local officials to authorize the construction of Sacramento's first levee. Completed in the fall of 1850, the new levee was 3 to 5 feet tall, 10 feet wide across the top, and 20 feet wide at the base. Construction began at Sutterville (John Sutter's settlement then located south of Sacramento) and progressed westward to the Sacramento River, where it continued northward past the new city to the American River, where the confluence with the Sacramento River was then approximately 0.15 mile north of the I Street Bridge in Sacramento, aligned with 2nd (Elizabeth) Street and 3rd (William) Street in West Sacramento. From this point, the levee followed the south bank of the American River east for another 2.5 miles (Neasham 1968; Colville 1854). Throughout the 1850s, opposition and scant resources blocked more substantial infrastructure improvements. As a result, the floods kept recurring, worsening as debris from the hydraulic mining operations upstream filled in the riverbeds and reduced their flow capacity. During the early 1860s, a series of floods led to a concerted effort to repair and strengthen the levees protecting the city (Neasham 1968).

Despite the waning of the Gold Rush and constant threat from floods, Sacramento remained a viable urban center due to the railroads, agricultural trade, and the growth of state government; the railroads became a major employer during the late nineteenth and early twentieth centuries. In addition to the railroads, transportation by way of the Sacramento River served a large part of the commercial and public market. Early in Sacramento's development, sailing vessels bringing miners and supplies to and from Sacramento were utilized and by the 1870s, large steamboats were used for commercial and industrial transportation. The Sacramento waterfront surrounding the APE was home to several landings, docks, and wharves for the local businesses. Shipping by rail and steamboat was the main source of transportation of goods until the development of the automobile and establishment of the highway system. In the 1960s the deep water port located in West Sacramento all but halted large vessel transportation along Sacramento's waterfront, and, by the 1980s, the majority of businesses located along the Sacramento waterfront were abandoned (Baker et al. 2007).

Surrounded by the fertile valley lands, Sacramento developed into an important processing and transport center for grains, fruits, and vegetables. Development in the central core of Sacramento included businesses such as Sacramento Warehouse Hay, Grain & Hops, and the U.S Bonded Warehouse Brandy Storehouse, both located at Front and R Streets. These warehouses were constructed of brick and had a capacity of 400,000 square feet (Sanborn Map Co. 1915).

History of the Project Area

The project area is located between 20th and 23rd street directly south of the American River in the City of Sacramento. The project area is located within the boundaries of the historic North City landfill, which was operated by the City of Sacramento between the 1940 and 1973. Dumping in the surrounding area began in 1862. Sutter's Landing was used a borrow site for the construction of adjacent levees, and the resultant pits were used as a refuse dump by city residents in the years that followed (City of Sacramento 2008:15). This early dumping was informal and was centered on areas east of the project site. City dump operations began in 1940 with the establishment of the North City Dump in the area where SMUD's North City Substation now stands. This portion of the dump was in operation from 1940-1949, until the purchase of the property by SMUD and the subsequent construction of the susbstation. Although city dump operations ceased in the North City Substation portion of the project area, SMUD continued to use this area to dump construction and demolition debris between 1980 and 1993 (Brown and Caldwell 2015).

Between 1949 and 1959, the City began to conduct dumping operations to the east of the NCLF site, including in the area of Lot 31. Garbage deposited was burnt daily until 1959 when complaints about smoke led to a change in practice (City of Sacramento 2008:15). Public dumping was terminated in 1959, following this change in practice, the City began to bury layers of street-sweeper debris and mixed municipal garbage; this practice continued until 1973 (16). All dump operations within Lot 31 were suspended in 1979, and a stormwater retention basin was constructed within the site in the early 1980s (Crawford 2021, Historic Aerials 1993). Dumping operations conducted by Waste Management continued until 1997, primarily in the area of the current location of Sutter's Landing Regional park (14).

Methods and Results

The effort to identify cultural resources in the APE for the proposed project included a records search and a review of the archaeological, ethnographic, and historical literature; consultation with the Native American Heritage Commission (NAHC) and Native American representatives from federally recognized tribes; correspondence with other interested parties; examination of historic maps; historical research; and field surveys. Each of these methods and their results are described below.

Records Search and Other Sources

A California Historical Resources Information System records search was conducted by staff at the North Central Information Center, California State University, Sacramento, on October 7, 2020. The records search compiled bibliographic references, previous survey reports, historic maps, and cultural resource site records pertinent to the proposed project in order to identify prior cultural resource studies and known cultural resources within 0.5 miles of the project area.

- NRHP and CRHR
- *California Office of Historic Preservation Historic Property Directory* (2010)
- *California Inventory of Historic Resources* (1976)
- *California State Historic Landmarks* (1996)
- *California Points of Historical Interest* (1992)
- Historic properties reference map

There are no known cultural resources within the project area, but there are two known built environment resources within 0.25 miles of the project area. These resources consist of P-34-505, a segment of the union pacific railroad located to the west of the project area, and P-34-000509, the South Bank American River Levee, located north of the APE. No previous studies have been conducted within the project area. One previous cultural resource study has been conducted within 0.25 miles of the project area, directly north of the Project APE.

Native American Correspondence

ICF Archaeologists submitted a request to search the Sacred Lands File (SLS) to the NAHC on October 20th, 2020. A positive SLS response was received on November 5, 2020. The response and the Native American contact list provided by the NAHC for Sacramento County has been forwarded to SMUD, who will conduct Native American consultation under AB 52.

Field Methods

A field survey of the APE was conducted by an ICF archaeologist on October 15, 2020, This survey included coverage of all work areas and all staging areas associated with the project. Transects were spaced no greater than 5 meters (16 feet). Visibility at project areas within SMUD's North City Landfill property was 50–100 percent. Although most areas were open, those closest to the fence line at the northern extent of the North City Landfill property were obscured in spots by large bushes. Surface visibility areas across the majority of the APE within City lot 31 was poor due to thick grasses. In areas where visibility was poor, close attention was paid to areas denuded of vegetation.

Historic-era ceramic and glass fragments were present throughout the majority of the survey area within the North City Landfill property. These included sun-affected amethyst glass fragments and an Old Spice Bottle produced between 1938 and 1946 (Old Spice Collectibles 2012). Amethyst coloration occurs in older, non-modern glasses when exposed to sunlight over a long period of time and is indicative of a deposit of some age. These artifacts are consistent with the use of this portion of the property as a city dump between 1940 and the early 1950s. A DPR 523 form for this resource, recorded as the North City Landfill for the purposes of this inventory, is presented in Appendix D to this report. An overview photo of the North City Landfill is presented below.

Image 1. Overview of Project Area containing the North City Landfill, Facing South, 10/15/2020

These artifacts were intermixed with modern trash and concrete construction debris, consistent with the use of the site as an area for dumping construction and demolition materials by SMUD between 1980 and 1993. There appears to be disturbance across the surface of the dump due to construction, but portions of the historic trash deposit to the northern extent of the site may be undisturbed below the ground surface. This is consistent with SMUD's 2018 analysis, which estimated a layer of construction debris between 3 to 18 feet below ground surface and a level of historic dump material up to 31 feet below ground surface (Brown and Caldwell 2015). Areas to the south, closest to the SMUD substation, appear to have been modified by construction, with very small quantities of sun-affected amethyst glass having been pushed along the fence line. The extent of observed historic artifacts are presented in Figure 3 of this report (Appendix A).

Nondiagnostic materials were observed within City Lot 31. Although this location was part of the North City Dump complex, a small orchard appears to have been planted between 1947–1957 and seems to have undergone significant modification and construction between 1966 and 1993 with the installation of a large ponding basin at the eastern extent of the project area (Historic Aerials 2020). This is consistent with analysis by Kleinfelder, which indicated use of the Lot 31 Parcel for waste storage after 1963 (Klinefelder 2011). The majority of the construction debris and trash at the site was either nondiagnostic or clearly modern in origin. Denser collections of debris were obvious outside of the project area and had clearly been pushed along the fence line, indicating significant modification or levelling of the area. Although this area may have a subsurface deposit of historic trash, none was observed at the time of survey, and the site surface appeared to have been significantly modified. An overview photo of Lot 31 is presented below

Image 2. Overview of western portion of Lot 31 with modern debris in background facing north, 10/15/2020

Subsurface Sensitivity

Given the proximity of the site to a major watercourse, the American River, and the alluvial depositional environment of its landform, areas similar to the project APE would be at a heightened sensitivity for the presence of buried prehistoric resources. However, sections of the project APE within the NCLF property contain up to 42 feet of historic and modern refuse fill. A similar deposit, Cell #25 existed on the eastern portion of the City's Lot 31. Analysis by Kleinfelder indicates that any deposit in or near Cell #25 appears to have been significantly impacted or removed by construction of a sedimentation basin; testing conducted around these locations indicated no intact deposits of subsurface refuse (Kleinfelder 2011).

Given these factors, the project APE has low sensitivity for buried prehistoric archaeological resources within SMUD's NCLF property and low-to-moderate sensitivity for buried prehistoric archaeological resources within the City's Lot 31. There is a known historic refuse deposit within the NCLF property, but it is recommended not eligible for listing on the NRHP or CRHR per discussion that follows in the conclusions and recommendations section of this report. While Cell #25, a deposit of historic refuse associated with the larger dump property, has been destroyed by construction activity and has been removed from Lot 31, there is a low-to-moderate potential for pockets of buried historic archaeological resources elsewhere within Lot 31. This is true given the long-term use of the surrounding area as an informal dumping site from the 1860s onward (City of Sacramento 2008). Prior subsurface testing within Lot 31 suggests low sensitivity, but there is the potential for isolated subsurface deposits not captured by this testing (Kleinfelder 2011).

Results of Identification Efforts

In support of SMUD's effort to improve and remediate their NCLF property, ICF has prepared a cultural resources inventory of areas that would be directly affected by project construction activity. This effort consisted of pre-field research, including a Sacred lands request and records search, and a pedestrian survey of all areas that would be affected by construction activity.

No cultural resources were identified within the APE as a result of pre-field research, but a field survey identified a historic refuse deposit, the North City Landfill, dating between 1940-1949 within SMUD's NCLF property.

Archaeology

Following a records search, it was determined that no previously recorded archaeological resources were noted within the APE or within 0.25 mile of the APE. Pedestrian survey identified one historic era resource, the North City Landfill, a historic refuse dump dating between 1940–1959, within the APE.

Built Environment

There are no previously recorded built environment resources within the APE. There are two resources within 0.25 mile of the APE. P-34-505, a segment of the Union Pacific Railroad located to the west of the project area, and P-34-000509, the South Bank American River Levee, located north of the APE.

Conclusions and Recommendations

Archaeological Resources

Intensive pedestrian archaeological survey resulted in the identification of a historic-era archaeological resource, the North City Landfill, an apparently intact deposit of historic refuse dating between 1940-1949. This resource consists of Dump Cell #1 of the NCLF and contains refuse from WWII-era and directly post WWII-era domestic contexts (1940-1949). Testing from SMUD indicates that intact deposits associated with the NCLF are significantly below ground surface (3-18 feet bgs), and that refuse visible on the ground surface is in a mixed and churned context with modern debris, consistent with observations during survey. While these deposits are likely intact, they lack any meaningful data potential. Deposits at the dump were burned daily as a part of operations, which is likely to have destroyed most artifacts and diagnostic features of artifacts deposited in the dump (City of Sacramento 2008). In addition to this, the data potential of municipal dumps is inherently limited by their communal nature. While household dumps can be directly linked to individuals and their patterns of consumption, municipal dumps lack this granularity. The resource is not associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage, is not associated with the lives of persons important in California's past, and does not embody the distinctive characteristics of a type, period, region, or method of construction. The North City Landfill also does not have the potential to yield information important in prehistory or history. For these reasons, the North City Landfill is not eligible for listing on the CRHR.

Furthermore, Figure 3-2 of Brown and Caldwell's report provides a cross section of the layers of the dump based on subsurface testing. These cross sections indicate that while excavation would likely

extend into intact portions of dump deposit (in areas where depth of excavation is up to 11 feet bgs), the total volume of disturbance would be less than 1% of the total volume of refuse deposit as a whole. Given the minimal impact to intact deposits, SMUD's proposed work within this location would not constitute an adverse effect on the resource.

The easternmost portion of the APE in Lot 31 extends into the known boundaries of Cell #25. This is also the location of the existing sedimentation basin. Construction of this basin appears to have impacted and/or completely destroyed this portion of the larger landfill complex, and prior subsurface testing by Kleinfelder (2011) indicated that there were no intact subsurface deposits of historic refuse in the sedimentation basin or in the vicinity of the sedimentation basis. The historic dump deposit in Cell 25 has been completely excavated and destroyed and there is no evidence of other extant historic refuse deposits in the vicinity of work areas given the negative results of prior testing. ICF does not recommend any further subsurface testing or monitoring of work in Lot 31.

Built Environment Resources

A review of the proposed undertaking, previous studies, background research, and field survey did not identify any built environment historic properties in the project APE.

Inadvertent Discovery of Archaeological Resources

Construction would cease if potential cultural resources are encountered. It is possible that previous activities have obscured surface evidence of cultural resources. If signs of a prehistoric archeological site, such as any unusual amounts of stone, bone, or shell, or of a historic archaeological site, such as concentrated deposits of bottles or bricks with makers marks, amethyst glass, or other historic refuse, are uncovered during grading or other construction activities, work will be halted within 100 feet of the find and SMUD will be notified. A qualified archeologist will be consulted for an onsite evaluation. If the site is or appears to be eligible for listing the CRHR or NRHP, additional mitigation, such as further testing for evaluation or data recovery, may be necessary.

In the event resources are discovered, SMUD will retain a qualified archaeologist to assess the find and to determine whether the resource requires further study. Any previously undiscovered resources found during construction will be recorded on appropriate California Department of Parks and Recreation 523 forms and evaluated for significance under all applicable regulatory criteria.

All work will stop within 100 feet of the find. If the find is determined to be eligible for listing on the CRHR, SMUD will make available contingency funding and a time allotment sufficient to allow recovery of an archaeological sample or implement an avoidance measure. Construction work can continue on other parts of the project while archaeological mitigation takes place.

Inadvertent Discovery of Human Remains

If human remains are discovered during any phase of construction, including disarticulated or cremated remains, the construction contractor will immediately cease all ground-disturbing activities within 100 feet of the remains and notify SMUD.

In accordance with California Health and Safety Code Section 7050.5, no further disturbance will occur until the following steps have been completed.

- The Sacramento County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code Section 5097.98.

- If the remains are determined by the County Coroner to be Native American, the Coroner will notify the NAHC within 24 hours. The NAHC will assign the Most Likely Descendant (MLD) for the remains at the site. The MLD will have 48 hours to provide recommendations for treatment of the remains.

A professional archaeologist with Native American burial experience will conduct a field investigation of the specific site and consult with the MLD, if any, identified by NAHC. As necessary and appropriate, a professional archaeologist may provide technical assistance to the MLD, including the excavation and removal of the human remains.

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Appendix A
Figures

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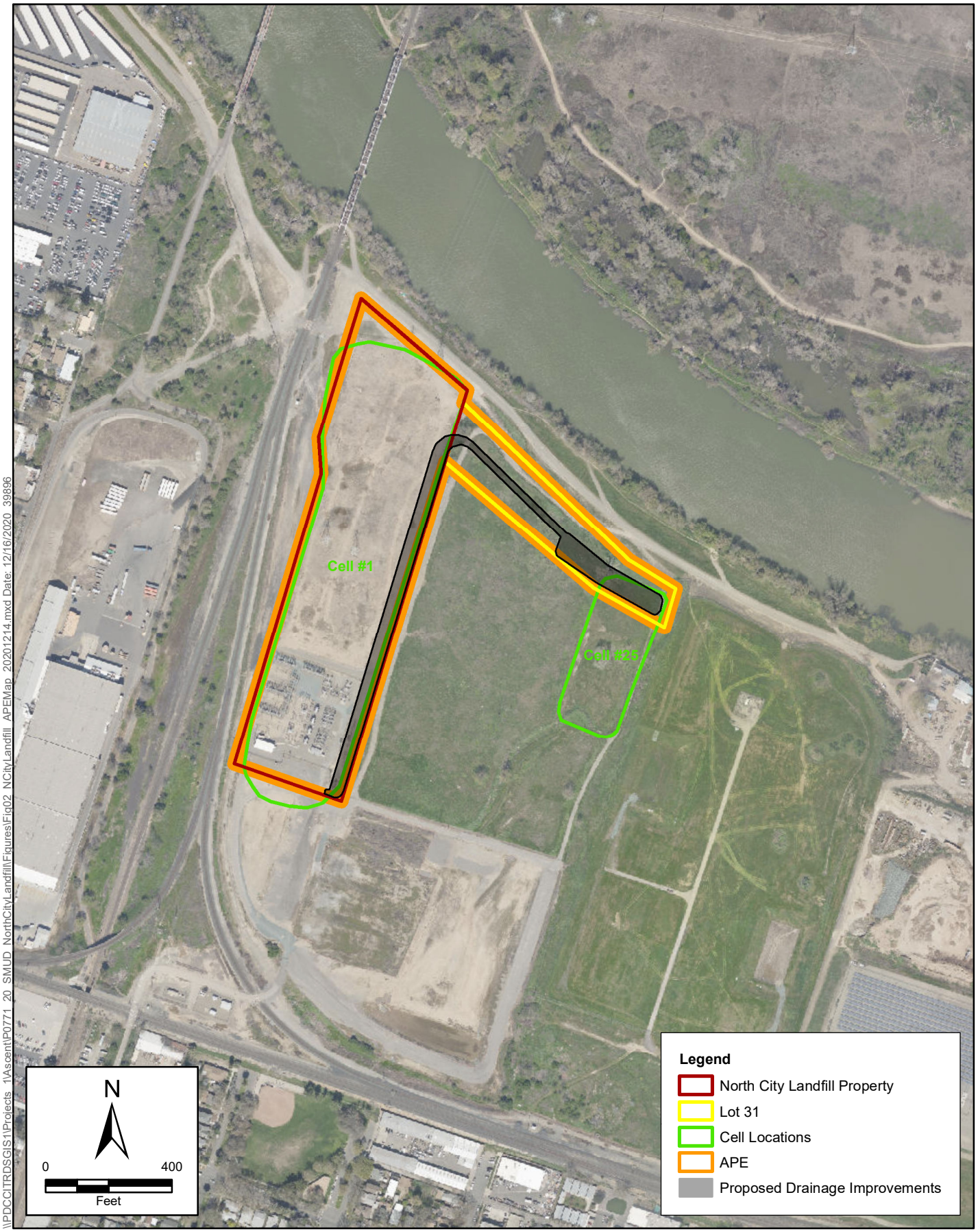
Figure 1
North City Landfill Vicinity Map



\\PDCCITRDSGIS1\Projects_1\Ascent\P0771 20_SMUD_NorthCityLandfill\Figures\Fig02_NCityLandfill_APEMap_20201214.mxd Date: 12/16/2020 39896

Figure 2
North City Landfill APE Map

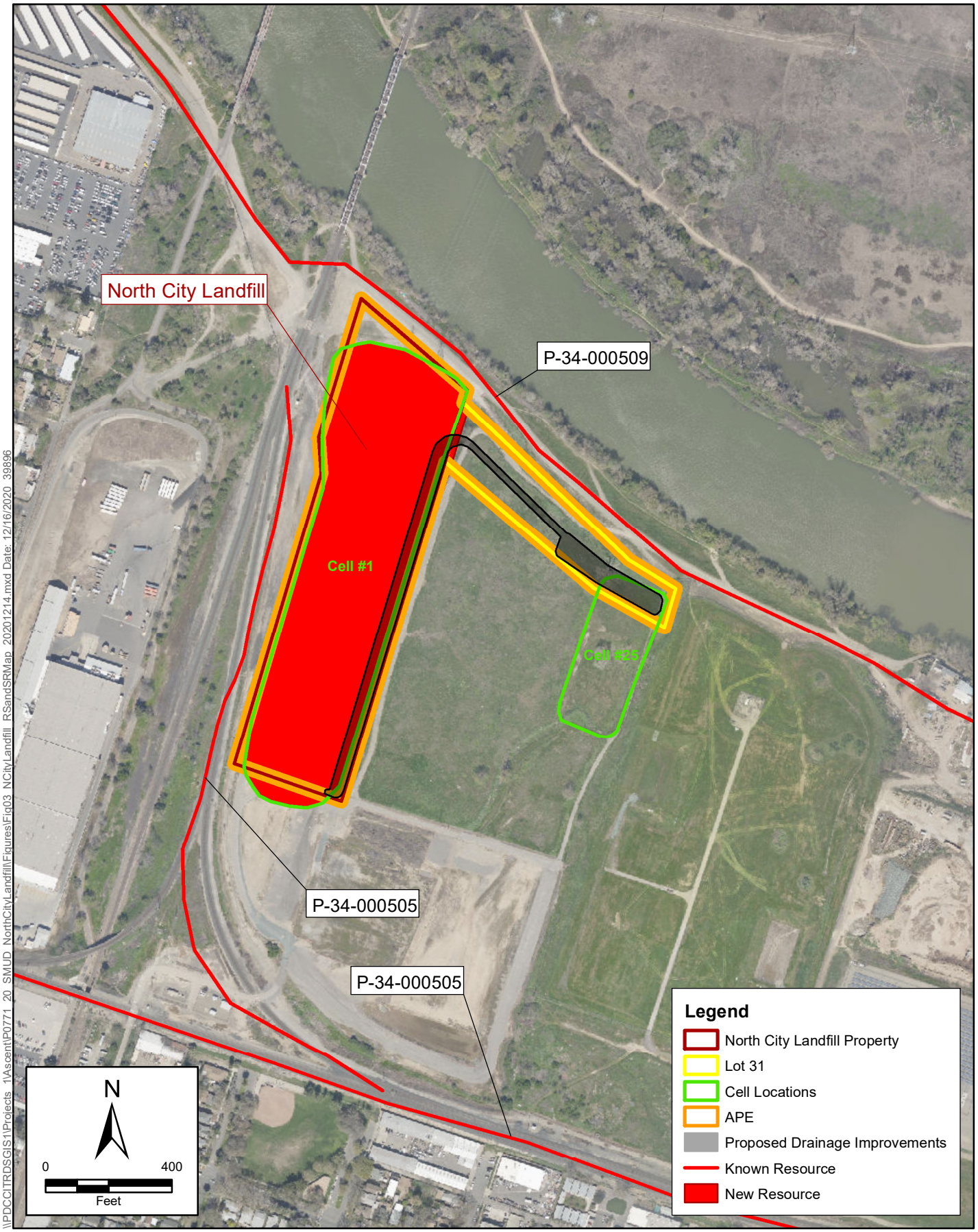


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Figure 3
North City Landfill Record Search and Survey Results Map

Appendix B
Sacred Lands Search Request

October 20, 2020

California Native American Heritage Commission
1550 Harbor Blvd
West Sacramento, California 95691

Subject: Sacred Lands File Search and Contacts Request, SMUD Landfill Project

The Sacramento Municipal Utility District (SMUD) has proposed the installation of a new drainage ditch and infiltration basin at their substation near the North City Landfill in Sacramento. Project work involves the excavation of the ditch and basin. I have attached a map depicting this project area.

SMUD would like to enlist the help of members of the Native American community in identifying cultural resources that may be affected by this project. Because this project will require ground-disturbing construction, identification of cultural resources early in the environmental review process is critical. Please perform a search of the Sacred Lands File for this project. The project crosses land within the following locations:

QUAD	MERIDIAN	TOWNSHIP	RANGE	SECTION	COUNTY
Sacramento East	MDB&M	9N	5E	Unsectioned	Sacramento

SMUD would like to identify cultural resources in advance so they may be avoided where feasible. Please provide us with Sacred Lands File information and the most current Native American contact lists for Sacramento County via e-mail. Your assistance with this project is appreciated. If you have any questions, please contact me at ICF at Erik.Allen@icf.com or by phone at 916.231.9589.

Sincerely,

Erik Allen

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

November 5, 2020

Erik Allen
ICF

Via Email to: erik.allen@icf.com
Cc: bguth@auburnrancheria.com

Re: SMUD Landfill Project, Sacramento County

Dear Mr. Allen:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were positive. Please contact the United Auburn Indian Community of the Auburn Rancheria on the attached list for more information. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Nancy.Gonzalez-Lopez@nahc.ca.gov.

Sincerely,

Nancy Gonzalez-Lopez

Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
Sacramento County
11/5/2020

Buena Vista Rancheria of Me-Wuk Indians
Rhonda Morningstar Pope, Chairperson
1418 20th Street, Suite 200 — Me-Wuk
Sacramento, CA, 95811
Phone: (916) 491 - 0011
Fax: (916) 491-0012
rhonda@buenavistatribe.com

Ione Band of Miwok Indians
Sara Setchwaelo, Chairperson
9252 Bush Street, Suite 2 — Miwok
Plymouth, CA, 95669
Phone: (209) 245 - 5800
sara@ionemiwok.net

Nashville Enterprise Miwok-Maidu-Nishinam Tribe
Cosme Valdez, Chairperson
P.O. Box 580986 — Miwok
Elk Grove, CA, 95758-0017
Phone: (916) 429 - 8047
Fax: (916) 429-8047
valdezcome@comcast.net

Shingle Springs Band of Miwok Indians
Regina Cuellar, Chairperson
P.O. Box 1340 — Maidu
Shingle Springs, CA, 95682 — Miwok
Phone: (530) 387 - 4970
Fax: (530) 387-8067
rcuellar@ssband.org

Tsi Akim Maidu
Grayson Coney, Cultural Director
P.O. Box 510 — Maidu
Browns Valley, CA, 95918
Phone: (530) 383 - 7234
tsi-akim-maidu@att.net

United Auburn Indian Community of the Auburn Rancheria
Gene Whitehouse, Chairperson
10720 Indian Hill Road — Maidu
Auburn, CA, 95603 — Miwok
Phone: (530) 883 - 2390
Fax: (530) 883-2380
bguth@auburnrancheria.com

Wilton Rancheria
Dahlton Brown, Director of Administration
9728 Kent Street — Miwok
Elk Grove, CA, 95624
Phone: (916) 683 - 6000
dbrown@wiltonrancheria-nsn.gov

Wilton Rancheria
Steven Hutchason, THPO
9728 Kent Street — Miwok
Elk Grove, CA, 95624
Phone: (916) 683 - 6000
Fax: (916) 863-6015
shutchason@wiltonrancheria-nsn.gov

Wilton Rancheria
Jesus Tarango, Chairperson
9728 Kent Street — Miwok
Elk Grove, CA, 95624
Phone: (916) 683 - 6000
Fax: (916) 683-6015
jtarango@wiltonrancheria-nsn.gov

Colfax-Todds Valley Consolidated Tribe
Pamela Cubbler, Treasurer
P.O. Box 4884 — Maidu
Auburn, CA, 95604 — Miwok
Phone: (530) 320 - 3943
pcubbler@colfaxrancheria.com

Colfax-Todds Valley Consolidated Tribe
Clyde Prout, Chairperson
P.O. Box 4884 none — Maidu
Auburn, CA, 95604 — Miwok
Phone: (530) 577 - 3558
miwokmaidu@yahoo.com

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed SMUD Landfill Project, Sacramento County.

Appendix C
Records Search Results

California Historical Resources Information System

NORTH CENTRAL INFORMATION CENTER

AMADOR
EL DORADO
NEVADA
PLACER
SACRAMENTO
YUBA

California State University, Sacramento
6000 J Street, Folsom Hall, Suite 2042
Sacramento, California 95819-6100
phone: (916) 278-6217
fax: (916) 278-5162
email: ncic@csus.edu

10/12/2020 NCIC File No.: SAC-20-144

Erik Allen
ICF
930 9th Street, Suite 1200
Sacramento, CA 95814

Re: SMUD Landfill

The North Central Information Center received your records search request for the project area referenced above, located on the Sacramento East USGS 7.5' quad. The following reflects the results of the records search for the project area and an 80 ft radius.

As indicated on the data request form, the locations of resources and reports are provided in the following format: ☐custom GIS maps ☒ shapefiles

Resources within project area:	P-34-509
Resources outside project area, within radius:	P-34-505
Reports within project area:	2016 2729 3407 3490 3491 6694 9369 9423 10553
Reports outside project area, within radius:	7061

Resource Database Printout (list):	☐ enclosed	☒ not requested	☐ nothing listed/NA
Resource Database Printout (details):	☒ enclosed	☐ not requested	☐ nothing listed/NA
Resource Digital Database Records:	☒ enclosed	☐ not requested	☐ nothing listed/NA
Report Database Printout (list):	☐ enclosed	☒ not requested	☐ nothing listed/NA
Report Database Printout (details):	☒ enclosed	☐ not requested	☐ nothing listed/NA
Report Digital Database Records:	☒ enclosed	☐ not requested	☐ nothing listed/NA
Resource Record Copies:	☒ enclosed	☐ not requested	☐ nothing listed/NA
Report Copies:	☒ enclosed	☐ not requested	☐ nothing listed/NA

Built Environment Resources Directory:	☒ enclosed	☐ not requested	☐ nothing listed/NA
Archaeological Determinations of Eligibility:	☒ enclosed	☐ not requested	☐ nothing listed/NA
CA Inventory of Historic Resources (1976):	☐ enclosed	☐ not requested	☒ nothing listed/NA
Caltrans Bridge Survey:	☐ enclosed	☐ not requested	☒ nothing listed/NA
Ethnographic Information:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Historical Literature:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Historical Maps:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Local Inventories:	☐ enclosed	☒ not requested	☐ nothing listed/NA
GLO and/or Rancho Plat Maps:	☒ enclosed	☐ not requested	☐ nothing listed/NA
Shipwreck Inventory:	☐ enclosed	☐ not requested	☒ nothing listed/NA
Soil Survey Maps:	☐ enclosed	☒ not requested	☐ nothing listed/NA

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the California Historical Resources Information System (CHRIS) Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Sincerely,

Paul Rendes, Coordinator
North Central Information Center

Appendix D
DPR 523 Form

State of California ◆ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code
Other Listings
Review Code Reviewer Date

Page 1 **of** 5 ***Resource Name or #:** (Assigned by recorder) North City Landfill
P1. Other Identifier: _

*P2. **Location:** ☐ **Not for Publication** ☒ **Unrestricted**

***a. County** Sacramento **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Sacramento East **Date** 1980 **T** 5E; **R** 9N; **Sec** Unsectioned ; M.D. **B.M.**

c. Address 199 20th Street City Sacramento Zip 95814

d. UTM: (Give more than one for large and/or linear resources) Zone 10N, 632986.32 mE/ 4272297.48 mN

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate)

Site is accessible via a graveled road north of Blues Alley, across the Southern Pacific Railroad Tracks.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

This resource consists of the remains of Sacramento's North City Landfill, a facility which was in use by the City of Sacramento between 1940-1949 until its acquisition by the Sacramento Municipal Utility District. Historic refuse including diagnostic glass vessels and sun-affected amethyst glass are visible eroding from the edge of the property. The dump is overlain to a depth of between 3-18 feet of construction debris from previous SMUD projects. SMUD records indicate that these debris were deposited between 1980-1993. SMUD documents from earlier work within the area indicate that historic dump material extends up to 31 feet below ground surface at its deepest. SMUD's North City Substation is located within the southern portion of the resource boundary.

***P3b. Resource Attributes:** (List attributes and codes) AH4. Privies/Dumps/Trash Scatters

***P4. Resources Present:** ☐ Building ☐ Structure ☐ Object ☒ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5b. Description of Photo: (view, date, accession #) Site Overview facing North 10/15/2020

***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
1940-1949

***P7. Owner and Address:**
Sacramento Municipal Utility District
6301 S Street
Sacramento, CA 95817

***P8. Recorded by:** (Name, affiliation, and address) **Erik Allen, ICF**
980 9th Street, #1200
Sacramento, CA 95814

***P9. Date Recorded:** 10/15/2020

***P10. Survey Type:** (Describe)
Intensive Pedestrian Survey (5 meter transect)

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
ICF 2020. Cultural Resources Inventory Report for the North City Landfill Project

***Attachments:** ☐NONE ☒Location Map ☒Continuation Sheet ☐Building, Structure, and Object Record
☒Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☒ Other (List): Sketch Map

ARCHAEOLOGICAL SITE RECORD

 ***Resource Name or #:** North City Landfill

***A1. Dimensions: a. Length:** 350 ft. **(** E/W**) × b. Width:** 1390 ft. **(** N/S **)**
Method of Measurement: ☐ Paced ☐ Taped ☐ Visual estimate ☒ Other: GPS
Method of Determination (Check any that apply.): ☒ Artifacts ☐ Features ☐ Soil ☐ Vegetation ☐ Topography
☐ Cut bank ☐ Animal burrow ☐ Excavation ☐ Property boundary ☐ Other (Explain):

Reliability of Determination: ☒ High ☐ Medium ☐ Low Explain:

Limitations (Check any that apply): ☒ Restricted access ☒ Paved/built over ☐ Site limits incompletely defined
☒ Disturbances ☐ Vegetation ☐ Other (Explain): Site has been overlain by construction debris deposited between 1980-1993, by recent construction, and by the construction of the SMUD North City Substation.

A2. Depth: 3-31 feet bgs Method of Determination: Earlier SMUD analysis (2018) indicates historic deposit extends between 3-31 feet bgs, and is deepest near center of property.

***A3. Human Remains:** ☐ Present ☒ Absent ☐ Possible ☐ Unknown (Explain):

***A4. Features**: SMUD North City Susbstation is located at the southern extent of the site. Utilities attached to this substation are installed across the area.

***A5. Cultural Constituents (**Describe and quantify artifacts, ecofacts, cultural residues, etc., not associated with features.):
Solar affected amethyst glass, Old Spice Bottle Ca. 1938-1946, large quantities of fragmentary glass and ceramics which are not obviously diagnostic but that are likely associated with the historic deposit of the dump rather than construction debris from the 1980s and 1990s

***A6. Were Specimens Collected?** ☒ No ☐ Yes (If yes, attach Artifact Record or catalog and identify where specimens are curated.)

***A7. Site Condition:** ☐ Good ☐ Fair ☒ Poor (Describe disturbances.): Impacts from construction and continued use as a dump site in the 80s and 90s. Appears to be at least some intermixing of historic and modern components near surface. Deposit is deep enough that some is likely intact with no mixing with modern component. Historic accounts indicate that City Dump operations involved burning of refuse daily. The majority of the subsurface component of the site has likely been damaged by this activity (City of Sacramento 2008). Footprint of the dump includes SMUD's North City Substation. The construction of the substation in 1950 destroyed a large portion of the deposit at the south of the property.

***A8. Nearest Water:** The American River is situated approximately 450 feet north of the site.

***A9. Elevation:** 40' AMSL

A10. Environmental Setting**:**
The site is within an urban context. Largely denuded of vegetation with active construction. Use of the surrounding area is largely industrial.

A11. Historical Information:
Site consists of the Sacramento North City Landfill, a dump that was operated by the City of Sacramento between 1940 and 1950.

***A12. Age:** ☐ Prehistoric ☐ Protohistoric ☐ 1542-1769 ☐ 1769-1848 ☐ 1848-1880 ☐ 1880-1914 ☒ 1914-1945
☒ Post 1945 ☐ Undetermined **Describe position in regional prehistoric chronology or factual historic dates if known:** The North City Landfill was operational between the years 1940 and 1950, at which point it was acquired by Sacramento Municipal Utility District. SMUD periodically used portions of the Landfill property to dump construction and demolition debris between 1980 and 1993.

A13. Interpretations:
Historic refuse in this site represents domestic trash from citizens of Sacramento during both WWII and in the period of economic growth directly following it.

A14. Remarks: This resource likely lacks data potential and is likely ineligible for listing on the CRHR. Communal dumps are inherently limited in their potential to characterize consumer behavior due to the inability of the deposit to be associated with an individual consumer or family, as would be the case with something like a household dump. Furthermore, refuse deposited at the City Dump property was burned daily until 1959 (City of Sacramento 2008). This would mean that a large proportion of artifacts and diagnostic information was destroyed at the time of original deposition between 1940-1949.

A15. References:
SMUD 2018. Station E Substation – Phase 2 – Part A – Control Building Construction. RFP No. 180117.JM
ICF 2020. Cultural Resources Inventory Report, North City Landfill Project. Prepared for Sacramento Municipal Utility District.
City of Sacramento 2008. Sutters Landing Area Master Plan Background Report.

A16. Photographs: Digital photos:

Original Media/Negatives Kept at:

***A17. Form Prepared by:** Erik Allen **Date:** 12/16/2020
Affiliation and Address: ICF 980 9th Street, Suite 1200, Sacramento, Ca. 95814

***Required information**

Figure 1. Solar-Affected Amethyst Glass Bottle Stopper

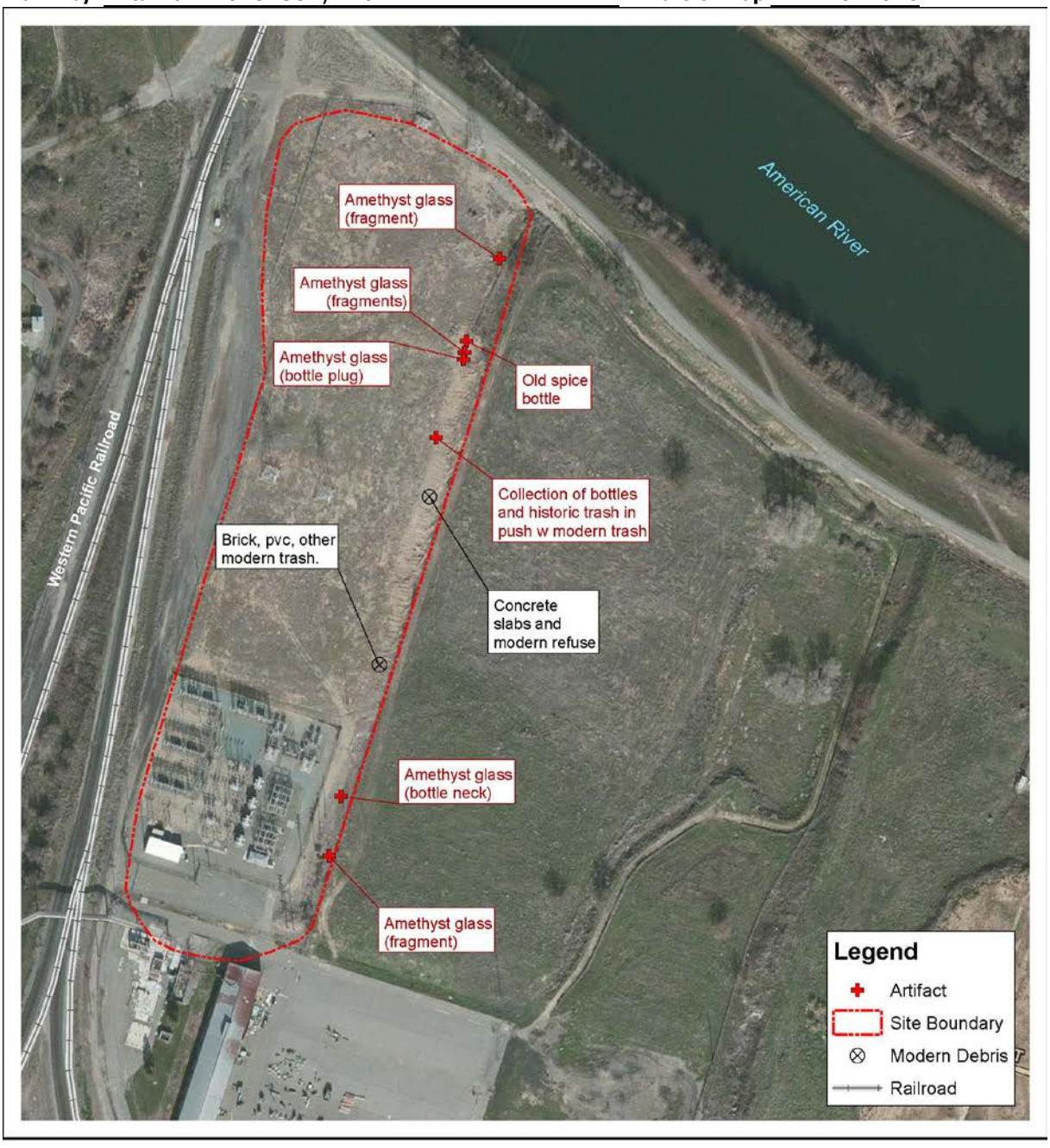
Figure 2. Old Spice Bottle Ca. 1938-1946

Figure 3. Fragmentary Amethyst Glass Fragments, Bricks, and Ceramic on Site Surface

State of California ♁ The Resources Agency Primary #
DEPARTMENT OF PARKS AND RECREATION HRI#
SKETCH MAP
Trinomial

Page 4 **of** 5 ***Resource Name or #:** North City Landfill

***Drawn by:** David Nicholson, ICF ***Date of map:** 12-16-2020



N

USGS 7.5 SACRAMENTO EAST, CA;
Sacramento County

1:3,000
0 Feet 500
0 Meters 100

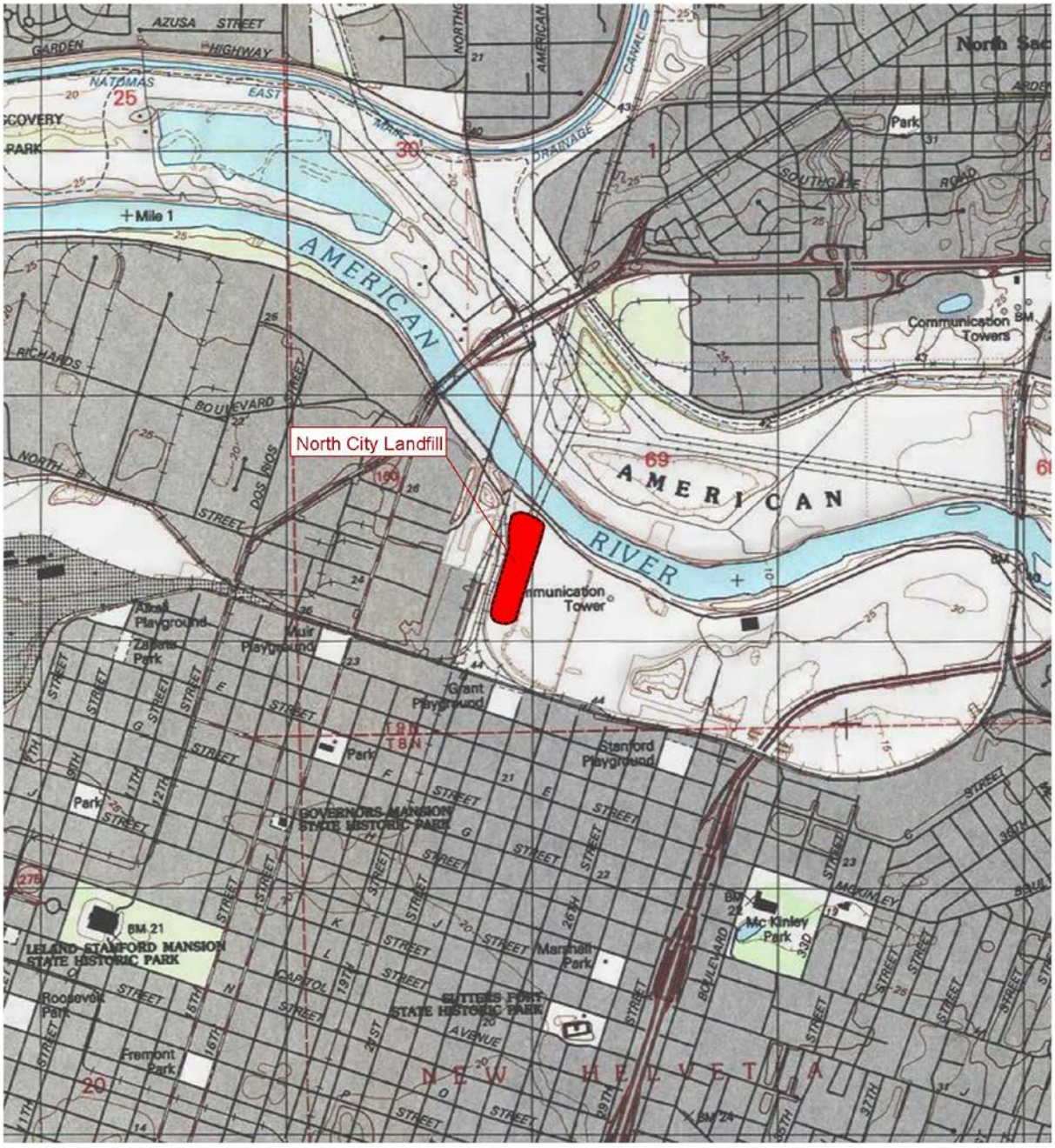
State of California ♦ Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI#
Trinomial

Page 5 **of** 5 ***Resource Name or #** (Assigned by recorder) North City Landfill

***Map Name:** Sacramento East ***Scale:** 1:24,000 ***Date of map:** 2012



USGS 7.5 SACRAMENTO EAST, CA;
Sacramento County

1:24,000
Miles
0 1
0 Kilometers 1