

# Eastlake Sanitary Landfill Expansion

## Lake County, California



# **INITIAL STUDY CHECKLIST**

## **PROPOSED MITIGATED NEGATIVE DECLARATION**

### **Eastlake Sanitary Landfill Expansion**

**Lead Agency:**



LAKE COUNTY  
Community Development Department – Planning Division  
255 North Forbes Street  
Third Floor, Room 323  
Lakeport, CA 95453  
(707) 263-2221

**Technical Assistance By:**



SHN Consulting Engineers & Geologists  
350 Hartnell Avenue, Suite B  
Redding, CA 96002



SCS Engineers  
3117 Fite Circle, Suite 108  
Sacramento, CA 95827

**January 2020**



# Table of Contents

Page

List of Tables .....	iv
List of Illustrations.....	v
Abbreviations and Acronyms .....	vi
Lake County Environmental Checklist Form .....	ix
<b>1.0 Introduction and Purpose .....</b>	<b>1</b>
1.1 Introduction.....	1
1.2 Lead Agency.....	1
1.3 Purpose of the Initial Study .....	1
1.4 Incorporation by Reference.....	2
1.5 Project Environmental Studies .....	2
1.6 Review Process .....	2
<b>2.0 Project Description .....</b>	<b>3</b>
2.1 Project Location and Setting.....	3
2.2 Purpose of the Proposed Project.....	8
2.3 Basis of Design .....	10
2.4 Description of the Proposed Project .....	12
2.5 Existing Facility Permits .....	13
<b>3.0 Environmental Impacts and Mitigation Measures .....</b>	<b>25</b>
Section I. Aesthetics .....	26
Section II. Agricultural Resources.....	35
Section III. Air Quality.....	37
Section IV. Biological Resources .....	44
Section V. Cultural Resources.....	55
Section VI. Energy.....	58
Section VII. Geology and Soils .....	60
Section VIII. Greenhouse Gas Emissions.....	65
Section IX. Hazards and Hazardous Materials .....	68
Section X. Hydrology and Water Quality.....	73
Section XI. Land Use and Planning .....	81
Section XII. Mineral Resources .....	83
Section XIII. Noise.....	84
Section XIV. Population and Housing .....	96
Section XV. Public Services .....	98
Section XVI. Recreation .....	100
Section XVII. Transportation and Traffic.....	102
Section XVIII. Tribal Cultural Resources.....	108
Section XIX. Utilities and Service Systems .....	112
Section XX. Wildfire Hazards .....	115
Section XXI. Mandatory Findings of Significance.....	118
<b>4.0 CEQA Determination.....</b>	<b>120</b>
<b>5.0 References and Citations.....</b>	<b>121</b>

## Table of Contents, Continued

### Technical Appendices

- A Joint Technical Document
- B Air Quality and Greenhouse Gas Analysis Report
- C Natural Resources Assessment
- D Geologic and Seismic Siting Assessment
- E Hydrogeology and Hydrologic Evaluation
- F Noise and Vibration Memorandum
- G Transportation Memorandum



## List of Tables

Table		Page
2-1	Key Design Features – Landfill Expansion .....	12
2-2	Estimated Water Demand – Construction .....	12
2-3	Existing Facility Permits .....	13
3-1	Daily Emissions Estimates, Current Landfill Operations .....	39
3-2	Daily Emissions Estimates, Future Landfill Operations .....	39
3-3	Net Project Daily Emissions Estimates .....	39
3-4	Annual Emissions Estimates, Current Landfill Operations .....	40
3-5	Annual Emissions Estimates, Future Landfill Operations .....	40
3-6	Net Project Annual Emissions Estimates .....	40
3-7	Daily Emission Estimates – Landfill New Cell Construction Projects .....	41
3-8	Health Risk Assessment .....	42
3-9	Greenhouse Gas Emission Estimates .....	66
3-10	Hourly Noise Level Standards (dBA L <sub>eq</sub> ) .....	84
3-11	Construction Vibration Damage Criteria .....	85
3-12	Long-Term 24-Hour Noise Level Measurements .....	85
3-13	Reference Noise Levels of Equipment Used at the Landfill for Daily Operations .....	85
3-14	Typical Maximum Construction Equipment Noise Levels (L <sub>max</sub> ) .....	88
3-15	Comparison of Daily Operations Contributions – Loudest Modeled Hour (dBA L <sub>eq</sub> ) .....	93
3-16	Vibration Source Amplitudes for Heavy Equipment .....	94
3-17	LOS and Delay .....	103

## List of Illustrations

Figure		Page
2-1	Site Location .....	4
2-2	Study Area Parcels.....	5
2-3	Existing Site Plan .....	6
2-4	Final Grading Plan (Existing Permit) .....	9
2-5	Proposed Landfill Expansion Site Plan.....	11
2-6	Proposed Landfill Expansion Excavation Plan .....	14
2-7	Proposed Fill Sequence Plan (Phase 1).....	15
2-8	Proposed Fill Sequence Plan (Phase 2).....	16
2-9	Proposed Fill Sequence Plan (Phase 3).....	17
2-10	Proposed Fill Sequence Plan (Phase 4).....	18
2-11	Proposed Landfill Expansion Final Grading Plan .....	19
2-12	Proposed Landfill Expansion Sections (1 of 2).....	20
2-13	Proposed Landfill Expansion Sections (2 of 2).....	21
2-14	Base Liner System Comparison .....	22
2-15	Preferential Pathway Schematic .....	23
2-16	Landfill Expansion, Final Cover, Baseline and LCRS Details.....	24
3-1	View Simulation Locations .....	27
3-2	View Simulation of Photo Point 1 .....	28
3-3	View Simulation of Photo Point 2 .....	29
3-4	View Simulation of Photo Point 3 .....	30
3-5	View Simulation of Photo Point 4 .....	31
3-6	View Simulation of Photo Point 5 .....	32
3-7	Study Area with Potential Areas of Disturbance .....	45
3-8	Natural Communities and Wetlands .....	46
3-9	Potential Areas of Disturbance with Natural Communities & Stream Setback.....	50
3-10	Proposed Mitigation Area .....	51
3-11	Noise Monitoring Locations .....	86
3-12	Construction Noise Impacts – Phase 2 .....	90
3-13	Existing Operations Noise Impacts.....	91
3-14	Future Phase 2 Operations Noise Impacts .....	92
3-15	Study Area Intersections .....	104



## Abbreviations and Acronyms

AB	Assembly Bill
ACOE	United States Army Corps of Engineers
ADT	Average Daily Traffic
AF	Acre feet
AFY	Acre feet per year
AMS	American Meteorological Society
A-P Act	Alquist-Priolo Earthquake Fault Zoning Act
APN	Assessor's Parcel Number
APZ	Agricultural Preserve (Zone Classification)
BAAQMD	Bay Area Air Quality Management District
bcy	Bank cubic yards
BLM	Bureau of Land Management
BMP	Best Management Practices
C-1	Neighborhood Commercial (Zone Classification)
CAA	Clean Air Act
CalEPA	California Environmental Protection Agency
CALFIRE	California Department of Forestry and Fire Protection
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAO	Cleanup and Abatement Order
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFW	California Department of Fish & Wildlife
CERS	California Environmental Reporting System
CEQA	California Environmental Quality Act
CGS	California Geological Survey
CH <sub>4</sub>	Methane
CHP	California Highway Patrol
CNDDDB	California Natural Diversity Data Base
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO <sub>2</sub>	Carbon Dioxide
County	Lake County
CPRA	California Public Records Act
CRHR	California Register of Historic Resources
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dBA	Decibel
DL	Discharge Location
DOF	California Department of Finance
DOI	United States Department of the Interior
DTSC	California Department of Toxic Substances
ECHO	Enforcement and Compliance History Online
EIR	Environmental Impact Report
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FOIA	Freedom of Information Act
FMMP	Farmland Mapping and Monitoring Program
FRAP	Fire and Resource Assessment Program
FTA	Federal Transit Administration

## Abbreviations and Acronyms, Continued

GCCS	Gas Collection Control System
GHG	Greenhouse Gas
gpd	Gallons per day
HAP	Hazardous Air Pollutants
HCFs	Hydrofluorocarbons
HCM	Highway Capacity Manual
HMBP	Hazardous Material Business Plan
HRA	Health Risk Assessment
IGP	Industrial General Permit
KCWD	Konocti County Water District
LCAB	Lake County Air Basin
LCAQMD	Lake County Air Quality Management District
LCFPD	Lake County Fire Protection District
LCRS	Leachate Collection and Removal System
LEA	Local Enforcement Agency
$L_{eq}$	Equivalent Sound Level
$L_{max}$	Maximum Noise Level
LFG	Landfill Gas
LOS	Level of Service
L <sub>WA</sub>	A-weighted sound power level
MDBM	Mount Diablo Base Meridian
MG/yr	Megagrams per year
MND	Mitigated Negative Declaration
MRP	Mitigation and Reporting Program
MSL	Mean Sea Level
MSW	Municipal Solid Waste
NAHC	Native American Heritage Commission
NO <sub>x</sub>	Nitrous Oxide
ND	Negative Declaration
NMOC	Non-methane Organic Compounds
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NHPA	National Historic Preservation Act
NPDES	National Pollution Discharge Elimination System
NRHP	National Register of Historic Places
O <sub>3</sub>	Ozone
OHV	Off-Highway Vehicle
OPR	Governor's Office of Planning and Research
OS	Open Space (Zone Classification)
O-WW	Water Way Combining District (Zone Classification)
PCE	Passenger Car Equivalent
PDC	Planned Development Commercial (Zone Classification)
PF	Public Facilities (Land Use Classification)
PFAS	Per- and Polyfluoroalkyl Substances
PFCs	Perfluorocarbons
PG&E	Pacific Gas & Electric Company
PPM	Micrograms per cubic meter
PPV	Peak Particle Velocity
PRC	Public Resources Code
R-1	Single Family Residential (Zone Classification)
RCRA	Resource Conservation and Recovery Act
RL	Rural Lands (Zone Classification)



## Abbreviations and Acronyms, Continued

ROW	Right-of-Way
RP	Resource Protection (Land Use Classification)
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCH	State Clearinghouse
SDWA	Safe Drinking Water Act
SF <sub>6</sub>	Sulfur Hexafluoride
SGMA	Sustainable Groundwater Management Act
SGP	Sustainable Groundwater Plan
SMARA	Surface Mining and Reclamation Act
SR	State Route
SRA	State Responsibility Area
SSURGO	Soil Survey Geographic
SWFP	Solid Waste Facility Permit
SWMS	Surface Water Monitoring Station
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminates
TCR	Tribal Cultural Resources
tpd	Tons per day
tpy	Tons per year
U	Unclassified (Zone Classification)
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VHFHSZ	Very High Fire Hazard Severity Zone
VOC	Volatile Organic Compound
VMT	Vehicle Miles Traveled
YCFCWCD	Yolo County Flood Control and Water Conservation District
WDR	Waste Discharge Requirements
WMU	Waste Management Unit

## Lake County Environmental Checklist Form

1. **Project Title:** Eastlake Sanitary Landfill Expansion

2. **Lead Agency Name and Address:**

LAKE COUNTY  
Community Development Department – Planning Division  
255 North Forbes Street  
Third Floor, Room 323  
Lakeport, CA 95453

3. **Contact Person and Phone Number:** Michalyn DelValle, Community Development Director (707) 263-2221

4. **Project Location:** The project is located within Lake County, immediately east of the City of Clearlake, and all proposed expansion activities will occur within unincorporated Lake County. The project is situated approximately 1.73 miles east of Clearlake at the nearest point, and one-mile east of State Route (SR) 53 at its nearest point within Sections 23 and 26 of Township 13 North, Range 7 West, Mount Diablo Base Meridian (MDBM). The project site includes an area within eleven separate parcels (Assessor's parcel numbers [APNs] 010-053-110, 120, 130, 140, 010-008-030, 350, 390, 410, 041-224-400, 041-234-270, and 041-244-180). Parcel 010-008-350 is owned by the United States Department of the Interior (DOI), Bureau of Land Management (BLM) and is not included within the expansion area; however, the existing use within the northwest corner of this parcel will continue. The total project area is approximately 91 acres, of which 34.7 acres are occupied by the existing permitted landfill. The project site has a center point latitude and longitude of 38.951666° and -122.601460°, respectively.

5. **Applicant's Name and Address:**

LAKE COUNTY PUBLIC SERVICES DEPARTMENT  
333 North Second Street  
Lakeport, CA 95453  
(707) 262-1618

6. **General Plan Designation:** Public Facilities (PF)

7. **Zoning:** Open Space – Water Way Combining District (O-WW)

8. **Description of Project:** The proposed Eastlake Sanitary Landfill Expansion project would laterally expand the existing landfill to the north and east on properties currently owned by Lake County and South Lake Refuse, and to the south and east onto properties owned by the County. The lateral expansion areas would occupy an approximate 21.8-acre footprint and the entire expansion project would occupy approximately 36.2 acres. The proposed expansion has been designed to extend the lifespan of the landfill by 22 years or more based on current and projected disposal rates. The existing leachate pond, landfill gas (LFG) flare, scales and scale house and maintenance buildings would remain at their current onsite location. Construction of an all-weather access road and stormwater detention basin would also be required.

9. **Surrounding Land Uses and Setting:** Adjacent land contains additional blue oak woodland to the south, rural residential development within blue oak woodland to the west, steep, chamise and grass covered slopes to the north as well as a vineyard and green waste disposal facility, and steep, deeply dissected chamise-dominated slopes to the east interspersed with seasonal drainages and tree dominated draws.

Existing land uses within a one-mile radius of the facility and includes residential, commercial, agricultural and open space. Further details regarding zoning designations and general land use on the adjoining properties are provided below.



- Properties west and southwest of the landfill are comprised primarily of residential uses in the City of Clearlake. These properties are zoned as Single Family Residential (R-1), which allows for single family houses of wood frame, manufactured or prefabricated.
- A portion of the land generally located northwest of the landfill is zoned Neighborhood Commercial (C-1). This designation allows for personal services, offices, and other commercial uses. A larger and more significant portion of the land is designated as Resource Protection (RP). The purpose of the RP designation is to allow development in environmentally sensitive areas compatible with the environmental constraints of these parcels.
- The remaining adjoining properties to the north, east and south are comprised of unincorporated lands of the County that include the following zoning designations: Unclassified (U); Open Space (OS), Planned Development Commercial (PDC); Rural Lands (RL); and Agriculture Preserve (APZ). The BLM owns the land immediately east of the landfill. A portion of the BLM parcel was acquired in 2000 as a right-of-way (ROW) to accommodate the location of the gatehouse and access road construction. The County owns the approximate 77.2-acre undeveloped parcel to the south of the facility.

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

Lake County as Lead Agency for the proposed project has discretionary authority over the primary project proposal. To implement this project, the applicant may need to obtain, at a minimum, the following discretionary permits and approvals from other agencies:

- California Department of Resources Recycling and Recovery
- California Department of Fish & Wildlife
- Lake County Air Quality Management District
- Lake County Department of Health Services – Environmental Division
- Regional Water Quality Control Board – Central Valley
- State Water Resources Control Board
- United States Army Corps of Engineers

**11. Tribal Consultation:** On June 21, 2019, the County initiated environmental review under CEQA for the proposed Eastlake Sanitary Landfill Expansion project. On July 3, 2019, the County sent project notification letters to the following California Native American tribes, which are listed on the County's tribal notification list (refer to Section XVIII, *Tribal Cultural Resources*).

Big Valley (Sarah Ryan)  
Cortina Rancheria, Kletsel Dehe Band of Wintun Indians (Charlie Wright, Chairman)  
Elem Indian Colony (Alix Tyler)  
Habematolel Pomo of Upper Lake (Anthony Arroyo)  
Habematolel Pomo of Upper Lake (Linda Rosas)  
Koi Nation (Dino Beltran)  
Middletown Rancheria (General Mailbox)  
Middletown Rancheria (Jose Simon III)  
Middletown Rancheria (Mike Shaver)  
Middletown Rancheria (Tribal Historic Preservation Officer)  
Middletown Rancheria (Brenda Torres)

Middletown Rancheria (Ryan Peterson)  
Middletown Rancheria (Sierra Shope)  
Middletown Rancheria (Sally Peterson)  
Mishewal-Wappo (Scott Gabaldon)  
Redwood Valley (Steve Navarez)  
Robinson Rancheria (Dean Rogers)  
Scotts Valley Pomo (Terre Logsdon)  
Scotts Valley Pomo (Thomas Jordan)  
Yocha Dehe Wintun Nation, Cache Creek (Laverne Bill)  
Yocha Dehe Wintun Nation, Cache Creek (Reunabb Riyse)  
Yocha Dehe Wintun Nation, Cache Creek (James Kinter)  
Yocha Dehe Wintun Nation, Cache Creek (Anthony Roberts)

**12. Purpose of this Document:** This document analyzes the environmental effects of the Eastlake Sanitary Landfill Expansion project and makes appropriate findings in accordance with Section 15070 of the State CEQA Guidelines. In addition, this document has been prepared to the degree of specificity appropriate to the current proposed action, as required by Section 15146 of the State CEQA Guidelines. The analysis considers the actions associated with the proposed project to determine the short-term and long-term effects associated with their implementation.

## Section 1.0 Introduction and Purpose

### 1.1 Introduction

This document is an Initial Study that summarizes the technical studies prepared for the proposed Eastlake Sanitary Landfill Expansion and provides justification for a Mitigated Negative Declaration (MND). This document has been prepared in accordance with the current California Environmental Quality Act (CEQA), Public Resources Code Section 21000 et seq., and the State CEQA Guidelines. The purpose of this document is to evaluate the potential environmental impacts of the proposed Eastlake Sanitary Landfill Expansion project. Mitigation measures have been proposed to avoid or minimize any significant impacts that were identified.

### 1.2 Lead Agency

The Lead Agency is the public agency with primary responsibility for implementing a proposed project. Accordingly, the Lake County Community Department – Planning Division (County) is the CEQA Lead Agency.

### 1.3 Purpose of the Initial Study

CEQA requires that public agencies document and consider the potential environmental effects of the agency's actions that meet CEQA's definition of a "project." Briefly summarized, a "project" is an action that has the potential to result in direct or indirect physical changes in the environment. A project includes the agency's direct activities as well as activities that involve public agency approvals or funding. Guidelines for an agency's implementation of CEQA are found in the CEQA Guidelines (Title 14, Chapter 3 of the California Code of Regulations).

Provided that a project is not exempt from CEQA, the first step in the agency's consideration of its potential environmental effects is the preparation of an Initial Study. The purpose of an Initial Study is to determine whether the project would involve "significant" environmental effects, as defined by CEQA, and to describe feasible mitigation measures that would avoid significant effects or reduce them to a level that is less than significant. If the Initial Study does not identify significant effects, then the agency prepares a Negative Declaration (ND). If the Initial Study notes significant effects but also identifies mitigation measures that would reduce these significant effects to a level that is less than significant, then the agency prepares a MND. If a project would involve significant effects that cannot be readily mitigated, then the agency must prepare an Environmental Impact Report (EIR). The agency may also decide to proceed directly with the preparation of an EIR without an Initial Study.

The proposed project is a "project" as defined by CEQA and is not exempt from CEQA consideration. The County has determined that the project may potentially have significant environmental effects and therefore would require preparation of an Initial Study. This Initial Study describes the proposed project and its environmental setting, discusses the potential environmental effects of the project, and identifies feasible mitigation measures that would eliminate any potentially significant environmental effects of the project or reduce them to a level that would be less than significant.

This Initial Study is a public information document that describes the proposed project, existing environmental setting at the project site, and potential environmental impacts of construction and operation of the proposed project. It is intended to inform the public and decision-makers of the proposed project's potential environmental impacts and to document the lead agency's compliance with CEQA and the State CEQA Guidelines.

This Initial Study concludes that the project would have potentially significant environmental effects, all of which would be avoided or reduced to a level that would be less than significant with recommended mitigation measures. The project applicant has accepted all the recommended mitigation measures. As a result, the County has prepared a MND and has issued a Notice of Intent to adopt the MND for the project. The time available for public comment on the Initial Study and MND is shown on the Notice of Intent.

## 1.4 Incorporation By Reference

In accordance with Section 15150 of the State CEQA Guidelines to reduce the size of the report, the following documents are hereby incorporated by reference into this Initial Study and are available for public review at the Lake County Community Development Department – Planning Division.

- Lake County General Plan (2008)
- Lake County Zoning Ordinance: Articles 1 through 72 (2019)
- City of Clearlake 2040 General Plan Update (2017)

## 1.5 Project Environmental Studies

As part of the preparation of this Initial Study, the following studies, which are included in Section 6.0, *Technical Appendices*, were prepared or utilized to develop baseline information and project-related impact discussions. These studies are available for inspection at the Lake County Community Development Department, 255 North Forbes Street, Third Floor – Room 323, Lakeport, CA 95453, during normal business hours (8:00 a.m. to 5:00 p.m. Monday through Thursday).

- DZC Archaeology & Cultural Resources Management. 2018. *Phase I Cultural Resource Inventory Report & Extended Phase 1 Testing Results for the Eastlake Landfill Expansion Project, Lake County, California*. January 2018.
- LSA. 2019. *Noise and Vibration Memorandum for the Eastlake Sanitary Landfill Expansion Project*. October 18, 2019.
- LSA. 2019. *Transportation Memorandum for the Eastlake Sanitary Landfill Expansion Project*. October 2, 2019.
- SCS Engineers. 2019. *Eastlake Landfill Expansion CEQA Air Quality and Greenhouse Gas Impact Analysis*. December 6, 2019.
- SCS Engineers. 2018. *Landfill Expansion Field Investigation Engineering Analyses and Preliminary Basis of Design – Eastlake Sanitary Landfill, Clearlake, California*. October 2018.
- SCS Engineers. 2018. *Report of Disposal Site Information/Report of Waste Discharge/Preliminary Final Closure and Post-Closure Plan: CCR Title 27 – Joint Technical Document for Eastlake Sanitary Landfill, Clearlake, California*. July 30, 2018.
- SHN Consulting Engineers and Geologists, Inc. 2018. *Geologic and Seismic Siting Assessment for the Proposed Eastlake Landfill Expansion, Lake County, California*. March 5, 2018.
- SHN Consulting Engineers and Geologists, Inc. 2018. *Hydrogeologic and Hydrologic Evaluation for the Proposed Eastlake Sanitary Landfill Expansion, Lake County, California*. March 28, 2018.
- SHN Consulting Engineers and Geologists, Inc. 2019. *Natural Resources Assessment Eastlake Expansion Project*. August 2019.

It is important to note that information contained in the cultural resources documentation related on the specific location of prehistoric and historic sites is confidential and exempt from the Freedom of Information Act (FOIA) and the California Public Records Act (CPRA); therefore, site specific cultural resource investigations are not attached to this initial Study. Professionally qualified individuals, as determined by the California Office of Historic Preservation, may contact the Lake County Community Development Department directly in order to inquire about its availability.

## 1.6 Review Process

This Initial Study is being circulated for public and agency review as required by CEQA. Because State agencies will act as responsible or trustee agencies, the County will circulate the Initial Study to the State Clearinghouse (SCH) of the Governor's Office of Planning and Research (OPR) for distribution and a 30-day review period. During the review period, written comments may be submitted to:

LAKE COUNTY  
Community Development Department – Planning Division  
255 N. Forbes Street  
Third Floor, Room 323  
Lakeport, CA 95453

Michalyn DelValle  
Community Development Director  
Michalyn.DelValle@lakecountycalifornia.gov  
(707) 263-2221

## Section 2.0

### Project Description

#### 2.1 Project Location and Setting

##### Regional Setting

Lake County lies within the eastern portion of the North Coast Range, the arbitrary geomorphic province which is bounded by San Francisco Bay to the south, the Sacramento Valley to the east, and the northwestern portion of coastal California to the west. The North Coast Range is formed by numerous rugged ridges and small intermontane valleys. The ridges in the region generally follow a north to northwestern trend.

Elevations in Lake County vary from approximately 1,300 feet above mean sea level (MSL) (the elevation of Clear Lake) to approximately 7,000 feet above MSL at Snow Mountain. Overall the northern half of the County lies at a higher elevation than the southern half. While the general trend is toward greater relief and higher elevations in the northern areas of the county, the mountain ridges of this complex rise 4,000 feet or more above the floor of the Sacramento Valley to the east.

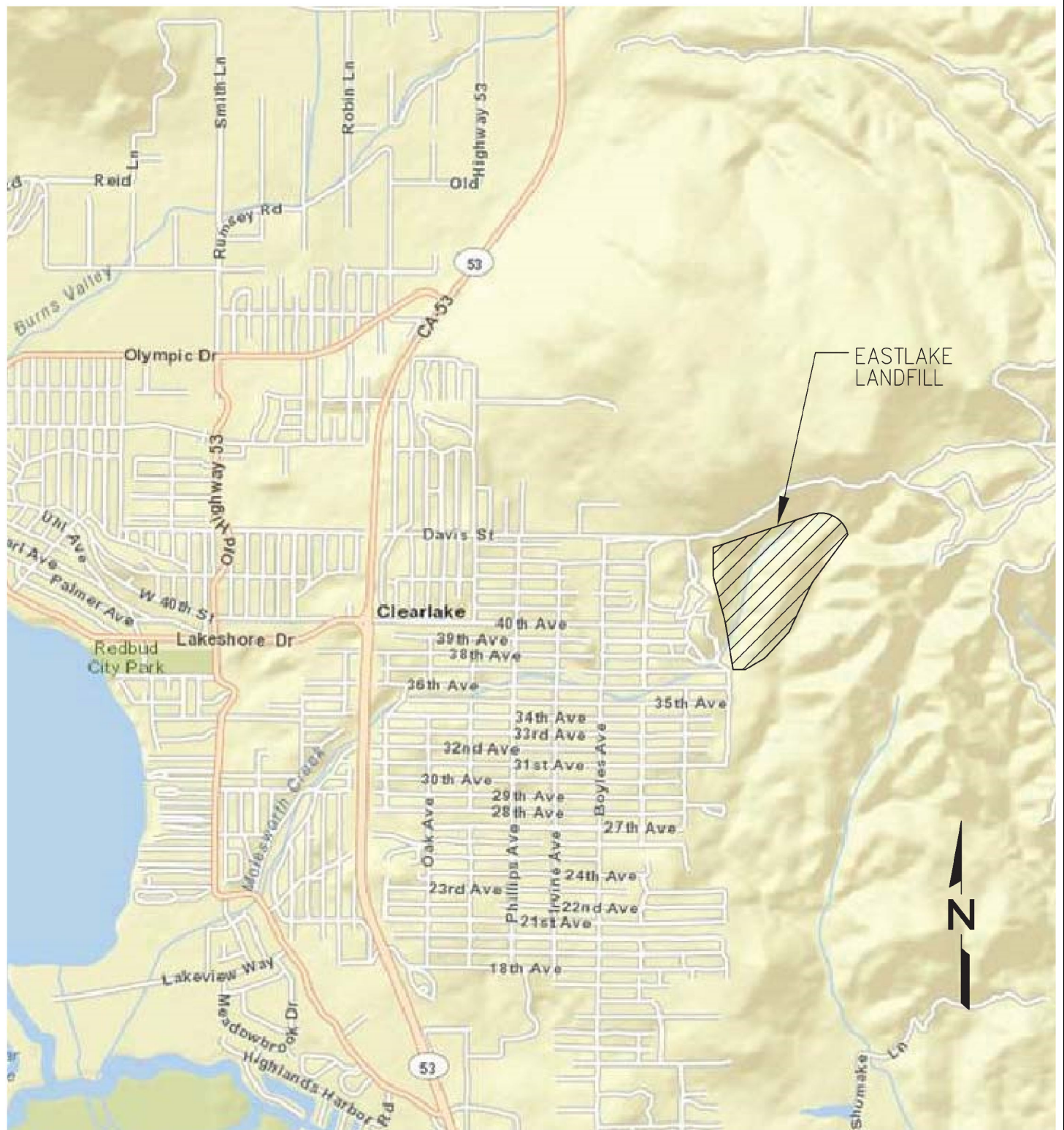
##### Local Setting

The project is located within Lake County, immediately east of the City of Clearlake, and all proposed expansion activities will occur within unincorporated Lake County. The project area is located on the lower slopes of Quackenbush Mountain a pre-historic extinct basaltic andesite volcano part of the Clearlake volcanics. Land use within the vicinity of the project area includes rural residential development to the west, landfill and associated facilities, green waste and vineyard development to the north, and steep wild lands to the east and south. Prior to the development of the landfill in 1972, the project area was likely very similar to the surrounding area, with steep slopes covered in chaparral and grassland and more gently sloping areas with oak woodland and grassland. Some relatively undisturbed habitat area remains surrounding the existing landfill within and surrounding the project area consisting of chamise chaparral, blue oak woodland, riparian woodland, grassland and native dominated flower fields. The project area is situated at an elevation between 1,560 feet and 1,880 feet above MSL. The average 30-year precipitation data for this area from October 1 through August 24 is 33 inches, with the majority of precipitation occurring between November and March. Temperatures in Clearlake range from an average low of 32 degrees Fahrenheit (°F) in December to an average high of 92°F in July; reflecting the inland Mediterranean climate found within Lake County.

##### Project Location

The Eastlake Sanitary Landfill is located at 16015 Davis Avenue and is owned, operated and managed by the Lake County Public Works Department. The landfill is situated approximately 1.73 miles east of Clearlake at the nearest point, and approximately one-mile east of State Route (SR) 53 at its nearest point within Sections 23 and 26 of Township 13 North, Range 7 West, Mount Diablo Base Meridian (MDBM). The project area includes eleven separate parcels (Assessor's parcel numbers [APNs] 010-053-110, 120, 130, 140, 010-008-030, 350, 390, 410, 041-224-400, 041-234-270, and 041-244-180). The location of the proposed project is depicted on Figure 2-1, SITE LOCATION, and Figure 2-2, STUDY AREA PARCELS, with a site plan provided on Figure 2-3, EXISTING SITE PLAN.

The currently permitted boundary for the Eastlake Sanitary Landfill is primarily within unincorporated Lake County jurisdiction. Some existing landfill features including the entrance road, recycle center, maintenance buildings and Area I landfill slope are within the jurisdiction of the City of Clearlake. As previously mentioned above, the proposed landfill expansion areas would be located entirely within unincorporated County jurisdiction. Also depicted in Figures 2 and 3 is an approximate 40-acre parcel (APN 010-008-350) owned by the U.S. Department of the Interior (DOI), Bureau of Land Management (BLM). The County has an easement agreement with the BLM for access across this parcel to the existing landfill scale house. No change in use of the BLM property or expansion onto that property is proposed.



Eastlake Landfill  
CEQA Initial Study  
Lake County, California

Site Location

November 2019

Source: SCS Engineers, 2019

Figure 2-1



\\Arcata\Projects\GIS-Files\Willits\2019\419004-ESL-CEQA\PROJ\_MXD\ USER: jsousa DATE: 11/5/19, 10:57AM



SOURCE: GOOGLE EARTH PRO, 2017



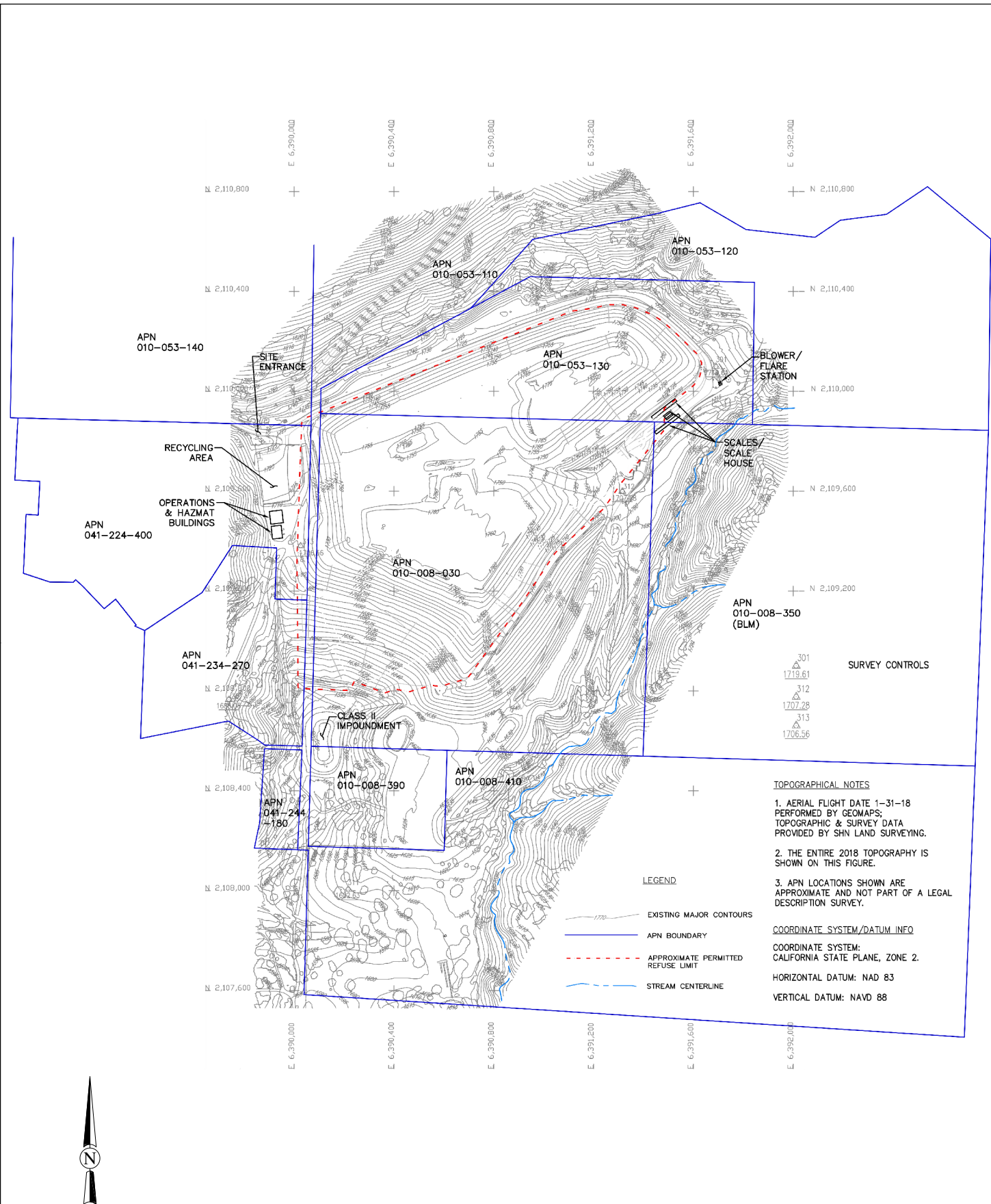
Eastlake Landfill  
CEQA Initial Study  
Lake County, California

Study Area Parcels

November 2019

Source: SCS Engineers, 2019

Figure 2-2



Eastlake Landfill  
CEQA Initial Study  
Lake County, California

Existing Site Plan

November 2019

Source: SCS Engineers, 2019

Figure 2-3



## Existing Conditions and Operations

The current permitted landfill footprint at the Eastlake Sanitary Landfill is approximately 35 acres (refer to Figure 2-3, EXISTING SITE PLAN, for a depiction of current topography and key site features). Within Lake County, the Eastlake Sanitary Landfill is the primary disposal facility for non-hazardous municipal solid wastes generated within the County. The site is designated as a Class III waste management unit that is based on the following site characteristics:

- Geologic setting is sufficient to ensure no impairment of beneficial uses of surface water or groundwater beneath or adjacent to the landfill. Factors to evaluate include: landfill's size; hydraulic conductivity and transmissivity of underlying soils; depth to groundwater and variations in depth to groundwater; background quality of groundwater; current and anticipated use of groundwater; and, annual precipitation.
- Not located in a 100-year floodplain or wetland.
- Not subject on or within 200 feet of a Holocene fault.
- The waste management unit's containment structure are designed, constructed and maintained to preclude failure due to rapid geologic change.

The waste types permitted to be discharged at a Class III landfill, per Title 27 Section 20220, are generally limited to "Nonhazardous Solid Waste," defined as: "all putrescible and non-putrescible solid, semi-solid, and liquid wastes, including garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction waste, abandoned vehicles and parts thereof, discarded home and industrial appliances, manure, vegetable or animal solid and semi-solid wastes and other discarded waste (whether of solid or semi-solid consistency); provided that such wastes do not contain waste which must be managed as hazardous wastes, or wastes which contain pollutants in concentrations which exceed applicable water quality objectives, or could cause degradation of water of the State (i.e., designated waste)."

Lake County residents and businesses currently generate approximately 45,000 to 50,000 tons of municipal solid waste per year requiring disposal at the landfill. These totals exclude wildfire debris which has been disposed at the site over the period 2015 through 2018. As of January 2019 the remaining net useable airspace capacity at the landfill was estimated to be approximately 659,200 cubic yards (cy).

### Municipal Solid Waste Disposal

The Eastlake Sanitary Landfill is currently permitted for an average daily throughput of 200 tons per day (tpd) where the daily average is calculated weekly. The County reports that there have been no exceedances of the 200 tpd permitted maximum tonnage limit since the Solid Waste Facility Permit (SWFP) was issued in August, 1998, with the exception of the emergency waivers granted to allow disposal of ash and fire debris from 2015 to 2017-18. The current municipal solid waste disposal rate, for wastes generated solely within Lake County, is approximately 45,000 tons per year (tpy), equivalent to 130 tpd. This excludes contributions from wildfire debris.

### Hours of Operation

Current hours of facility operation are 7:30 a.m. to 4:00 p.m., 7 days per week, except for 12 legal holidays or any other holiday declared by the Board of Supervisors pursuant to State law. The facility is operated 353 days per year. Public hours at the Eastlake Sanitary Landfill for waste receipt are 7:30 a.m. to 3:00 p.m. The facility is open for limited hours for waste receipt from commercial franchise haulers on some holidays from 7:30 a.m. to 12:00 noon. On occasion, at the request of the Sheriff's office or as a result of an emergency situation, the hours may be extended with the approval of the Lake County Public Services Director to allow emergency debris removal or disposal of confiscated marijuana loads.

## Site History and Key Features

### Waste Disposal Areas / Waste Management Units

The Eastlake Sanitary Landfill is a canyon-type fill and consists of two discrete disposal areas, or waste management units, designated Areas I and II, respectively. Operation of this site as a sanitary landfill began in 1972. Prior to 1972, a legal burn dump was operated on a southern portion of the County's landfill property. Sometime around 1975, solid waste was



placed in the upper end of the Area I canyon and associated burn debris was removed from the lower canyon and disposed within the limits of the existing Area I waste management unit.

Sanitary landfill operations in the 22.4-acre Area I continued until 1999. There is no engineered base liner in place in Area I (this is typical of landfills constructed and operated before adoption of current governing federal and State regulations). The module is equipped with a leachate collection and removal system (LCRS) that gravity-drains to a 600,000 gallon lined Class II surface impoundment located below the southern toe of the waste management unit.

In 1999, the County began filling the adjacent 12.3-acre Area II cell. The cell was constructed with a composite base liner overlain by an LCRS. The base liner system was constructed in accordance with requirements outlined in federal Subtitle D regulations (40 CFR 258) and Title 27 of the California Code of Regulations (27 CCR). The LCRS discharge piping gravity-drains to the surface impoundment. Area II consists of 2 modules, Module 1 (6.5 acres) and Module 2 (5.8 acres). Refuse depths start at 1,660 feet above MSL for Module 2 and initial refuse was placed once the refuse filling in Module 1 reached its final refuse filling height.

The unlined Area I and Lined Area II disposal units abut each other. Currently fill operations are taking place in the top deck generally overlying the two footprint areas. Current surface elevations range from approximately 1,750 to 1,770 feet above MSL in the top deck area. For the currently permitted landfill, filling will continue until the site reaches elevation 1,827 feet above MSL at its highest point, and in accordance with the currently approved final grading plan. The proposed final grading plan for the currently permitted landfill operation is provided in Figure 2-4, FINAL GRADING PLAN (EXISTING PERMIT).

### **Ancillary Facilities**

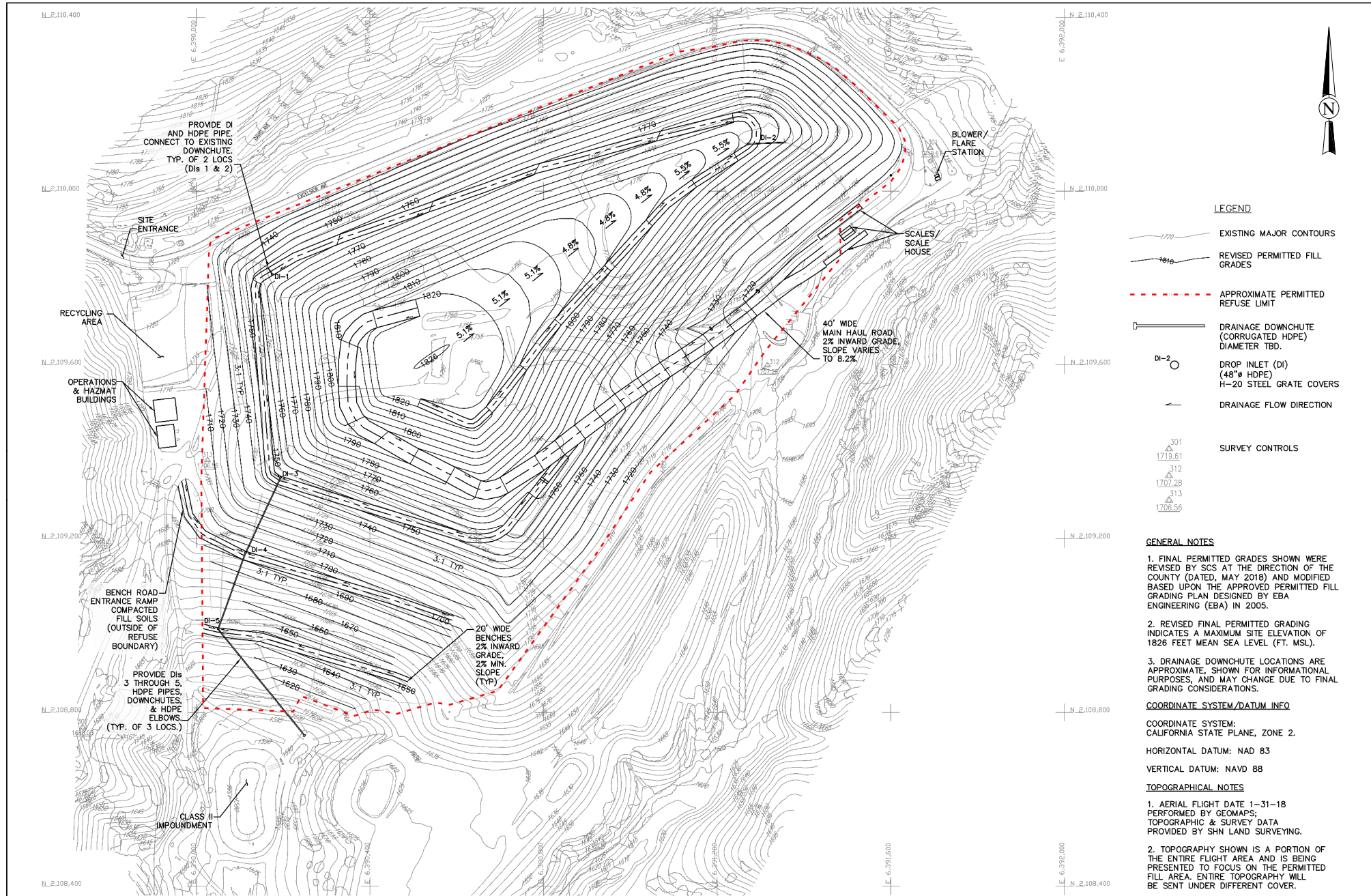
In addition to the waste management units components described above there are a number of improvements and ancillary facilities at the Eastlake Sanitary Landfill. They include the following (refer to Figure 2-3, EXISTING SITE PLAN):

- Paved two-lane access road from the landfill entrance to the scalehouse and bagdump areas.
- Perimeter drainage control facilities.
- Dedicated borrow source area for daily soil cover.
- Scalehouse and scale facilities.
- Restroom building.
- Bagdump facility.
- Recycling and buy back center.
- Operations and equipment shop.
- 2,500 gallon potable water tank.
- Leachate, unsaturated zone, groundwater and perimeter landfill gas (LFG) monitoring points.
- LFG collection and control system (GCCS), with gas blower and flare station located at the north end of the site.

## **2.2 Purpose of the Proposed Project**

As of January 2019, the remaining net (useable) airspace capacity at the Landfill was estimated to be approximately 659,200 cubic yards. This remaining airspace was expected to be exhausted in 5 to 6 years (as soon as early year 2024). The County proposes to expand the Eastlake Sanitary Landfill in order to secure long-term municipal solid waste disposal capacity beyond year 2024. Expansion of the landfill is proposed solely for the purpose of meeting long-term community public service and waste disposal needs.

The municipal solid waste disposal rate in the County is assumed to increase proportionally with population/economic growth forecasts, at approximately 1.3% per year through 2030. This growth rate represents the mid-range between actual population growth in Lake County over the period 2000-2015, and the Lake County General Plan forecast for years 2015-2030. The 1.3% annual growth rate was used as a basis for estimating future waste disposal rates, starting with a base of 45,000 tpy in 2018. Using this growth rate, projected averaged daily disposal rates are forecast to range from 130 tpd in 2020 to 180 tpd in 2045.



Eastlake Landfill  
CEQA Initial Study  
Lake County, California

November 2019

Source: SCS Engineers, 2019

Final Grading Plan (Existing Permit)

Figure 2-4

The peak daily disposal rate at the landfill is forecasted to be 480 tpd. The peak daily disposal rate will accommodate special events, seasonal fluctuations due to construction or tourist activities, and other factors. This peak is based on historic waste deliveries for municipal solid waste only (year 2014), when waste import from Mendocino County was in effect and annual disposal rates were comparable to those forecasted at Eastlake Sanitary Landfill for year 2040 and beyond (for County-only wastes). This peak excludes debris disposal from wildfires, which has historically been allowed under waivers granted during a state of emergency.

## 2.3 Basis of Design

The design criteria for the proposed landfill expansion are as follows:

- New cell excavations provide for the bottom of waste to be above historic high groundwater elevations. Under 27 CCR, disposal facilities must be sited, designed, constructed and operated to ensure that solid waste will be a minimum of five feet above the highest anticipated elevation of underlying groundwater. For preliminary design purposes, the design interprets the potential contact point with waste to be the bottom elevation of the leachate collection layer in a landfill base liner system. The proposed cell excavation elevations and configurations maintain 5-foot separation from anticipated high groundwater elevations and are consistent with 27 CCR requirements, and design standards in WDR R5-2019-0009. To be conservative, the proposed cell design also includes engineered underdrain systems for canyon cells and floors. This is consistent with previous Area II design and permit conditions onsite.
- A minimum setback of 30 feet from the top bank of mapped intermittent streams would be maintained for cell excavations, fill slopes or stability berms.
- A minimum 50-foot setback from the property line is provided for the proposed expansion areas entirely within County-owned land.
- There are insufficient quantities of suitable low permeability soils available onsite for landfill base liner construction. Consistent with previous cell design and permit conditions at the landfill, a factory fabricated GCL component in lieu of a low-permeability soil layer will be utilized.
- Cell excavation cut slopes will be at 2H:1V or flatter.
- Refuse fill slopes will be no steeper than 3H:1V, with 15-foot wide benches at every 50-foot elevation increase<sup>1,2</sup>.
- The final fill elevation will be at or just below 1,827 feet above MSL. It is important to note that maximum permitted elevation in the existing Solid Waste Facility Permit is 1,860 feet above MSL.
- Storm water conveyance features will be designed for a 100-year, 24-hour storm event per 27 CCR regulations.
- A new 4.1-acre storm water retention basin will be constructed, generally southeast of the existing Class II liquid impoundment to accommodate a 100-year, 24-hour storm event.
- Landslide deposits are mapped on both County and South Lake Refuse owned parcels generally north of the existing landfill area, and within the area that is proposed for expansion. These have been identified as relict features. Under 27 CCR, landfill expansion cells can be located in areas of potential rapid geologic change (i.e. landslide areas) if containment features are designed, constructed and operated to prevent failure.

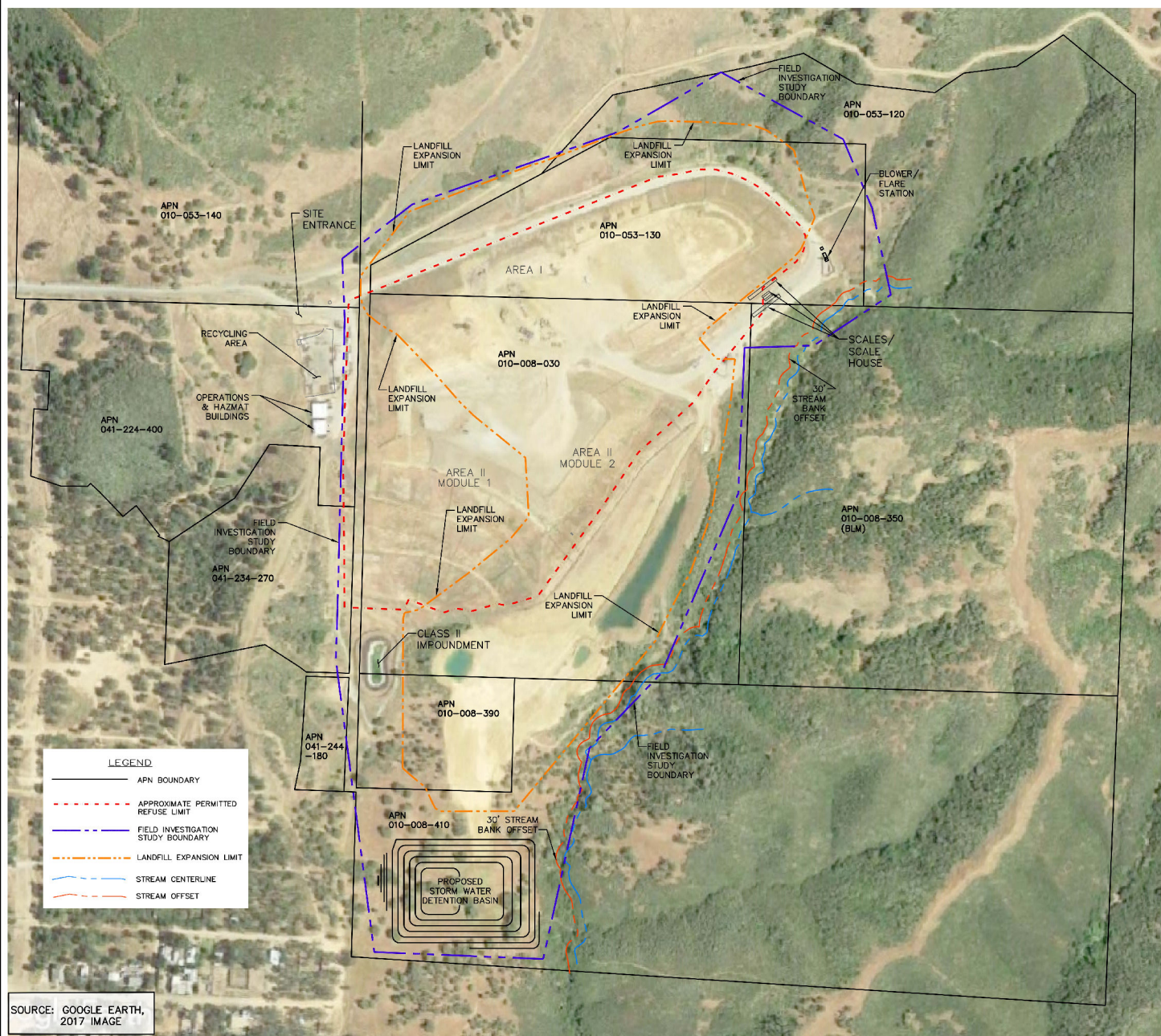
The proposed expansion would require land purchase or lease for expansion onto an adjacent private property (APN 010-053-140). No waste disposal is proposed within this parcel. In addition, the proposed landfill expansion design would require a new access road alignment and road cuts onto APN 010-053-110 only, thus necessitating a lot-line adjustment with land dedication to the County. Allowing for a 200-foot setback from fill operations, this land dedication is estimate to be approximately 5 acres. All soil disturbance and grading to allow landfill expansion will remain entirely within unincorporated Lake County.

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1. A preliminary seismic and stability evaluation was performed to assess proposed base grading and waste fill configurations. The static safety factors for the sections analyzed are equal to or above the generally accepted factor of safety of 1.5. Estimated seismic displacements for the base liner and final cover system meet applicable 27 CCR stability criteria.

2. RMC Geoscience, Inc. 2019. *Preliminary Seismic and Stability Evaluation, Lake County Eastlake Landfill Expansion Project*. March 12, 2019.





Eastlake Landfill  
CEQA Initial Study  
Lake County, California

Proposed Landfill Expansion Site Plan

November 2019

Source: SCS Engineers, 2019

Figure 2-5

## 2.4 Description of the Proposed Project

The proposed project would laterally expand the existing Eastlake Sanitary Landfill to the north and east on properties owned by the County and South Lake Refuse, and to the south onto properties owned by the County. The lateral expansion areas would occupy approximately 21.8 acres footprint area. The existing, permitted landfill area is approximately 35 acres and after full expansion would be approximately 56.5 acres. An additional approximately 14.4 acres of land outside of the disposal footprint areas will be needed for a new access road and road cuts, a new storm water basin, and soil stockpiling. Refer to Figure 2-5, PROPOSED LANDFILL EXPANSION SITE PLAN, for an illustration of the expansion footprint areas and limits of grading.

It is important to note that no vertical expansion beyond currently permitted maximum fill elevations would occur with the proposed expansion and both existing Class II surface impoundment (leachate pond) and existing LFG flare would also remain at their current locations. In addition, the existing scales and scale house and maintenance buildings would remain in place.

Landfill expansion (excavation and cell construction) will occur in four discrete phases. Construction of the new all-weather main access road would be necessary in advance of the first new cell excavation. Preliminary design parameters are listed below in Table 2-1, KEY DESIGN FEATURES – LANDFILL EXPANSION. Estimated water use associated with new cell construction is provided in Table 2-2, ESTIMATED WATER DEMAND – CONSTRUCTION. Site plans depicting excavation, fill sequencing and final grading, cross-sections and details are shown in Figure 2-6, PROPOSED LANDFILL EXPANSION EXCAVATION PLAN, and Figures 2-7 through 2-10, PROPOSED FILL SEQUENCE PLAN (PHASES 1-4).

**Table 2-1**  
**KEY DESIGN FEATURES – LANDFILL EXPANSION**

Design Feature	Proposed Expansion
Expansion Area Footprint (Plan Area)	21.8 acres
Waste Cell Excavation Volume	481,000 bank cubic yards (bcy)
Useable Airspace	1,843,000 bcy
Storm Water Basin Excavation	114,000 bcy
Disposal Capacity @ 1,200 lb/cy airspace utilization	1,106,000 tons
Additional Soil Needed (soil balance for daily/intermediate/final cover)	18,200 bcy
Additional Site Life	22 years (year 2046+)

Source: SCS Engineers. 2019.

Implementation of the proposed expansion will not change the amount of potable water used onsite which is estimated to remain at approximately 125 gallons per day (gpd). Currently, operations at the Eastlake Sanitary Landfill utilize approximately 16,000 gpd of water for dust suppression. This water is currently procured onsite from the existing ponds. Estimated water use associated with new cell construction is provided below in Table 2-2, ESTIMATED WATER DEMAND - CONSTRUCTION.

**Table 2-2**  
**ESTIMATED WATER DEMAND – CONSTRUCTION**

	Phase 1	Phase 2	Phase 3	Phase 4
Estimated Start Year	2024	2028	2036	2042
Estimated Duration (days)	20	83	5	NA
Estimated Water at 100,000 gpd	1,400,000	7,900,000	270,000	NA

Source: SCS Engineers. 2019.

Notes:

1. Construction schedule based on earthmoving quantity ranging between 3,000 and 4,800 bcy/day.
2. Estimates assume two water trucks operating 10 hours per day.

As noted in Table 2-2, water for cell construction is estimated to range between 270,000 to 7,900,000 gallons for phases 1 through 3. The onsite operational and construction water demand would cease upon landfill closure (year 2042).

The proposed project is intended to accommodate anticipated waste disposal needs of the residents and businesses of Lake County. The County does not propose any significant changes in day-to-day operations as part of landfill expansion. In particular, no changes are proposed that would affect:

- Waste Management Unit (WMU) classification or waste acceptance criteria will remain as noted above under *Existing Conditions and Operations*. Daily operations include waste placement, compaction and cover practices. Daily cover prevents windblown trash, minimizes the escape of odor, prevents excess water infiltration into the waste, minimizes vectors, prevents water runoff, and minimizes risk of fires.
- Hours of operation will remain unchanged as noted above under *Existing Conditions and Operations*.
- Waste quantities received and daily customer counts, other than to accommodate planned growth in the Lake County service area. The peak daily traffic count is expected to remain within the 300 vehicle per day limit as currently allowed by Solid Waste Facility Permit #17-AA-0001.
- Filling will continue until the site reaches elevation 1,827 feet above MSL at its highest point. Fill side slopes will be graded and finished at a 3:1 slope. Following cessation of waste deliveries, a final cover system will be installed in accordance with regulatory and permit conditions. Post-closure land use (absent proposed landfill expansion) will be non-irrigated open space and will not exceed the current permitted elevation of 1,827 feet above MSL (refer to Figure 2-11, PROPOSED LANDFILL EXPANSION FINAL GRADING PLAN). Proposed landfill cross-sections, including proposed baseliner, preferential pathway, and final cover and LCRS details are provided in Figures 2-12 through 2-16.
- Environmental control and monitoring provisions, except as may be required by future regulation or permit conditions. The County operates the landfill in accordance with state minimum standards and requirements embodied in 27 CCR Section 21600 to minimize public health and nuisance concerns. Control measures include those for nuisance management, fire, leachate, dust, vectors, drainage and erosion, litter, noise, traffic and hazardous waste management.

The proposed expansion would provide approximately 1.84 million cubic yards of additional, useable airspace capacity (beyond the current permitted capacity), and at anticipated disposal rates, would extend landfill site life by 22 years or more.

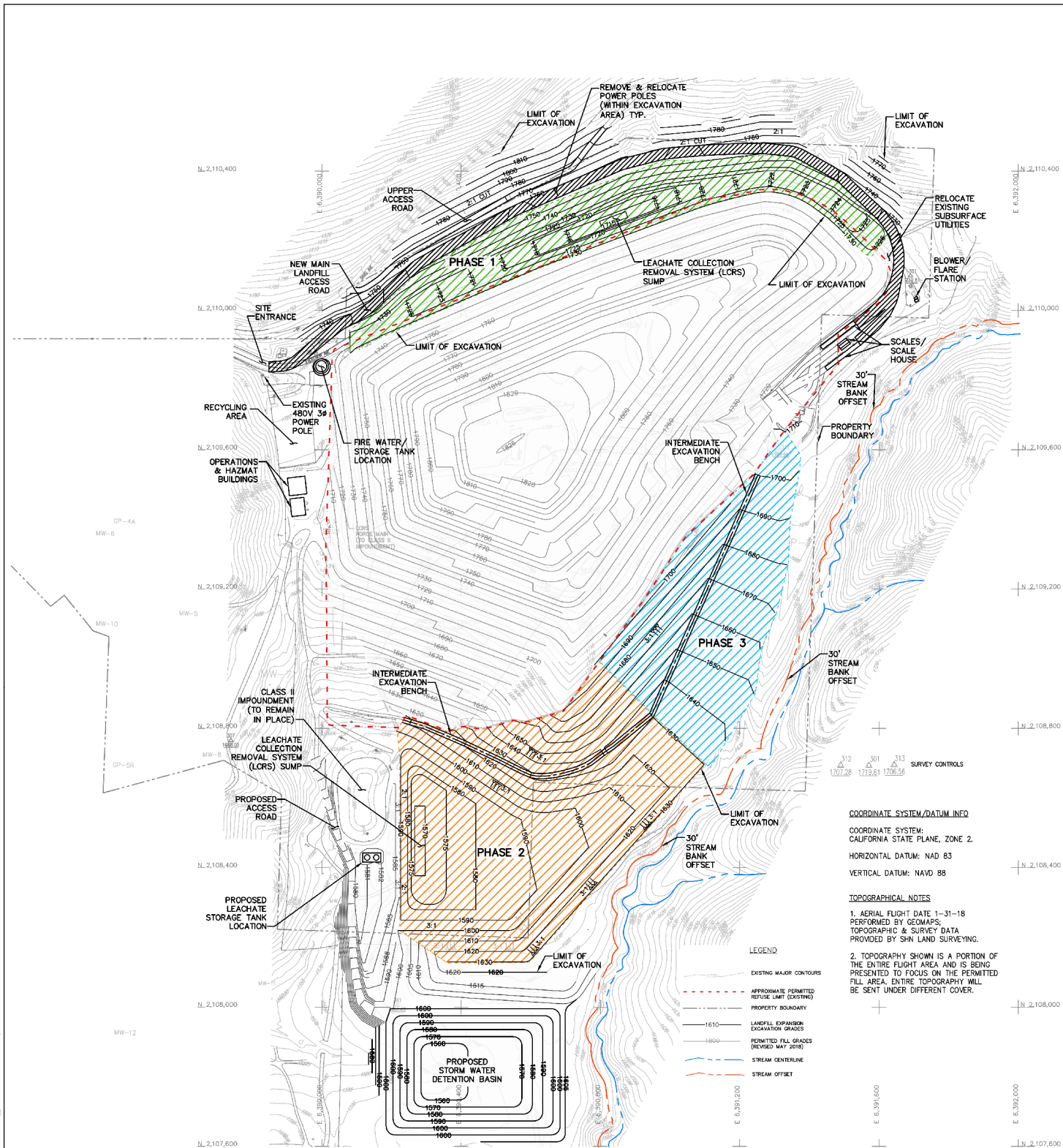
## 2.5 Facility Permits

Eastlake Sanitary Landfill is operated in accordance with several regulatory permits, including local requirements as identified below in Table 2-3, EXISTING FACILITY PERMITS.

**Table 2-3  
EXISTING FACILITY PERMITS**

Regulatory Agency	Permit
CalRecycle; Lake County DHS-Environmental Division	Waste Discharge Requirements R5-2019-0009; Cleanup and Abatement Order R5-2015-0713
Regional Water Quality Control Board - Central Valley Region	Solid Waste Facility Permit (SWFP) #17-AA-0001
Lake County Air Quality Management District	Authority to Construct 85-035; Designated Non-Major Stationary Source – Permit to Operate #P/O 2003-11
CalRecycle	Tire Program Identification #1103316-01
CAL EPA Department of Toxic Substances	USEPA Generator ID #CAH111000085
US EPA – NPDES	Storm Water Permit
State Water Resources Control Board	WDID Permit #5817SO14858
County of Lake	General Plan Conformance Finding dated September 28, 2006.
Source: SCS Engineers. 2019.	





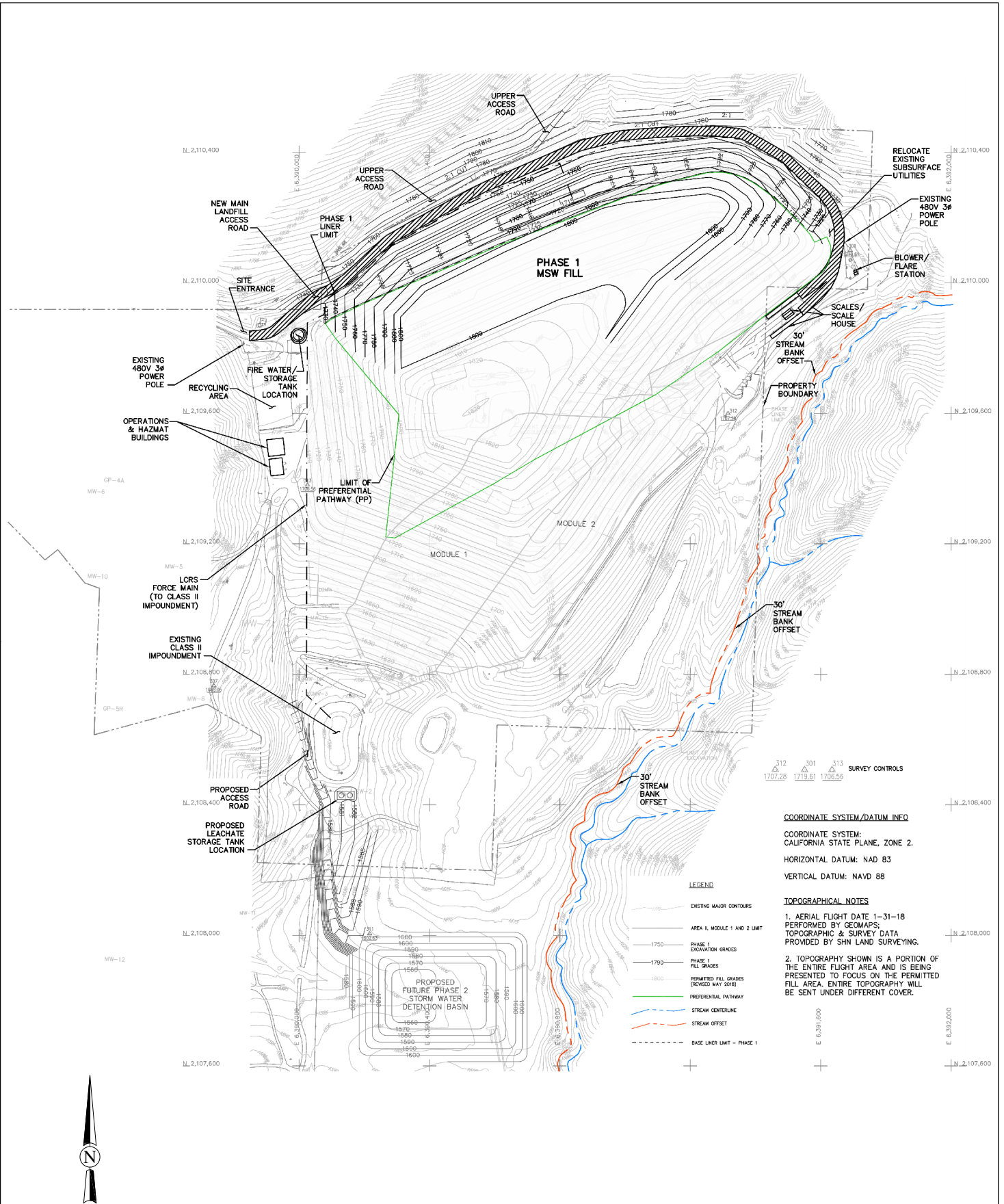
# Eastlake Landfill CEQA Initial Study Lake County, California

November 2019

Source: SCS Engineers, 2019

## Proposed Landfill Expansion Excavation Plan

Figure 2-6



Eastlake Landfill  
 CEQA Initial Study  
 Lake County, California

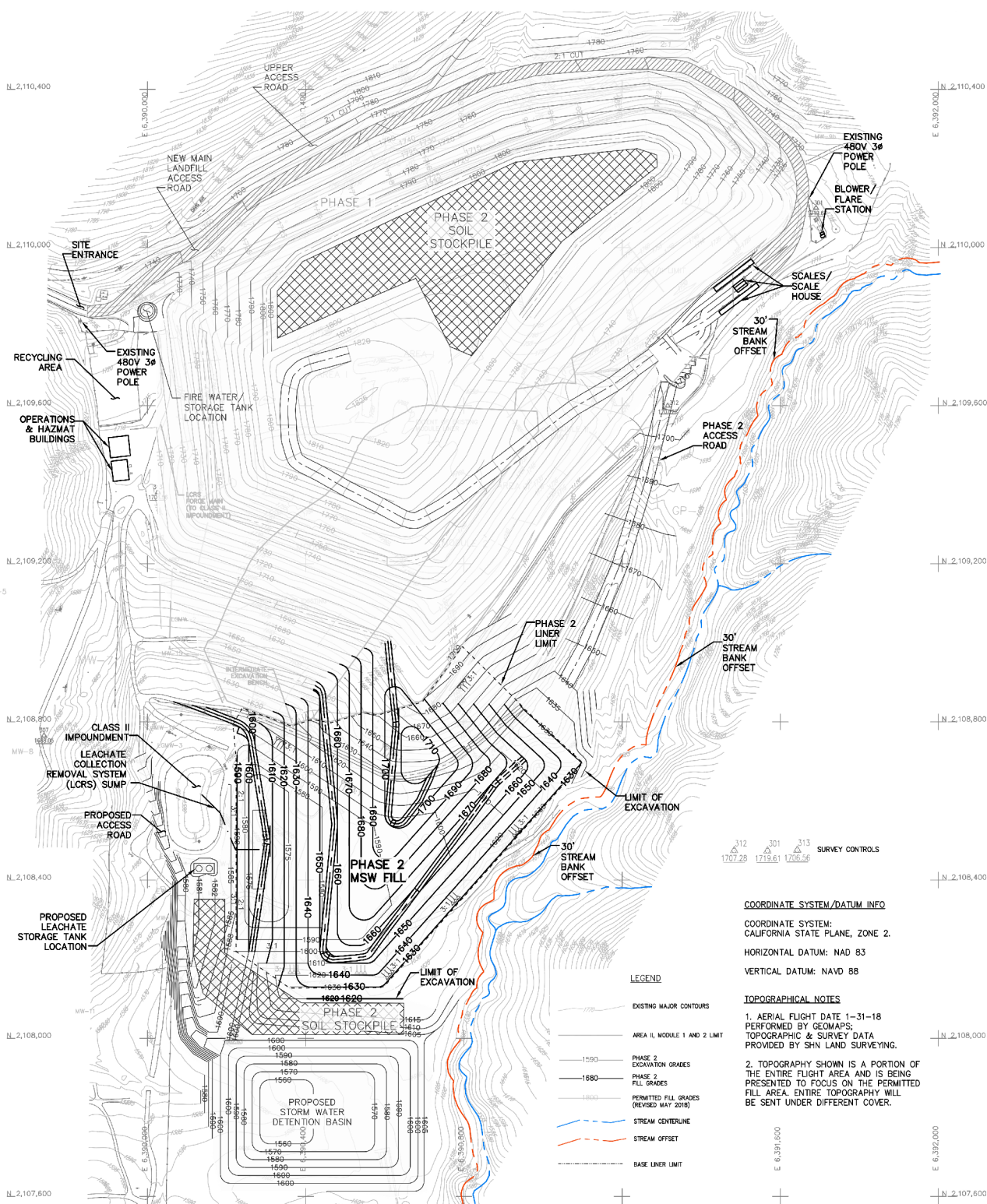
Proposed Fill Sequence Plan  
 (Phase 1)

November 2019

Source: SCS Engineers, 2019

Figure 2-7





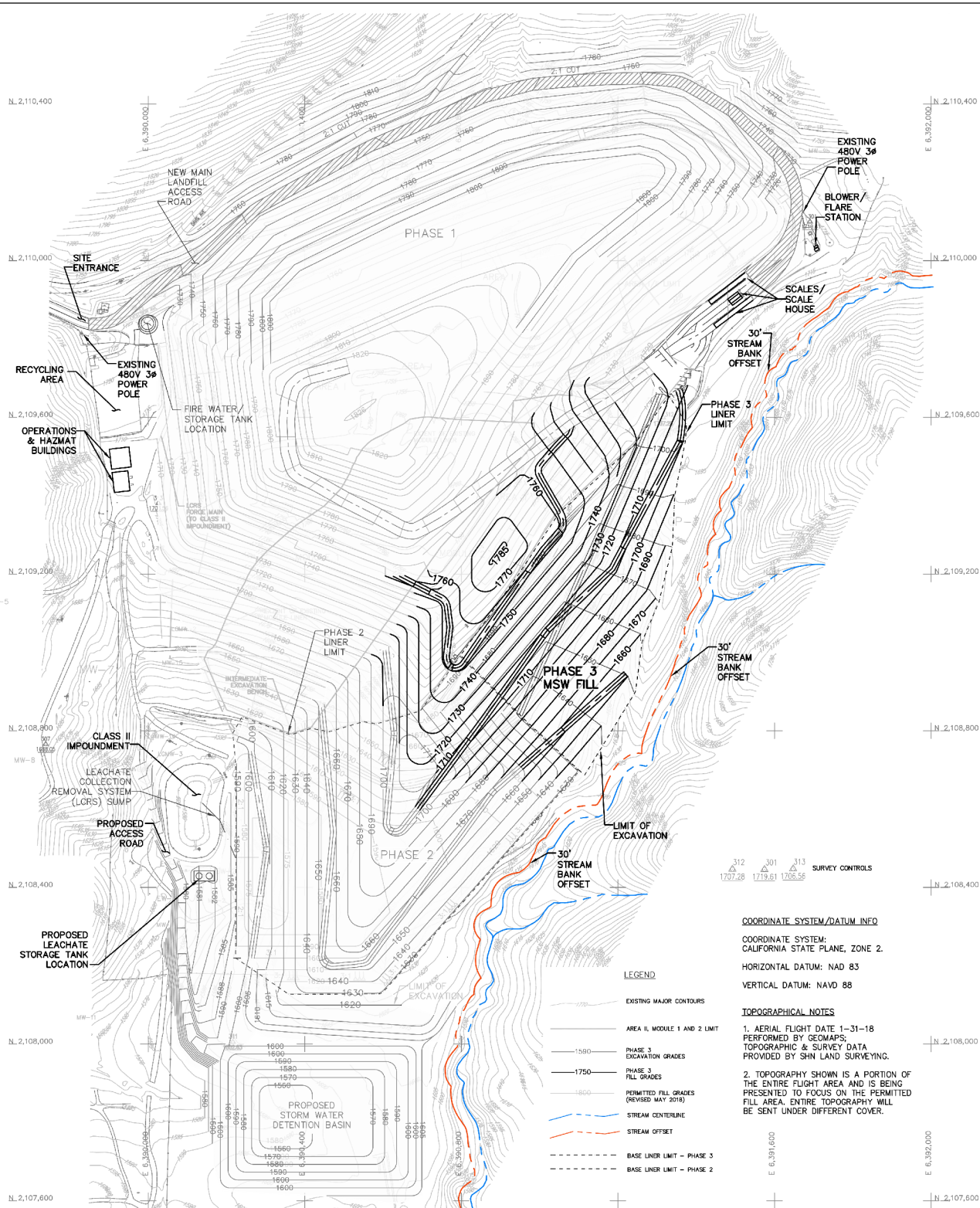
Eastlake Landfill  
 CEQA Initial Study  
 Lake County, California

Proposed Fill Sequence Plan  
 (Phase 2)

November 2019

Source: SCS Engineers, 2019

Figure 2-8



Eastlake Landfill  
 CEQA Initial Study  
 Lake County, California

Proposed Fill Sequence Plan  
 (Phase 3)

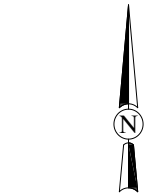
November 2019

Source: SCS Engineers, 2019

Figure 2-9







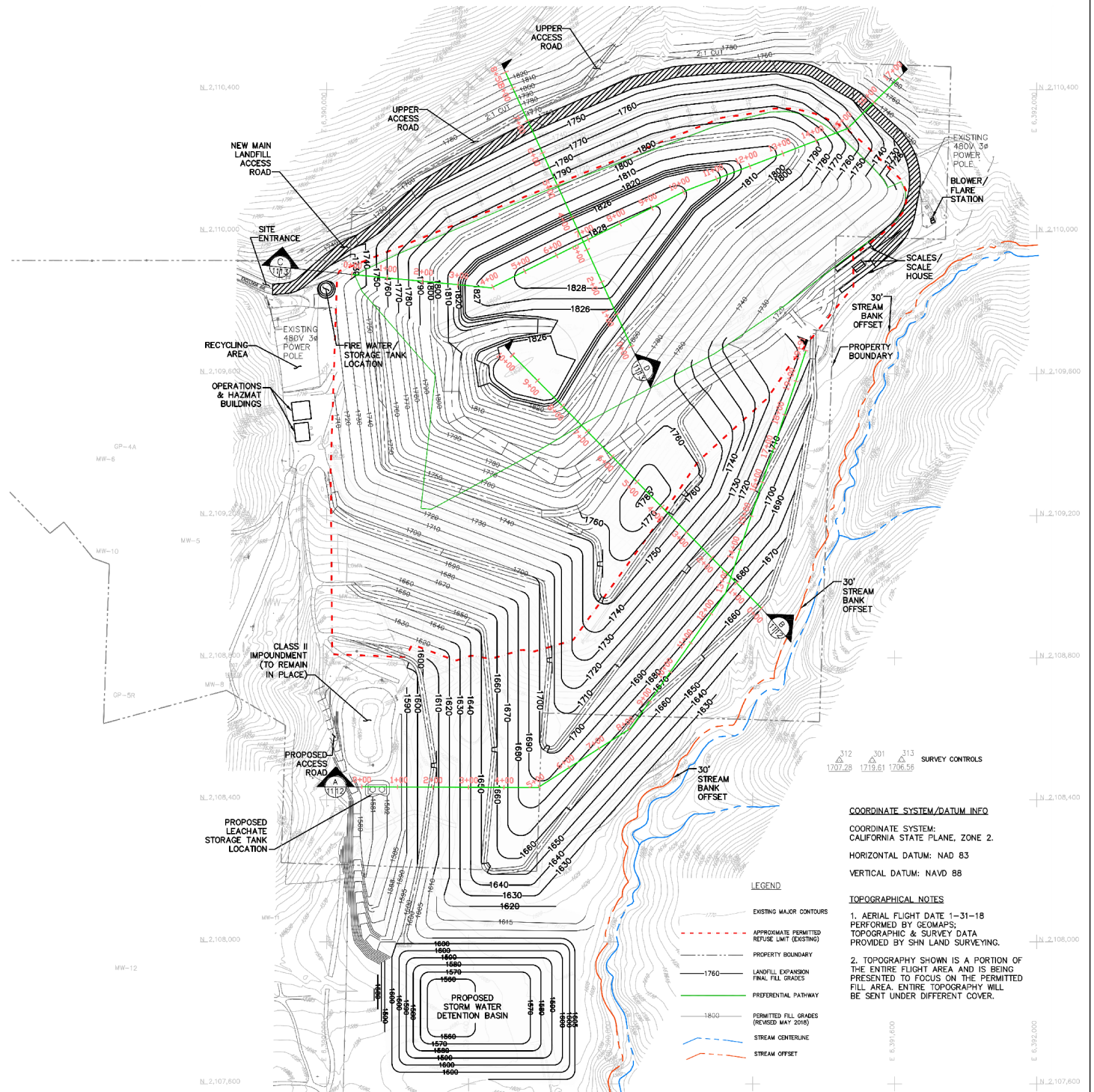
Eastlake Landfill  
CEQA Initial Study  
Lake County, California

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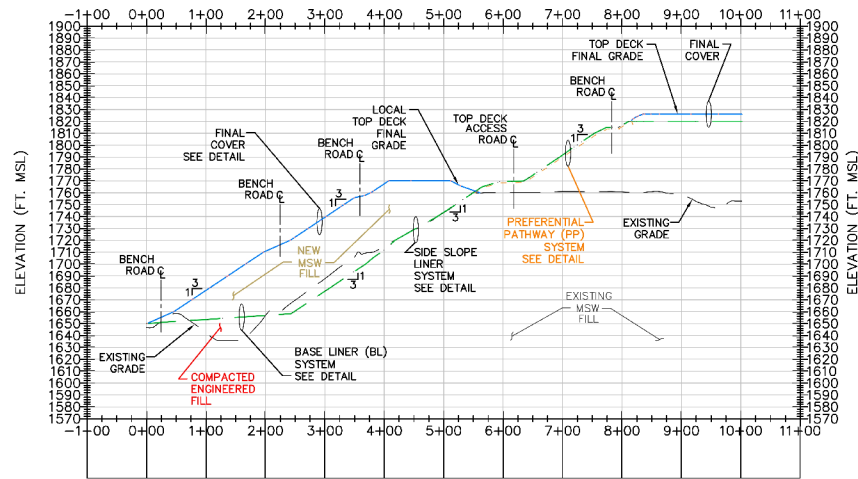
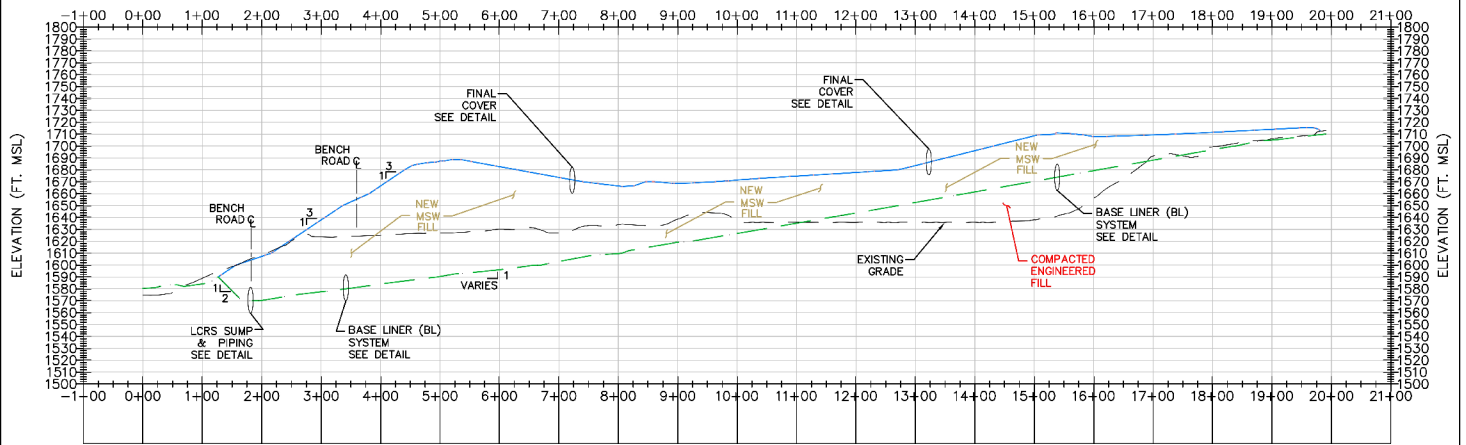
Source: SCS Engineers, 2019

Proposed Landfill Expansion  
Final Grading Plan

Figure 2-11







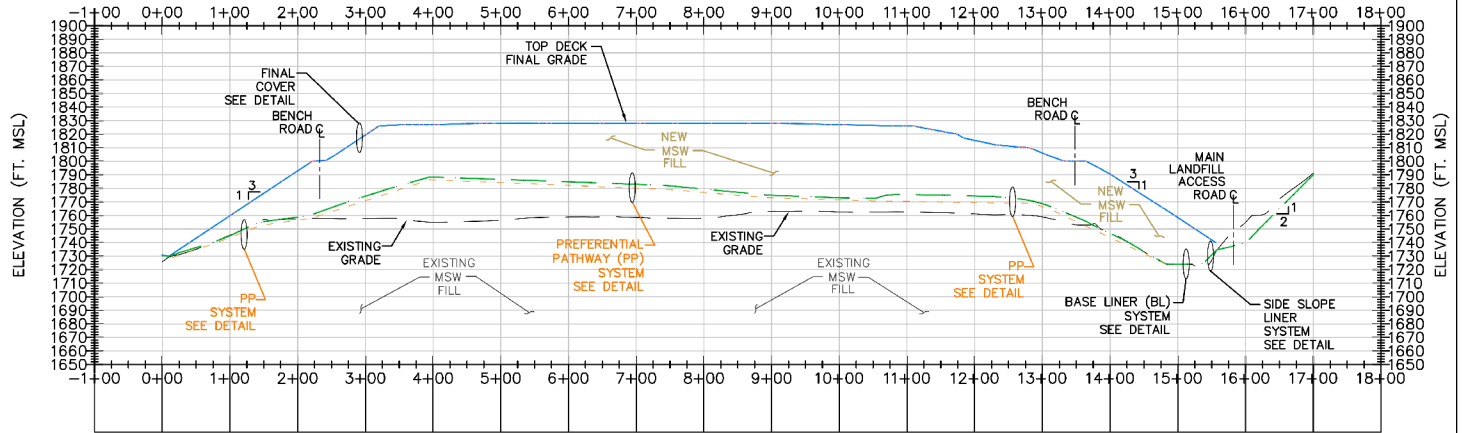
Eastlake Landfill  
CEQA Initial Study  
Lake County, California

Proposed Landfill Expansion  
Sections (1 of 2)

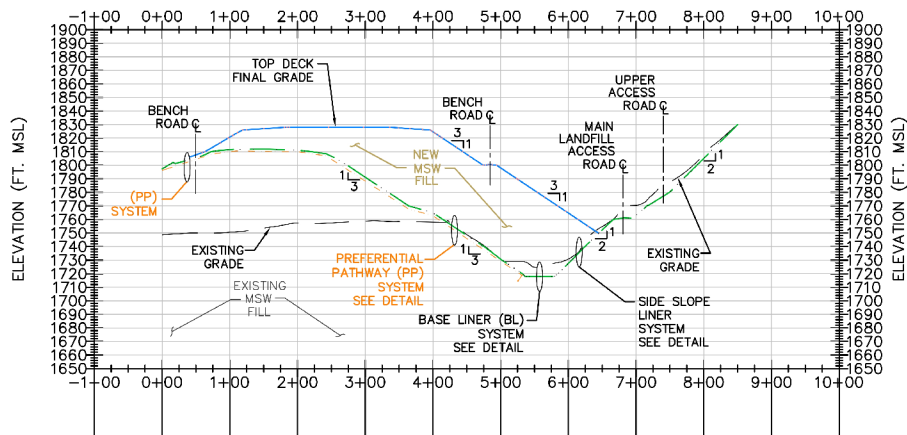
November 2019

Source: SCS Engineers, 2019

Figure 2-12



**C**  
SECTION C  
SCALE:  
H: 1"=100'  
V: 1"=50'



**D**  
SECTION D  
SCALE:  
H: 1"=100'  
V: 1"=50'



Eastlake Landfill  
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Lake County, California

Proposed Landfill Expansion  
Sections (2 of 2)

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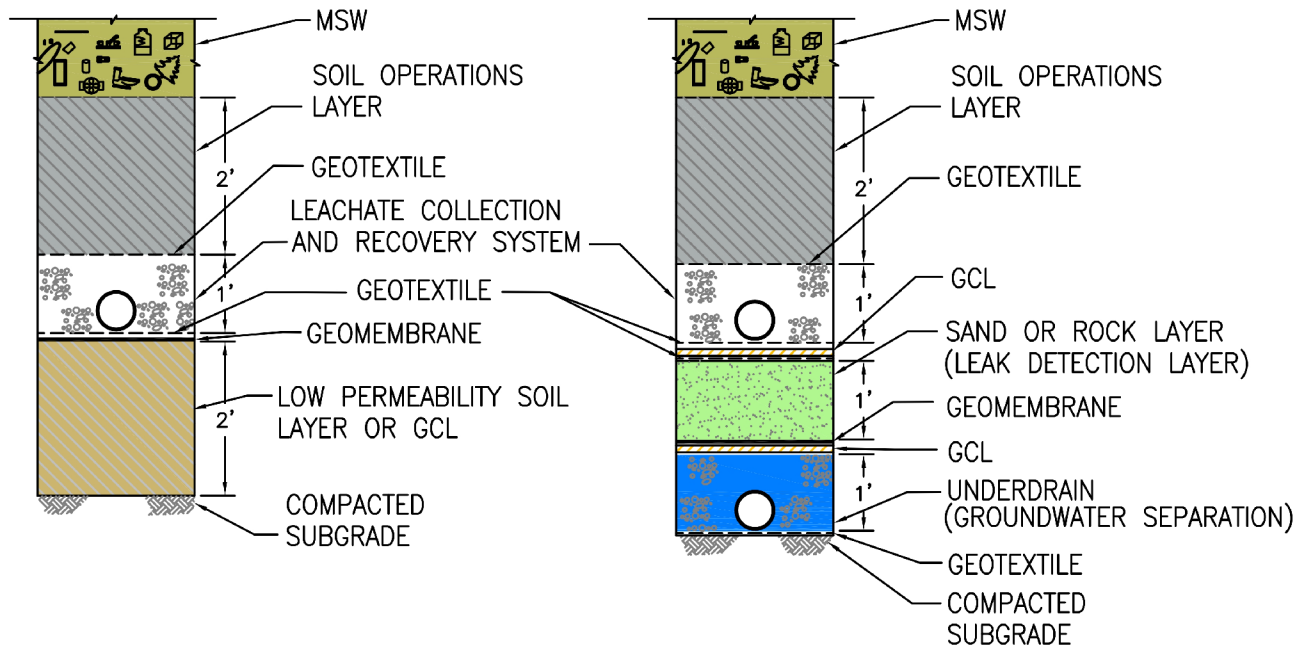
Source: SCS Engineers, 2019

Figure 2-13

## 27CCR PRESCRIPTIVE LINER

## PROPOSED ENGINEERED ALTERNATIVE

### PHASES 1, 2, & 3



## BASE LINER SYSTEMS



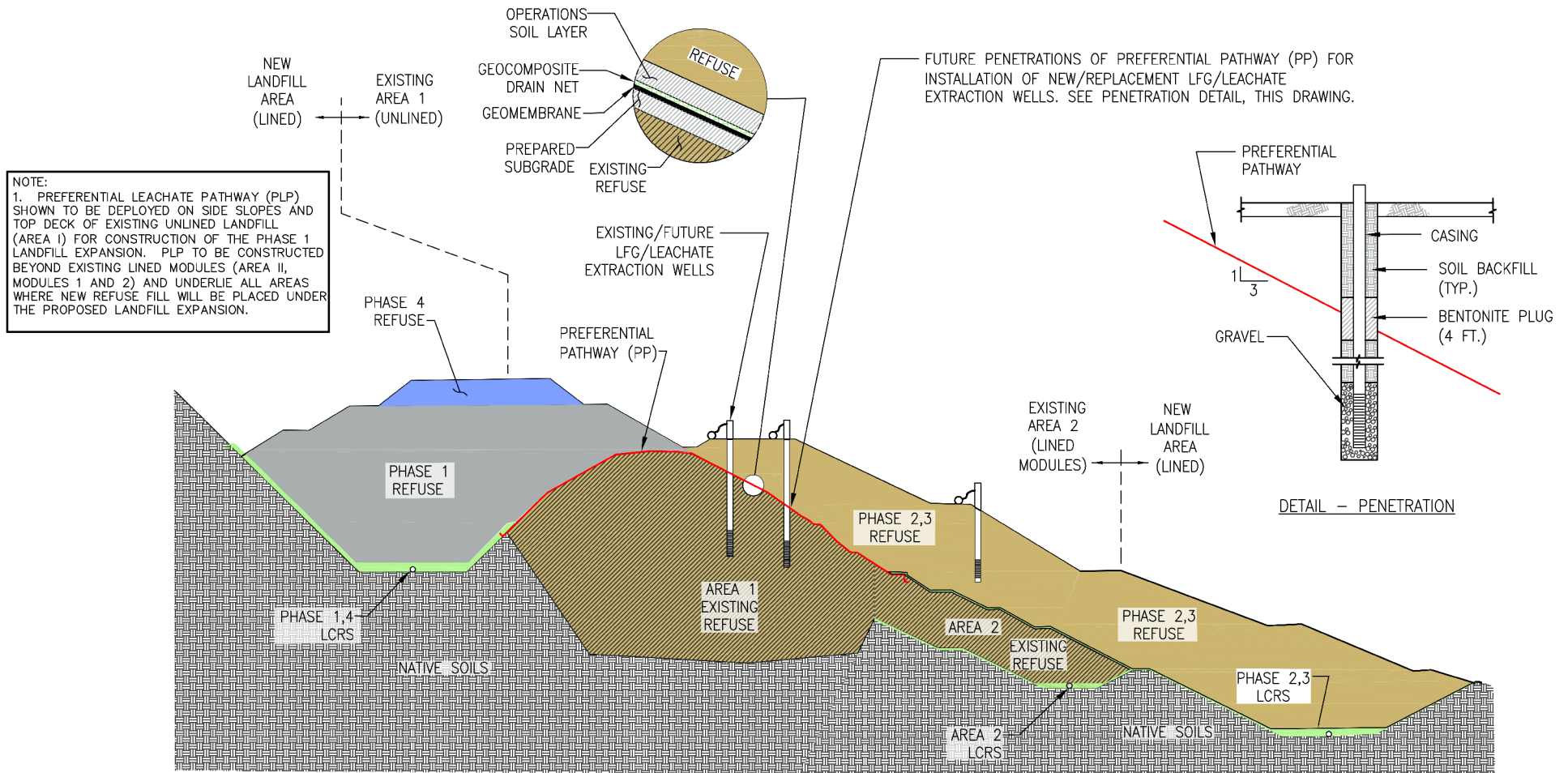
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Lake County, California

Base Liner System Comparison

November 2019

Source: SCS Engineers, 2019

Figure 2-14



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Lake County, California

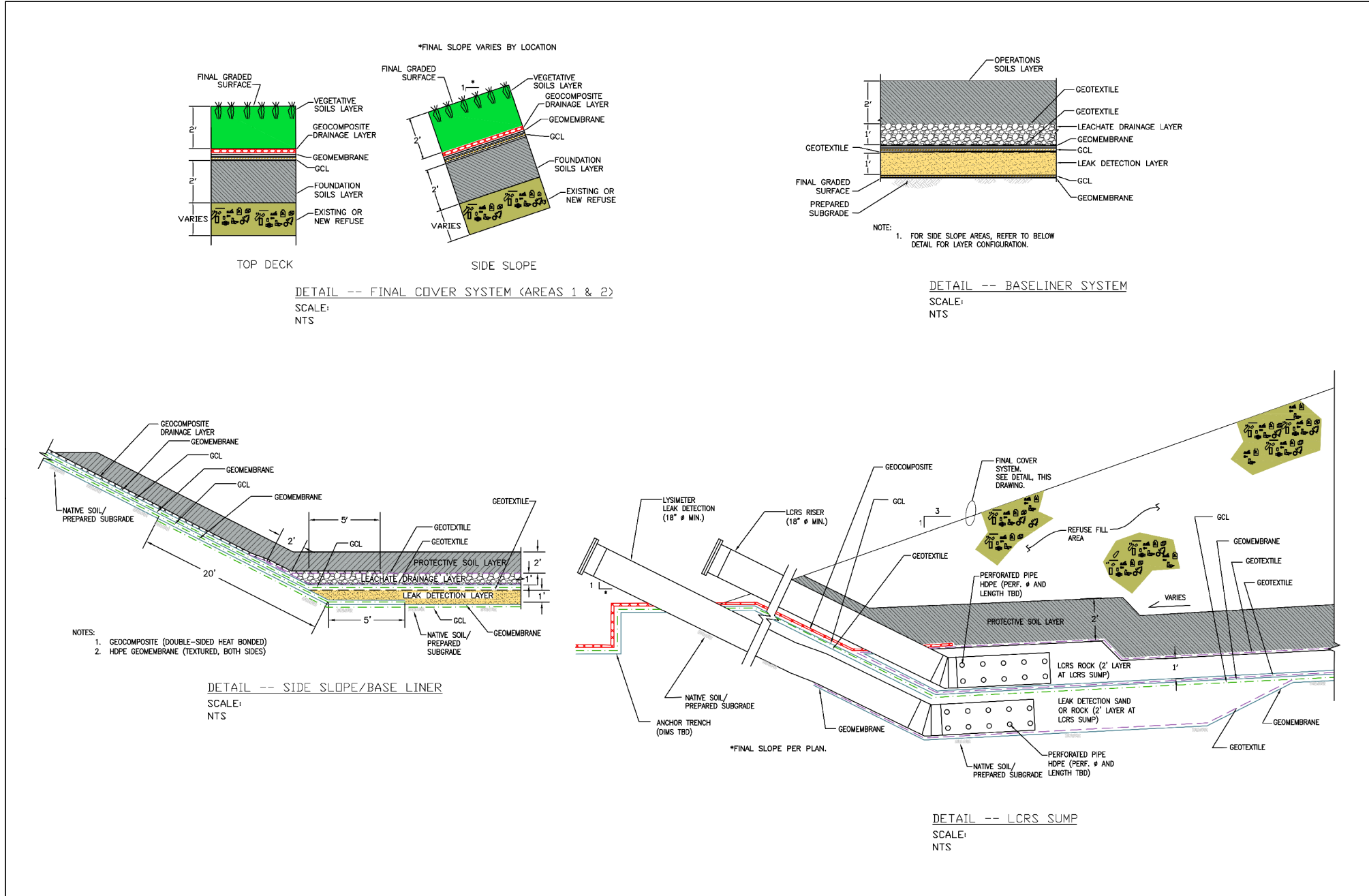
Preferential Pathway Schematic

November 2019

Source: SCS Engineers, 2019

Figure 2-15





## Section 3.0

# Environmental Impacts & Mitigation Measures

This section provides an evaluation of the potential environmental impacts of the proposed cannabis cultivation expansion for the Eastlake Sanitary Landfill project in unincorporated Lake County, as well as the CEQA Mandatory Findings of Significance. A discussion of cumulative impacts is included at the end of this chapter. The issue areas evaluated in this Initial Study include:

- |                                     |                               |
|-------------------------------------|-------------------------------|
| - Aesthetics                        | - Land Use & Planning         |
| - Agricultural & Forestry Resources | - Mineral Resources           |
| - Air Quality                       | - Noise                       |
| - Biological Resources              | - Population & Housing        |
| - Cultural Resources                | - Public Services             |
| - Energy                            | - Recreation                  |
| - Geology & Soils                   | - Transportation              |
| - Greenhouse Gas Emissions          | - Tribal Cultural Resources   |
| - Hazards & Hazardous Materials     | - Utilities & Service Systems |
| - Hydrology & Water Quality         | - Wildfire                    |

The environmental analysis in this section is patterned after the Initial Study Checklist recommended by the State CEQA Guidelines and used by Lake County in its environmental review process. This checklist has been updated with the revisions of the January 1, 2019 State CEQA Guidelines. For the preliminary environmental assessment undertaken as part of this Initial Study's preparation, a determination that there is a potential for significant effects indicates the need to more fully analyze the development's impacts and to identify mitigation.

For the evaluation of potential impacts, the questions in the Initial Study Checklist are stated and an answer is provided according to the analysis undertaken as part of the Initial Study. The analysis considers the long-term, direct, indirect, and cumulative impacts of the development. To each question, there are four possible responses:

- **No Impact.** The development will not have any measurable impact on the environment.
- **Less Than Significant Impact.** The development will have the potential for impacting the environment, although this impact will be below established thresholds that are considered to be significant.
- **Potentially Significant Impact Unless Mitigation Incorporated.** The development will have the potential to generate impacts which may be considered as a significant effect on the environment, although mitigation measures or changes to the development's physical or operational characteristics can reduce these impacts to levels that are less than significant.
- **Potentially Significant Impact.** The development will have impacts which are considered significant, and additional analysis is required to identify mitigation measures that could reduce these impacts to less than significant levels.

All answers must take into account the whole action involved, including potential off and onsite, indirect, direct, construction, and operation, except as provided for under State CEQA Guidelines Section 15183 and State CEQA Statute Section 21083. The setting discussion under each resource section in this chapter is followed by a discussion of impacts and applicable mitigation measures.

This Initial Study identifies several potentially significant environmental effects related to the proposed project. Some effects are mitigated by implementation of existing provisions of law and standards of practice related to environmental protection. Such provisions are considered in the environmental impact analysis, and the degree to which they would reduce potential environmental effects is discussed. Additional mitigation measures are specifically identified when necessary to avoid potential environmental effects or to reduce them to a level that is less than significant.

## I. Aesthetics

This section of the Initial Study describes the existing visual environment in and around the project area. The analysis assesses the potential for aesthetics impacts using accepted methods of evaluating visual quality, as well as identifying the type and degree of change the proposed project would likely have on the character of the surrounding area.

### Environmental Setting

Scenic vistas are defined as expansive views of highly-valued landscapes from publicly accessible viewpoints. Scenic vistas include views of natural features such as topography, water courses, outcrops, and natural vegetation, as well as man-made scenic structures. The County has not designated specific scenic vistas in the immediate project area as a part of the Lake County General Plan and there is no designated State or federal scenic highways or scenic highway corridors in the vicinity of the proposed project. The County maintains a Scenic or “SC Combining District” zone intended to protect and enhance views of scenic areas from the County’s scenic highways and roadways for the benefit of local residential and resort development, the motoring public, and the recreation based economy of the County. The proposed project is not located in or adjacent to a “SC Combining District.”

### Impact Analysis

Degradation of the visual character of a site is usually addressed through a qualitative evaluation of the changes to the aesthetic characteristics of the existing environment and the proposed project-related modification that would alter the visual setting. In order to analyze the potential impacts of visual resources, as seen from potential public scenic views, and to document potential change in character/quality at the proposed project site, the existing visual conditions (as seen from offsite key view locations) has been documented. A key view is an area (in this case, the proposed project site) that can be seen from a particular public location. Four key views (representing views from surrounding motorists, bicyclists, pedestrians, and community residents) were selected for this analysis (refer to Figure 3-1, VIEW SIMULATION LOCATIONS).

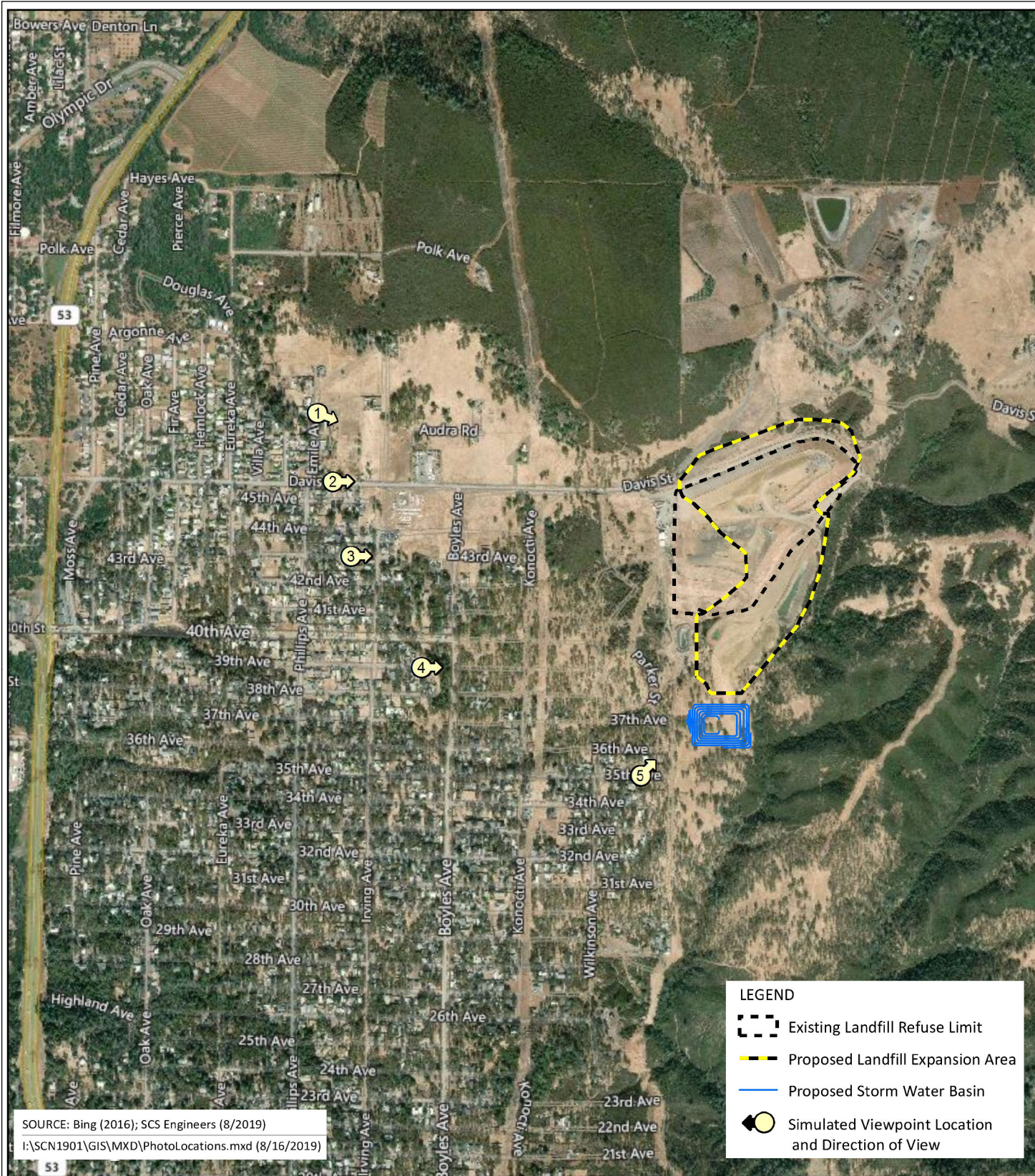
The following includes an analysis of environmental parameters related to *Aesthetics* based on Appendix G of the State CEQA Guidelines. The discussion not only includes the areas for which there is potential for environmental impacts but also provides justification for the conclusions that either no impacts, less than significant impacts, or less than significant impacts with mitigation could occur. The CEQA Checklist question, discussion, and environmental significance conclusion are provided below under each individual environmental parameter related to *Aesthetics*.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?			X	

**Discussion:** As noted above, the County has not designated specific scenic vistas in the immediate project area as a part of the Lake County General Plan and there is no designated State or federal scenic highways or scenic highway corridors in the vicinity of the proposed project. The project proposes the expansion of the existing Eastlake Sanitary Landfill on County owned land. While the existing landfill was approved to have a maximum height of 1,860 feet above MSL, the proposed expansion would reduce the overall maximum height by 32 feet to 1,827 feet above MSL at closure. The proposed expansion would primarily occur to the south and east, with a realignment of the existing access road to the north. While the footprint of the proposed project is larger than the previously approved expansion project (1997), the ultimate vertical height would be lower and occur over areas that are already disturbed with exception of the 4.1-acre stormwater detention basin to be constructed at grade on the southern portion of the project site. The post closure view simulations of the project illustrate the final landfill elevation in comparison to the currently permitted elevation of 1,860 feet MSL symbolized by a yellow dashed line (refer to Figures 3-2 through 3-6, VIEW SIMULATIONS). Therefore, the project would minimize impacts to views from surrounding areas compared to the existing permitted closure height. Due to these factors, the project would result in a less than significant impact and would not substantially have a substantial adverse effect on a scenic vista.

**Mitigation Measures:** No mitigation measures are required. Impacts would be less than significant.





Eastlake Landfill  
CEQA Initial Study  
Lake County, California

November 2019

Source: LSA, 2019

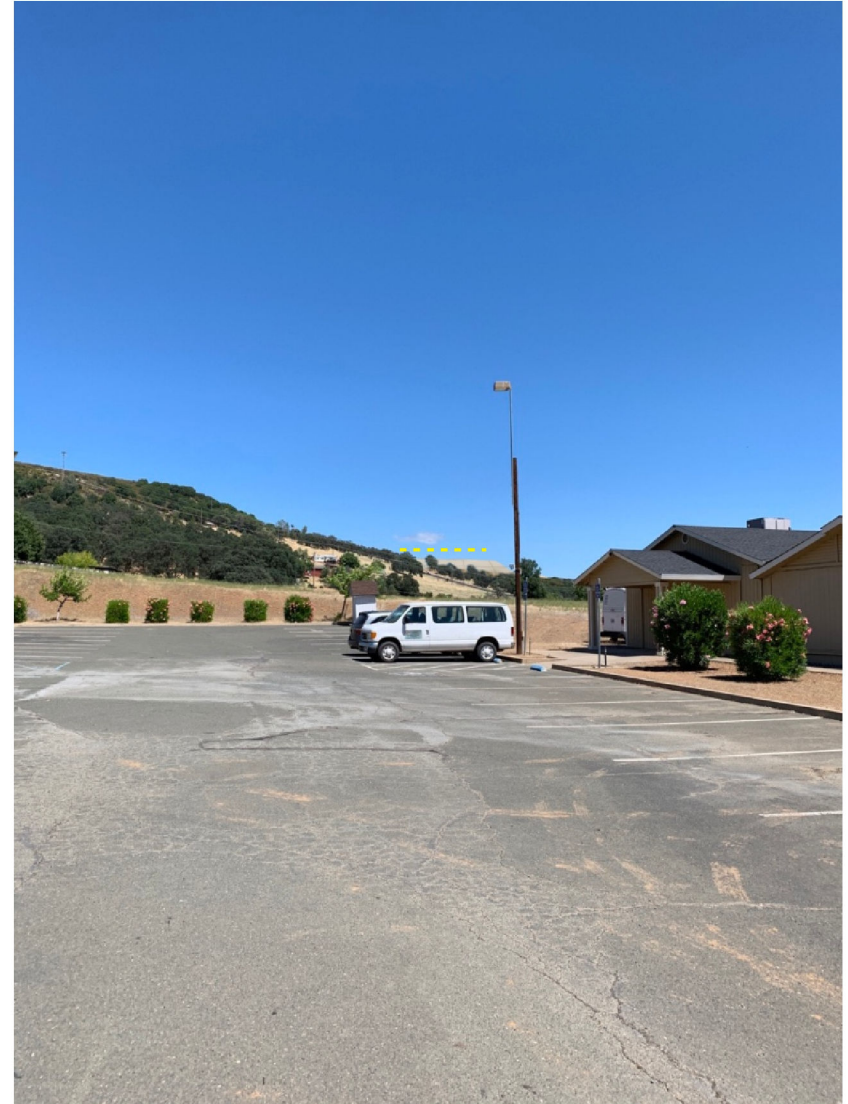
View Simulation Locations

Figure 3-1





**Photo Point 1:** Photo looking east-southeast towards the landfill from the church parking lot on Emile Avenue. The top of existing landfill site cannot be seen from this location .



**Photo Point 1 Simulation:** The proposed final grading configuration for landfill expansion, with highest design elevation seen in foreground. The yellow line denotes the highest elevation allowed under the existing permit (without expansion).



Eastlake Landfill  
CEQA Initial Study  
Lake County, California

November 2019

Source: LSA, 2019

View Simulation of Photo Point 1

Figure 3-2





**Photo Point 2:** Photo looking east towards landfill on Davis Avenue. The landfill site is somewhat visible from this location.



**Photo Point 2 Simulation:** Proposed final grading configuration for landfill expansion, with highest design elevation seen in foreground. The yellow line denotes the highest elevation allowed under the existing permit (without expansion).



Eastlake Landfill  
CEQA Initial Study  
Lake County, California

November 2019

Source: LSA, 2019

View Simulation of Photo Point 2

Figure 3-3





**Photo Point 3:** Photo looking east towards landfill on 43rd Avenue. The top of landfill site can be seen from this location.



**Photo Point 3 Simulation:** Proposed final grading configuration for landfill expansion, with highest design elevation seen in foreground. The yellow line denotes the highest elevation allowed under the existing permit (without expansion).



Eastlake Landfill  
CEQA Initial Study  
Lake County, California

November 2019

Source: LSA, 2019

View Simulation of Photo Point 3

Figure 3-4





**Photo Point 4:** Photo looking east towards landfill on 39th Street, at the end of the street. The top of the landfill site can be seen from this location, with landfill recycling structures visible (blue buildings).



**Photo Point 4 Simulation:** Proposed final grading configuration for landfill expansion, with the highest design elevation seen in the foreground. The yellow line denotes the highest elevation allowed under the existing permit (without expansion).



Eastlake Landfill  
CEQA Initial Study  
Lake County, California

November 2019

Source: LSA, 2019

View Simulation of Photo Point 4

Figure 3-5





**Photo Point 5:** Photo looking northeast towards landfill at the end of 35th Avenue. The top of landfill site can be seen from this location, with landfill recycling structures visible (blue buildings).



**Photo Point 5 Simulation:** Proposed final grading configuration for landfill expansion, with the highest design elevation seen in the foreground. The yellow line denotes the highest elevation allowed under the existing permit (without expansion).



Eastlake Landfill  
CEQA Initial Study  
Lake County, California

November 2019

Source: LSA, 2019

View Simulation of Photo Point 5

Figure 3-6

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?				X

**Discussion:** California’s Scenic Highway Program was created by the Legislature in 1963. Its purpose is to preserve and protect scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to highways. According to Caltrans’ California Scenic Highway Program and the National Scenic Byways Program, the proposed project is not located near a highway which has been listed as a State or federal Scenic Highway or as an Eligible State Scenic Highway-Not Officially Designated. Additionally, the Eastlake Sanitary Landfill is not located on a National Scenic Byway System route.

No designated scenic highways, vistas, ridgelines, or historic resources are within the project area, as noted in the County and City of Clearlake’s respective general plan circulation and natural resources elements. The project is on County land that is zoned for public facilities and is designated for use as a landfill. The landfill would not expand into existing known scenic resources or cause undue harm to those resources. Furthermore, the expansion area will primarily occur on disturbed land and will not remove scenic resources. The planned stormwater basin at the south end of the landfill is a basin and will not be visible from any identified viewpoints. No impacts would occur in this regard.

**Mitigation Measures:** No mitigation measures are required.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X	

**Discussion:** The existing visual character of the project site is consistent with the existing landfill operations. The project would not significantly alter the existing visual characteristic of the existing landfill or degrade the existing visual character or quality of the site. The key sensitive receptors include a church and residential areas to the west and the south of the project. Although the expansion area is visible in these areas, the final landfill height at closure would be below the previously permitted level shown with the yellow dashed line in the view simulation (refer to Figures 3-2 through 3-6, above). Therefore, implementation of the proposed project would reduce overall aesthetic impacts and the proposed expansion would not substantially degrade the existing visual characteristic of the area.

The proposed landfill expansion would occur within the existing landfill boundary and is consistent with the general plan land use and zoning for Lake County (refer to Section XI, *Land Use and Planning*, for additional discussion). Onsite grading and waste management unit (WMU) (i.e. cell) construction would occur primarily over previously disturbed land which serves to minimize the overall visual impact of the expansion. As noted above, the proposed stormwater basin at the south end of the landfill would be constructed at graded and not be visible from any identified viewpoints. Therefore, impacts to the visual character of the surrounding area or impacts to public views are considered less than significant.

**Mitigation Measures:** No mitigation measures are required. Impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

**Discussion:** Light pollution occurs when nighttime views of the stars and sky are diminished by an over-abundance of light coming from the ground. Light pollution is a potential impact from the operation of any light source at night. Proper light shields, lighting design, and landscaping are commonly used to reduce light pollution generated from lighting by blocking the conveyance of light upwards.

The proposed project would not involve the installation of new outdoor lighting. The project would continue to provide localized lighting in and around the site for safety, but not create a significant new light source. There is no lighting planned for the landfill expansion area or the proposed stormwater basin. Onsite safety lighting would be shielded and designed to illuminate only the pathway of onsite vehicular and truck routes, reducing the potential for glare and obstruction of nighttime views in the area. Less than significant impacts are anticipated in this regard.

**Mitigation Measures:** No mitigation measures are required. Impacts would be less than significant.

## Findings

Based upon the review of the information above, implementation of the proposed project will have a less than significant impact with respect to *Aesthetics*.

## References and Citations

- Caltrans (California Department of Transportation). 2018. *California Scenic Highway System*. [Online]: [http://www.dot.ca.gov/hq/LandArch/16\\_livability/scenic\\_highways/index.htm](http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm). Accessed October 22, 2019.
- City of Clearlake. 2017. *Clearlake 2040 General Plan Update*. February 23, 2017.
- Lake County. 2008. *Lake County General Plan*. September 2008.
- FHWA (Federal Highways Administration) National Scenic Byways Program. 2018. [Online]: <https://www.fhwa.dot.gov/byways/states/CA>. Accessed October 22, 2019.
- National Wild and Scenic Rivers System. 2018. [Online]: <https://www.rivers.gov/california.php>. Accessed October 22, 2019.
- SCS Engineers. 2018a. *Landfill Expansion Field Investigation Engineering Analyses and Preliminary Basis of Design – Eastlake Sanitary Landfill, Clearlake, California*. October 2018.
- SCS Engineers. 2018b. *Report of Disposal Site Information/Report of Waste Discharge/Preliminary Final Closure and Post-Closure Plan: CCR Title 27 – Joint Technical Document for Eastlake Sanitary Landfill, Clearlake, California*. July 30, 2018.

## II. Agricultural Resources

The purpose of this section is to determine the extent to which the project contributes to the physical deterioration of agricultural resources. This section describes the agricultural resources within the project study area, and the applicable regulations that govern those resources.

### Environmental Setting

The project area is located within areas used for historical and ongoing landfill operations, as well as relatively undisturbed lands characterized by oak woodlands and native vegetation, as well as grassland and chaparral dominated slopes. Soils within the study area consist of the Bally-Phipps complex, 15 to 30% slopes, Bally-Phipps-Haploxeralfs association, 30 to 75% slopes, Konocti-Hambright-Rock outcrop complex, 30 to 75% slopes, and the Phipps complex, 5 to 15% slopes. These soils are well drained very gravelly sandy clay loams from alluvium derived from weathered basalts, and are found on hills and slopes. Soils are highly manipulated within large portions of the study area reflecting landfill activities and soil movement. The soils found onsite support a wide range of plant communities including blue oak woodland, chamise chaparral, grassland, and other drought adapted species. In addition, the subject parcels are not under a Williamson Act contract, also known as the California Land Conservation Act, which allows for the local government to enter into contracts with private landowners for the purpose of restricting parcels of land to agricultural or open space uses.

### Impact Analysis

The following includes an analysis of environmental parameters related to *Agricultural Resources* based on Appendix G of the State CEQA Guidelines. The discussion not only includes the areas for which there is potential for environmental impacts but also provides justification for the conclusions that either no impacts, less than significant impacts, or less than significant impacts with mitigation could occur. The CEQA Checklist question, discussion, and environmental significance conclusion are provided below under each individual environmental parameter related to *Agricultural Resources*.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or 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?				X

**Discussion:** The project site has not been historically used for agricultural purposes, nor does it possess soils that are considered prime for agricultural production. The site is not located within an area of Prime Farmland as identified by the California Department of Conservation's Important Farmland Series Mapping and Monitoring Program. Therefore, implementation of the proposed landfill expansion would not result in a significant impact to agricultural resources. No impacts would occur in this regard.

**Mitigation Measures:** No mitigation measures are required.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act Contract?				X



**Discussion:** The proposed project site is not under a current Williamson Act contract. Therefore, project implementation would not result in conflicts with existing agricultural zoning. A no impact would occur in this regard.

**Mitigation Measures:** No mitigation measures are required.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?				X

**Discussion:** Implementation of the proposed project would not result in a conversion of farmland to non-farmland. Therefore, no impacts would occur in this regard.

**Mitigation Measures:** No mitigation measures are required.

## Findings

In the course of the above evaluation, impacts associated with *Agricultural Resources* were found to not be significant because of the inability of a project of this scope to create such impacts or the absence of project characteristics producing effects of this type.

## References and Citations

City of Clearlake. 2017. *Clearlake 2040 General Plan Update*. February 23, 2017.

DOC (California Department of Conservation). 2019. *Farmland Mapping and Monitoring Program*. [Online]: <https://maps.conservation.ca.gov/DLRP/CIFF/>. Accessed August 22, 2019.

Lake County. 2008. *Lake County General Plan*. September 2008.

### III. Air Quality

This section examines the air quality in the project area, includes a summary of applicable air quality regulations, and analyzes potential air quality impacts associated with the proposed project. Air quality impacts were assessed in accordance with methodologies recommended by the California Air Resources Board (CARB) and the Lake County Air Quality Management District (LCAQMD). Where quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod). This section is based upon the *Eastlake Landfill Expansion CEQA Air Quality and Greenhouse Gas Impact Analysis* (SCS, 2019) and is included as Appendix B, *Air Quality and Greenhouse Gas Analysis Report*.

#### Environmental Setting

The project site is located immediately adjacent to the City of Clearlake and is within the boundaries of the Lake County Air Basin (LCAB). The LCAQMD is responsible for air quality within the LCAB. Lake County is located approximately 100 miles north of San Francisco. The LCAB experiences a Mediterranean-like climate of hot dry summers and cool, moist winters. Seasonally, the majority of rainfall occurs from October through March. The warmest period of the year occurs from June through September. Project activities are subject to the authority of the LCAQMD and the California Air Resources Board (CARB). The LCAQMD is listed as "attainment" or "unclassified" for all the federal and State ambient air quality in Lake County.

In determining whether a project has significant air quality impacts on the environment, agencies often apply their local air district's thresholds of significance to project in the review process. LCAQMD has not adopted any CEQA guidelines or thresholds that are used to determine the significance of a project's emissions. Consequently, this analysis uses Bay Area Air Quality Management District's (BAAQMD's) CEQA Air Quality Guidelines, last revised in May 2011. The Air Quality Guidelines advise lead agencies on how to evaluate potential air quality impacts, including establishing quantitative and qualitative thresholds of significance.

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution include children, the elderly, athletes, and people with cardiovascular and chronic respiratory diseases. Facilities and structures where these air pollution-sensitive people live or spend considerable amounts of time are known as sensitive receptors. Land uses where air pollution-sensitive individuals are most likely to spend time include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities (sensitive sites or sensitive land uses).

The greatest potential for exposure of sensitive receptors to air contaminants would occur during the four new landfill cell construction phases (temporary projects), when soil would be disturbed and equipment would be used for cell and roadway excavations, soil stockpiling, and site grading. Potential exposure to emissions would vary substantially from day to day, depending on the amount of work being conducted, weather conditions, location of receptors, and exposure time. The construction-phase emissions in this analysis are estimated conservatively based on worst-case conditions, with maximum levels of construction activity occurring simultaneously within a short period of time. The nearest sensitive receptors are scattered rural residential land uses. Residential land uses have the highest potential to be affected by the project, in particular single-family or multiple-family residences located in the surrounding community within 1 mile (5,280 feet) of the project site.

The landfill operates under a Designated Non-Major Stationary Source permit from the LCAQMD. Facility emissions are monitored regularly to comply with Air Quality Management District standards. Uncontrolled emissions of non-methane organic compounds (NMOC) and methane, a greenhouse gas (GHG) are maintained below threshold levels specified in the Title V operating permit and the California Landfill Methane Rule (LMR). In 2014, a landfill gas collection and destruction system was installed and has been operating since that time in accordance with LCAQMD permit requirements.

Water, palliatives, asphalt or other surfacing materials are used on roads and other trafficked areas to control particulate emissions. Visible emissions are monitored at a weekly minimum for opacity for all excavation, loading, scraping and compacting operations as well as for diesel engine exhaust. Diesel equipment has been upgraded or replaced to meet emission requirements. No burning of any kind is permitted at the facility. Any accidental fires and breakdowns in process, monitoring, or emission control equipment is reported to the LCAQMD.

## Impact Analysis

The following includes an analysis of environmental parameters related to *Air Quality* based on Appendix G of the State CEQA Guidelines. The discussion not only includes the areas for which there is potential for environmental impacts but also provides justification for the conclusions that either no impacts, less than significant impacts, or less than significant impacts with mitigation could occur.

The LCAQMD defers to the BAAQMD “Thresholds of Significance” contained within its CEQA Air Quality Guidelines. According to the 2019 CEQA Checklist, a project may be deemed to have a potentially significant adverse impact on the environment if it would conflict with or obstruct implementation of the applicable air quality plan, 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, expose sensitive receptors to substantial pollutant concentrations, result in other emissions (such as those leading to odors), adversely affecting a substantial number of people.

Standards and ordinances applicable to the proposed project would be associated with day-to-day landfill operations, future landfill operations, and new cell construction. The proposed project consists of temporary construction activities over the course of four expansion phases, and continuation of current landfill operations (waste deliveries, placement and compaction, daily and intermediate cover placement, LFG capture and control) throughout the project lifetime.

This section analyzes the short-term air quality impacts associated with construction activities as well as the long-term operational impacts that may result due to development of the proposed project. The CEQA Checklist question, discussion, and environmental significance conclusion are provided below under each individual environmental parameter related to *Air Quality*.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	

**Discussion:** The area of covered by the LCAQMD is in attainment for all criteria air pollutants and does not have an air quality management plan. Impacts are considered less than significant in this regard.

**Mitigation Measures:** No mitigation measures are required. Impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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?		X		

**Discussion:**

### Daily Operational Impacts

Estimated daily emissions from current landfill operations and those from proposed future operations are tabulated below in Tables 3-1 through 3-3. Current operations are represented by the year 2024 when this project is anticipated to commence. Maximum operating emissions would occur in year 2050. Daily operating emissions include those resulting from waste decomposition processes, LFG flare exhaust, waste delivery vehicle and heavy equipment exhaust, particulates and dust from site operations (vehicle and equipment travel on paved and paved and unpaved roads, and daily cover soil excavation and placement. Exhaust emissions occur from diesel and internal combustion engines from vehicles, trucks,

and heavy equipment. Particulate emissions occur from heavy equipment performing earthmoving activity and fugitive particulate emissions from earthmoving travel and waste haul travel on paved and unpaved roads. These estimated emission changes are for comparison to BAAQMD CEQA emissions thresholds of significance to determine if significant impacts may occur. Worksheets with details on emission estimate calculations, governing assumptions and results are provided in Appendix B.

**Table 3-1**  
**DAILY EMISSIONS ESTIMATES, CURRENT LANDFILL OPERATIONS**

Current Daily Estimated Emissions (lbs/day)	ROG	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
2024 Traffic Exhaust	3.8E-03	2.1E-01	1.6E-03	1.4E-03
Current Unpaved Roads	NA	NA	6.47	0.65
Current Paved Roads	NA	NA	0.74	0.18
Current Flare	12.65	16.20	5.51	5.51
Current Landfill Gas	10.2	NA	NA	NA

Source: SCS Engineers. 2019. *Eastlake Landfill Expansion CEQA Air Quality and Greenhouse Gas Impact Analysis*. December 6, 2019.

**Table 3-2**  
**DAILY EMISSIONS ESTIMATES, FUTURE LANDFILL OPERATIONS**

Future Daily Estimated Emissions (lbs/day)	ROG	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
2050 Traffic Exhaust	2.92E-03	3.21E-01	7.20E-04	6.74E-04
Future Unpaved Roads	NA	NA	9.28	0.93
Future Paved Roads	NA	NA	0.98	0.24
Future Flare	27.40	35.10	11.93	11.93
Future Landfill Gas	12.87	NA	NA	NA

Source: SCS Engineers. 2019. *Eastlake Landfill Expansion CEQA Air Quality and Greenhouse Gas Impact Analysis*. December 6, 2019.

**Table 3-3**  
**NET PROJECT DAILY EMISSIONS ESTIMATES**

Net Project Daily Estimated Emissions (lbs/day)	ROG	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Project Traffic Exhaust	-8.6E-04	1.1E-01	-8.4E-04	-7.7E-04
Project Unpaved Roads			2.8E+00	2.8E-01
Project Paved Roads			2.4E-01	6.0E-02
Project Flare	1.5E+01	1.9E+01	6.4E+00	6.4E+00
Project Landfill Gas	2.6E+00	NA	NA	NA
Net Project Daily Estimated Emissions	1.7E+01	1.9E+01	9.5E+00	6.8E+00
BAAQMD Significance Threshold	54	54	82	54
Potentially significant Impact?	No	No	No	No

Source: SCS Engineers. 2019. *Eastlake Landfill Expansion CEQA Air Quality and Greenhouse Gas Impact Analysis*. December 6, 2019.

As noted above in Table 3-3, NET PROJECT DAILY EMISSIONS ESTIMATES, operational emissions associated with the proposed landfill expansion would not exceed established thresholds and are therefore considered less than significant.

### Annual Operational Impacts

Estimated annual emissions from current landfill operations and those from proposed future operations are summarized in Tables 3-4 through 3-6 below. Current operations are represented by the year 2024 when this project is anticipated to commence. Future operating emissions will be highest in year 2050. Daily operating emissions that are affected by the project include waste decomposition, and LFG flare exhaust. Particulate emissions occur from vehicles, trucks and heavy equipment performing earthmoving activity and fugitive particulate emissions from waste haul traveling on paved and unpaved roads. Exhaust emissions occur from diesel and internal combustion engines from vehicles, trucks, and heavy equipment. These estimated emission changes are for comparison to BAAQMD CEQA emissions thresholds of significance to determine if significant impacts may occur. Worksheets with details on emission estimate calculations, governing assumptions and results are provided in Appendix B.



**Table 3-4**  
**ANNUAL EMISSIONS ESTIMATES, CURRENT LANDFILL OPERATIONS**

Current Annual Estimated Emissions (tons/year)	ROG	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
2024 Waste Delivery Traffic Exhaust	6.1E-04	2.7E-02	2.6E-04	2.4E-04
Vehicle/Equipment Travel - Unpaved Roads	NA	NA	0.97	0.10
Vehicle/Equipment Travel - Paved Roads	NA	NA	0.13	0.03
Current Flare Exhaust	2.31	2.96	1.01	1.01
Uncontrolled LFG Surface Emissions	1.9	NA	NA	NA

Source: SCS Engineers. 2019. *Eastlake Landfill Expansion CEQA Air Quality and Greenhouse Gas Impact Analysis*. December 6, 2019.

**Table 3-5**  
**ANNUAL EMISSIONS ESTIMATES, FUTURE LANDFILL OPERATIONS**

Future Annual Estimated Emissions (tons/year)	ROG	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
2050 Waste Delivery Traffic Exhaust	4.3E-04	4.1E-02	1.1E-04	1.0E-04
Vehicle/Equipment Travel - Unpaved Roads	NA	NA	1.37	0.14
Vehicle/Equipment Travel - Paved Roads	NA	NA	0.16	0.04
Future Flare Exhaust	5.00	6.41	2.18	2.18
Uncontrolled LFG Surface Emissions	2.3	NA	NA	NA

Source: SCS Engineers. 2019. *Eastlake Landfill Expansion CEQA Air Quality and Greenhouse Gas Impact Analysis*. December 6, 2019.

**Table 3-6**  
**NET PROJECT ANNUAL EMISSIONS ESTIMATES**

Project Annual Estimated Emissions (tons/year)	ROG	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Project Waste Delivery Traffic Exhaust	-1.8E-04	1.3E-02	-1.5E-04	-1.4E-04
Project Vehicle/Equipment Travel - Unpaved Roads	NA	NA	4.0E-01	4.0E-02
Project Vehicle/Equipment Travel - Paved Roads	NA	NA	3.9E-02	9.6E-03
Project Flare Exhaust	2.7E+00	3.4E+00	1.2E+00	1.2E+00
Project Uncontrolled LFG Surface Emissions	4.8E-01	NA	NA	NA
Net Project Annual Estimated Emissions	3.2E+00	3.5E+00	1.6E+00	1.2E+00
BAAQMD Threshold of Significance	10	10	15	10
Potentially Significant Impact?	No	No	No	No

Source: SCS Engineers. 2019. *Eastlake Landfill Expansion CEQA Air Quality and Greenhouse Gas Impact Analysis*. December 6, 2019.

As noted above in Table 3-6, NET PROJECT ANNUAL EMISSIONS ESTIMATES, annual operational emissions would be below established thresholds and are therefore considered less than significant.

#### Landfill Cell Construction Impacts

Impacts for construction of expansion cells for the additional 26-year landfill life (2024 to 2050) would be limited to approximately 240 days and provide a disposal operating period of approximately 9,500 days. Estimated daily emissions associated with proposed new landfill cell construction projects are summarized below in Table 3-7, DAILY EMISSION ESTIMATES – LANDFILL NEW CELL CONSTRUCTION PROJECTS. As previously described in Section 2.0, *Project Description*, there will be four new cell construction projects over the project lifetime, with discrete cells or modules to be constructed every 4 to 9 years. Phases 1 through 3 will require excavations to reach required cell base grades, stockpiling of excavated soils, and installation of landfill containment systems (soil/geosynthetic base liners and leachate collection and recovery systems). Phase 4 will entail waste filling over previously constructed, lined cells. These projects will be short-term, typically 3 to 4 months duration. Estimates of daily emissions from these construction activities include those from heavy equipment engine exhaust, and fugitive particulate emissions from heavy equipment travel over unpaved roads, and fugitive particulate emissions from soil excavation and stockpiling activities. Worksheets with details on emission estimate calculations, governing assumptions and results are provided in Appendix B.

Table 3-7  
DAILY EMISSION ESTIMATES – LANDFILL NEW CELL CONSTRUCTION PROJECTS

Construction Daily Estimated Emissions (lbs/day)	ROG	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Soil Excavation / Earthworks	NA	NA	52.95	6.15
Base Liner Construction Earthworks	NA	NA	2.69	0.27
Heavy Equipment Exhaust – Soil Excavation	12.74	65.94	2.30	2.30
Heavy Equipment Exhaust – Base Liner Construction	1.93	11.10	0.48	0.48
Soil Stockpile	NA	NA	2.08	0.32
Total Estimated Daily Construction Emissions	14.7	77.04	60.5	9.5
BAAQMD CEQA Daily Emissions Threshold	54	54	82	54
Pass CEQA Screening Threshold?	Yes	No	Yes	Yes

Source: SCS Engineers. 2019. *Eastlake Landfill Expansion CEQA Air Quality and Greenhouse Gas Impact Analysis*. December 6, 2019.

As noted above in Table 3-7, construction related emissions for nitrous oxides (NO<sub>x</sub>) exceed the BAAQMD daily construction emission threshold and is therefore considered a potentially significant impact. However, with implementation of Mitigation Measure AQ-1, emissions from heavy equipment would be reduced to less than significant levels. Considering the fleet-average 20 percent NO<sub>x</sub> reduction noted in Mitigation Measure AQ-1, combined with a variety of other noted mitigation techniques, it is estimated that a combined total 40 percent reduction in NO<sub>x</sub> emissions would result with implementation of Mitigation Measure AQ-1. With mitigation, daily NO<sub>x</sub> emissions during construction are thus estimated to be 46.2 lbs/day, which is below the cited threshold of 54 lbs/day. Therefore construction-related air quality impacts will be less than significant.

**Mitigation Measures:** The following mitigation measure has been developed to reduce potential air quality impacts to less than significant levels:

**Mitigation Measure AQ-1.** Landfill operators shall follow the following specifications to reduce short-term air quality impacts attributable to the onsite cell construction activities.

- Vehicle speeds shall be limited to 15 miles per hour.
- Equipment idling times shall be minimized by either shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- Construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Idling time of diesel powered construction equipment shall be limited to a maximum of two minutes.
- Off-road equipment (more than 50 horsepower) to be used in cell construction (i.e., owned, leased, and subcontractor vehicles) shall achieve a project wide fleet-average 20 percent NO<sub>x</sub> reduction compared to the most recent ARB fleet average. Acceptable options for reducing emissions may include the use of late model engines, low-emission diesel products, and/or other options as such become available.
- All construction equipment, diesel trucks, and generators shall be equipped with Best Available Control Technology for emission reductions of NO<sub>x</sub>.
- All landfill equipment shall meet CARB's most recent certification standard for off-road heavy duty diesel engines.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
c) Expose sensitive receptors to substantial pollutant concentrations?			X	

**Discussion:** Toxic air impacts to residential and occupational locations from facility emissions were evaluated by determining landfill-related, offsite air contaminant transport, and resulting concentrations over a regular gridded area around the facility were estimated. These concentrations were then evaluated for potential exposure impacts. The offsite concentrations were determined using the American Meteorological Society (AMS) and preferred EPA Regulatory Model AERMOD. AERMOD input variables and output of unity emission concentrations that determine the dispersion field is provided in Appendix B. Resulting AERMOD concentrations were then evaluated for the risk of obtaining cancerous, and non-cancerous long-term (chronic) and short-term (acute) health impacts. Since the BAAQMD does not have a well-defined tiered health risk assessment approach, these cancer and non-cancer impacts were evaluated using the South Coast Air Quality Management District Risk Assessment Procedures. A summary of these resulting maximum health impacts are provided below in Table 3-8, HEALTH RISK ASSESSMENT. Worksheets with details on risk assessment model governing assumptions and results are provided in Appendix B.

**Table 3-8  
HEALTH RISK ASSESSMENT**

Exposure Characterization	Potential Impact	BAAQMD Significance Threshold	Potentially Significant Impact?
Cancer Risk- Worker	2.80E-07	1.0E-05	No
Cancer Risk- Resident	3.82E-06	1.0E-05	No
Chronic Hazard Index- Worker	8.10E-02	1.0	No
Chronic Hazard Index- Resident	3.82E-01	1.0	No
Acute Hazard Index- Worker	3.54E-02	1.0	No
Acute Hazard Index- Resident	3.57E-02	1.0	No

Source: SCS Engineers. 2019. *Eastlake Landfill Expansion CEQA Air Quality and Greenhouse Gas Impact Analysis*. December 6, 2019.

As shown in Table 3-8, the potential exposures of sensitive receptors to landfill-related toxic air contaminant concentrations are below established thresholds and are therefore considered less than potentially significant.

In addition to TACs, one hour and eight-hour average concentrations of carbon monoxide (CO) were determined over a regular grid surrounding the facility using AERMOD. The AERMOD input and output values, and maximum resulting concentrations of CO over this grid are provided in Appendix B. Resulting one-hour and eight-hour averaged maximum concentrations of CO are 290 micrograms per cubic meter and 84 micrograms per cubic meter, respectively. Both of these concentrations fall below the BAAQMD significance thresholds of 23,000 micrograms per cubic meter (20 ppm) for one-hour average, and 10,000 micrograms per cubic meter (9 ppm) for eight-hour averaging periods (SCS, 2019). Therefore, the exposure of sensitive receptors to substantial carbon monoxide concentrations is considered less than significant.

**Mitigation Measures:** No mitigation measures are required. Impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
d) Result in other emissions (such as those leading to odors or dust) affecting a substantial number of people?			X	

**Discussion:** Odor control is accomplished with good landfill management practices including the application of daily cover materials. The Class II surface impoundment and pumping station are properly managed to avoid causing an odor nuisance to adjacent residents in compliance with LCAQMD standards.

#### Acutely Hazardous Air Pollutant Impacts

BAAQMD sets the standard of significance for accidental releases of acutely hazardous air pollutants (HAP) as potentially significant if a facility stores or uses acutely hazardous materials that are locating near receptors or if new receptors are locating near stored or used acutely hazardous materials that are considered potentially significant. The County does not store acutely hazardous materials near existing receptors, nor will new receptors be located near any stored acutely hazardous materials at the landfill. Therefore, acutely HAP impacts are not considered to be significant.

### Odor Impacts

BAAQMD standard for odor threshold significance is five confirmed complaints per year averaged over 3 years. LCAQMD has not received five odor complaints per year averaged over three years. Odor control at Eastlake Sanitary Landfill is accomplished with good landfill management practices including the application of daily cover materials. The Class II surface impoundment and pumping station are properly managed to avoid causing an odor nuisance to adjacent residents in compliance with LCAQMD standards. Therefore, odor impacts are less than significant.

### Dust Impacts

Measures are taken to minimize the creation, emission or accumulation of excessive dust and particulates, and prevent other safety hazards to the public caused by obscured visibility. Unnecessary handling of wastes during processing prevents the creation of excessive dust. Staff has the capability to spray water on refuse loads that contain materials that would produce dust or other particulates during offloading or compacting activities.

The access road inside the landfill facility is paved from the facility entrance to the tipping area to prevent dust. Paving surrounds the gatehouse and the bagdump area. The access road and bagdump area are watered approximately three times per month in the summer and two to five times per week in the winter by the facility 3,500 gallon water truck to remove accumulated dust, dirt and mud, and prevent dust and prevent offsite tracking of dust or dirt. The water truck is operated by staff, and the water is drawn from Clear Lake which is approximately 2 miles from the landfill. The road is also swept weekly by a regenerative sweeper to remove other dirt and/or debris that may fall from entering or exiting vehicles. Where visible tracking has occurred, a mechanical sweeper is utilized as needed. These practices are expected to continue throughout the landfill expansion project lifetime.

At the point where the access road pavement ends at the entrance to the tipping area, temporary dirt roads to the current tipping road are kept graded and compacted. Road base material is added for stability as well as erosion and dust control and to prevent offsite tracking. The site water truck sprays these areas frequently during dry periods to control dust. Additionally, magnesium chloride may be applied by a commercial contractor on the dirt access roads to control dust.

Grading, scraping, loading and compacting operations are also supported by use of the water truck in the tipping area and the borrow area. The tarp, which is used for daily cover most days in lieu of dirt cover, reduces dust associated with dirt cover. When dirt stockpiles are used for cover material on days when the tarp is not used, they are kept close to the working face to reduce dust associated with the loading and hauling of these materials. Therefore, dust impacts are considered less than significant.

**Mitigation Measures:** No mitigation measures are required. Impacts would be less than significant.

## **Findings**

In the course of the above evaluation, impacts associated with *Air Quality* were found to be less than significant with implementation of mitigation.

It is important to note that the Eastlake Sanitary Landfill is the County's single landfill providing a significant disposal resource to County residents. Should the proposed expansion ultimately not be implemented, the landfill is anticipated to reach capacity by year 2024, thus requiring county-wide generated solid waste must be shipped and disposed of at another landfill outside of Lake County which would cause even higher criteria pollutant emissions.

## **References and Citations**

SCS Engineers. 2019. *Eastlake Landfill Expansion CEQA Air Quality and Greenhouse Gas Impact Analysis*. December 6, 2019.



## IV. Biological Resources

This section of the Initial Study describes the affected environment for biological resources and is based upon the *Natural Resources Assessment, Eastlake Sanitary Landfill Expansion Project Clearlake, California* (SHN, 2019) and is included as Appendix C, *Natural Resources Assessment*. The assessment summarizes the results of biological field surveys of the project area and describes the potential impacts on biological resources that would result from implementation of the proposed project. Additionally, this section provides mitigation measures that would reduce the impacts identified.

### Environmental Setting

The study area is composed of a mixture of highly disturbed landfill development and undeveloped chaparral, grassland, and oak woodland habitat. Land use within the vicinity of the existing landfill includes rural residential development to the west, landfill and associated facilities, green waste and vineyard development to the north, and steep wild lands to the east and south. Some relatively undisturbed habitat area is present to the east and south consisting of chamise chaparral, blue oak woodland, riparian woodland, grassland and native dominated flower fields.

Vegetation composition varied widely across the study area, but was representative of inland Mediterranean climates including chamise chaparral, blue oak woodland, grassland as well as disturbed and developed landfill areas. Vegetation within the disturbed areas was composed primarily of non-native species; however in less disturbed areas a wide range of native species were found within wildflower fields, grasslands, chaparral, riparian areas, and blue oak woodlands. Refer to Figure 3-7, STUDY AREA WITH POTENTIAL AREAS OF DISTURBANCE, and Figure 3-8, NATURAL COMMUNITIES AND WETLANDS.

Common wildlife species onsite are those associated with northern California chaparral, oak woodland, grassland and landfills. This includes species that nest in trees, shrubs or open ground, scavengers, and species that require a mix of available habitat. Wildlife species observed at the site included the common raven (*Corvus corax*), American crow (*Corvus brachyrhynchos*), wrenit (*Chamaea fasciata*), California quail (*Callipepla fasciata*), white crowned sparrow (*Zonotrichia leucophrys*), jack rabbit (*Lepus californicus* ssp. *californicus*), and western fence lizard (*Sceloporus occidentalis* ssp. *occidentalis*), among others. Other wildlife species are likely to inhabit the surrounding area and it is expected that there are many other bird, mammal, and amphibian species that might use the project site, if only transitionally. Human activities within the existing landfill and roadway areas limit the abundance of a variety of birds and animals within those areas. In addition, species such as the American crow are attracted to landfills and are known to have a deleterious effect on other species that might otherwise inhabit the surrounding area.

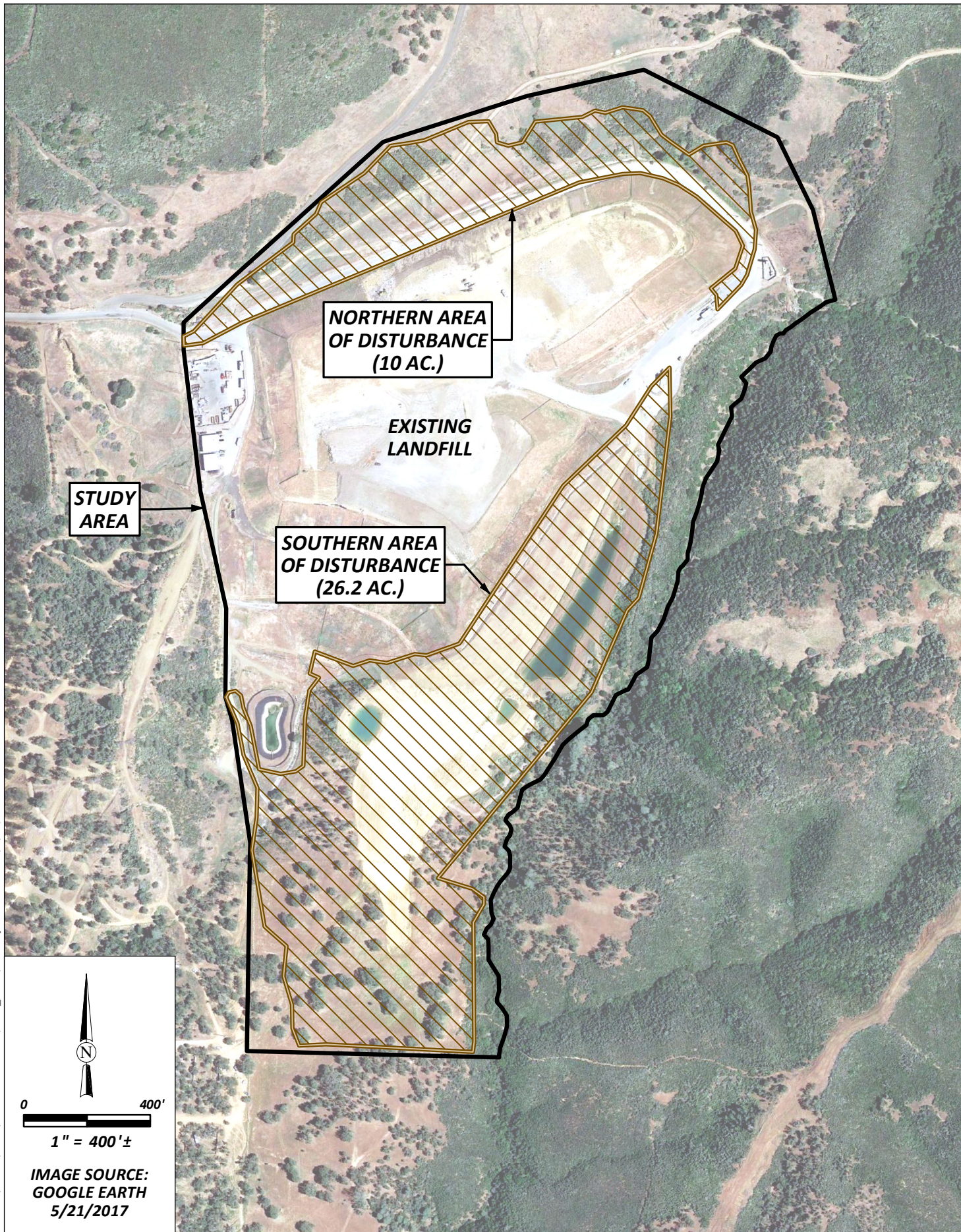
### Impact Analysis

An evaluation was conducted for the potential presence or absence of habitat for special-status plant and animal species. California Natural Diversity Data Base (CNDDDB) RareFind (CDFW [California Department of Fish and Wildlife]), BIOS, and California Native Plant Society (CNPS) searches were completed for the 7.5-minute United States Geological Survey (USGS) Lower Lake quadrangle and the eight adjacent quadrangles. The aforementioned databases were queried for historical and existing occurrences of State and federally-listed threatened, endangered, and candidate plant and animal species; species proposed for listing; and all plant species listed by the CNPS (Online 2019 inventory). In addition, a list of all federally-listed species that are known to occur or may occur in the vicinity was obtained from the United States Fish and Wildlife Service (USFWS) IPaC database.

Table 1 in Appendix C, *Natural Resources Assessment*, includes all plant species reported from the queries, their preferred habitat, and if there is suitable habitat present within the study area for the species. Table 2 in Appendix C includes all animal species reported from the queries, their preferred habitat, and if there is suitable habitat present within the study area for the species. The potential for occurrence of those species included on the list were then evaluated based on the habitat requirements of each species relative to the conditions observed during the field surveys.

The following includes an analysis of environmental parameters related to *Biological Resources* based on Appendix G of the State CEQA Guidelines. The discussion not only includes the areas for which there is potential for environmental impacts but also provides justification for the conclusions that either no impacts, less than significant impacts, or less than significant impacts with mitigation could occur. The CEQA Checklist question, discussion, and environmental significance conclusion are provided below under each individual environmental parameter related to *Biological Resources*.





Eastlake Landfill  
CEQA Initial Study  
Lake County, California

Study Area w/  
Potential Areas of Disturbance

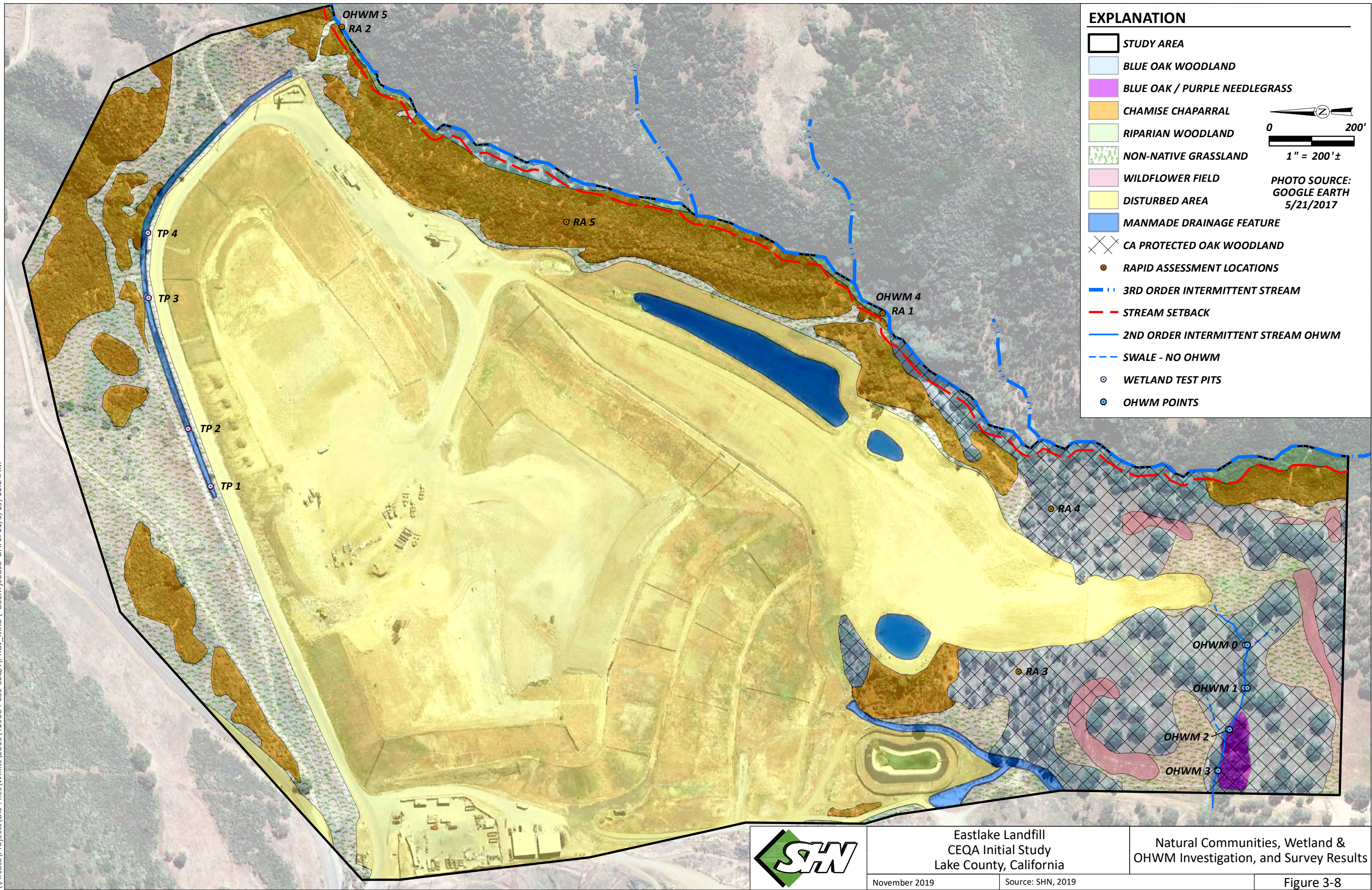
November 2019

Source: SHN, 2019

Figure 3-7



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Eastlake Landfill  
CEQA Initial Study  
Lake County, California

Natural Communities, Wetland &  
OHWM Investigation, and Survey Results

November 2019

Source: SHN, 2019

Figure 3-8



Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Have a substantial effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		X		

**Discussion:** Based on a review for special-status plant and animal species, 110 special-status plant species and 39 special-status animal species have been reported in the Lower Lake and surrounding quadrangles (refer to Appendix C, *Natural Resources Assessment*).

Direct Impacts. Of the 110 special-status plant species potentially occurring in the Lower Lake and surrounding quadrangles, 5 are considered to have a high potential of occurrence and 23 species are considered to have a moderate potential of occurrence. Site investigations were conducted during appropriate seasons for detecting the species with moderate or high potential for occurrence. No special-status plant species were observed within the study area; therefore, the project is not anticipated to directly impact special-status plant species potentially occurring within the vicinity of the project area. In addition, the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) that identifies Best Management Practices (BMPs) to minimize pollutants from discharging from the site to the maximum extent practicable also would reduce impacts onsite and adjacent habitat to a less than significant level (refer to Section X, *Hydrology and Water Quality*).

Of the 39 special-status animal species reported from the Lower Lake and surrounding quadrangles, 10 animal species are considered to have a moderate to high potential of occurrence or were documented as present within the study area. No special-status animal species were observed within the study area; therefore, the project is not anticipated to directly impact any special-status animal species potentially occurring within the vicinity of the project.

Two bat species reported during the scoping effort were observed within the project area, the hoary bat and the Yuma myotis. These species are not considered special-status species and are not protected under CEQA. Current use of the area as a landfill will not change and the mosaic of surrounding habitat makes it unlikely that the impact to potential habitat onsite will significantly impact the foraging habitats and roosting of these species following removal of vegetation. It is not anticipated that the proposed project will significantly impact these species; however, potential impacts can be minimized to less than significant by conducting vegetation removal from September 1 to October 15, following summer roosting and rearing of young, and prior to hibernation (Mitigation Measure BIO-1). Less than significant impacts are anticipated in this regard.

Tree canopy cover within the study area may provide suitable nesting habitat for migratory and other nesting birds. Impacts to woody vegetation including chamise chaparral, blue oak woodland, and riparian woodland could potentially nesting birds within the project area; however, with implementation of Mitigation Measure BIO-2 impacts to nesting birds would be less than significant.

Indirect Impacts. With respect to the proposed project, the site and surrounding area is already subject to indirect effects from human activity. Human activities within the existing landfill and roadway areas limit the abundance of a variety of birds and animals within those areas. The primary sources of stationary noise in the project vicinity are associated with the existing landfill activities and residential uses to the west. The noise associated with these sources may represent a single-event such as lawn mowing and parties or a continuous occurrence related to onsite operation of landfill equipment.

Most studies addressing the effects of noise on birds have focused on traffic noise (including road construction); however, other types of noise are expected to have similar effects on birds. In several studies, traffic noise has been found to reduce the density of nesting birds; one study found that 60% of woodland/forest bird species showed a reduction in nest density adjacent to roads. This may be due in part to masking of bird calls by traffic noise. However, other studies have shown no effects or minimal effects of noise on birds.

The California Department of Transportation (Caltrans) has found that effects of traffic noise on birds may include physiological and behavioral effects, damage to hearing from acoustic overexposure, and masking of bird vocalizations which may lead to behavioral and population effects. However, Caltrans also notes that no studies have definitively identified traffic noise as affecting birds with regard to stress and physiological effects, that birds are more resistant to acoustic overexposure than are humans and other mammals, that birds are able to regenerate sensory cells of the inner ear and can recover from acoustic overexposure, and that some birds may change their calls to compensate for traffic noise. Further studies are necessary to develop a science-based approach to evaluating potential impacts of noise on bird species.

Although no active bird nests were observed on the proposed project site during the field inspections, birds could establish nests in vegetation on or adjacent to these areas in future nesting seasons. According to the *Noise and Vibration Memorandum for the Eastlake Sanitary Landfill Expansion Project* (LSA, 2019) offsite noise levels associated with existing landfill operations during a typical “busy day” operation range between 58 dBA to 67 dBA to the north, 40 dBA to 52 dBA to the east, 40 to 43 dBA to the south, and 40 dBA and 49 dBA to the west. The most significant onsite operational activities would occur with construction and operation of Phase 2 of the expansion. Phase 2 of the landfill expansion is anticipated to begin in year 2028 and continue over an approximate 7.9-year period. Cell construction will require an excavation volume of 396,340 bank cubic yards (bcy) over a short-term construction period. Offsite operational noise associated with Phase 2 is estimated to be 40 dBA to the north, 49 dBA to 58 dBA to the west, 46 dBA to 55 dBA to the south, and 49 dBA to 61 dBA to the west. It is important to note that landfill activities are dynamic and as each expansion phase is completed the noise source would cease at one location and shift to a different onsite location. Upon completion of Phase 4 in year 2042 (landfill closure) landfill activities and associated operational noise would cease.

The proposed landfill expansion areas are not considered to substantially interfere with potential nesting activity adjacent to the site based on the following: 1) areas surrounding the landfill experience noise associated with existing landfill operations; 2) the proposed expansion would not result in a change to or increase in hours of operation; 3) no lighting is planned for the landfill expansion area or the proposed stormwater basin; 4) the area to the west has and continues to experience disruption from human activity, including, but not limited to, off-highway vehicle (OHV) use, pedestrian use (i.e., hiking), and mountain bike riding; and 5) studies have been inconclusive as to the actual impact on birds and further scientific-based studies are required to determine actual noise impacts on bird species. No additional measures are required.

**Mitigation Measures:** The following mitigations measures have been developed to reduce potential impacts related to biological resources to less than significant levels:

Mitigation Measure BIO-1. If feasible, vegetation removal shall be conducted between September 1 and October 15. If vegetation removal cannot occur between September 1 and October 15, a bat survey shall be conducted by a qualified biologist within one week prior to initiation of work. The survey report shall be provided to the CDFW. Should bats be encountered during the survey, work in that area shall be postponed and the following measures shall be implemented:

- A qualified bat biologist (one possessing a Memorandum of Understanding with CDFW for work with bats) shall either conduct, or supervise, the humane eviction of bats from the onsite structures.
- Humane bat eviction shall only be conducted within seasonal periods of bat activity during which specific temperature and precipitation criteria are met. Eviction may be conducted between about March 15<sup>th</sup> (or after evening temperatures rise above 45°F) and April 30<sup>th</sup>, or between August 15<sup>th</sup> and about October 1<sup>st</sup> (or before evening temperatures fall below 45°F); no eviction work shall be conducted if more than ½-inch of rainfall has occurred within the preceding 24 hours.

Mitigation Measure BIO-2. Project-related vegetation clearing should occur outside the bird nesting season, which is generally considered to be March 15 through August 15. If project-related brush clearing or structural work on buildings within the vicinity of nesting bird habitat must occur during the breeding season, nesting bird surveys should be performed in those locations by a qualified biologist one week prior to initiation of work to ensure that active nests are not destroyed. If active nests are present, work within 500 feet of the nest(s) shall be postponed until the young have fledged, unless a smaller nest buffer zone is authorized by the CDFW and USFWS. The survey report shall be provided to the CDFW.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		X		

**Discussion:** Sensitive natural communities are habitats that are generally defined by vegetation type and geographical location, and are increasingly restricted in abundance and distribution. Recognition of natural communities is an ecosystem-based approach to maintaining biodiversity in California. The following three special-status natural communities were observed within the study area: *Quercus douglasii* Woodland Alliance (Blue oak woodland) and *Quercus douglasii/Lotus subpinnatus-Nassella pulchra* Association (Blue oak-purple needlegrass Association), both of which are designated protected woodlands under SB1334: Oak Woodlands Conservation Act. Mixed riparian woodland which is designated a protected habitat under Lake County zoning Waterway combining district is also present onsite. The following summarizes the anticipated impact on these three natural communities:

- Blue oak woodlands represent approximately 10.47 acres (11.58% of the study area), of which approximately 7.71 acres (72%) will be impacted by the proposed project.
- Blue oak-purple needlegrass Association represents approximately 0.25 acres (0.28% of the study area), of which approximately 0.08 acres (32%) will be impacted by the proposed project.
- Riparian woodland represents approximately 0.47 acres (0.52% of the study area). It is not anticipated that the riparian woodland will be impacted by the project with adherence to the minimum 30-foot setback in accordance with the Article 72 of the County’s zoning ordinance.

Figure 3-9, POTENTIAL AREAS OF DISTURBANCE WITH NATURAL COMMUNITIES & STREAM SETBACK, illustrates the onsite natural communities and habitat areas and depicts the anticipated impacts associated with implementation of the proposed landfill expansion. Implementation of Mitigation Measure BIO-3 would serve to reduce impacts to special-status vegetation communities to less than significant levels (refer to Figure 3-10, PROPOSED MITIGATION AREA).

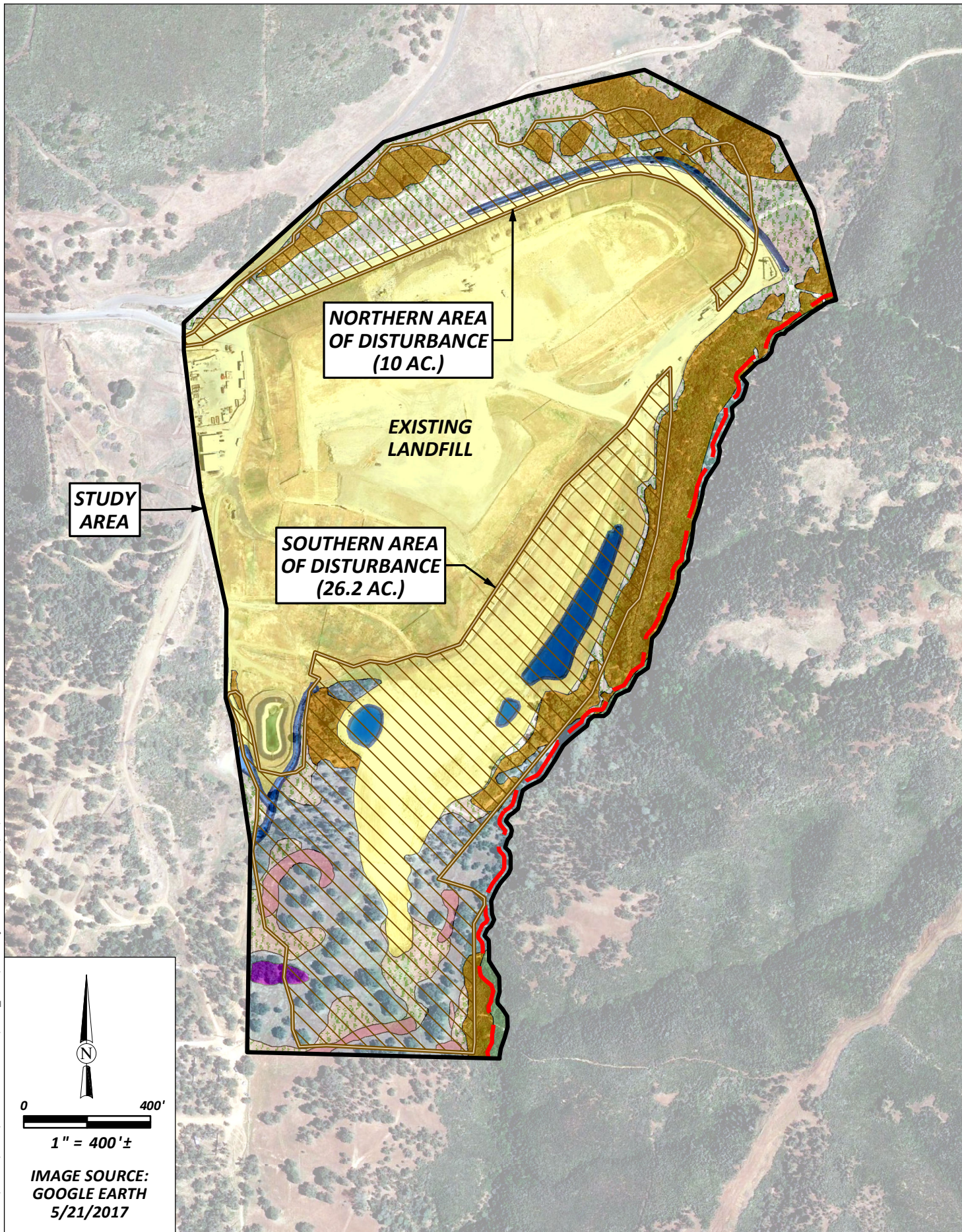
**Mitigation Measures:** The following mitigation measure has been developed to reduce potential impacts related to biological resources to less than significant levels:

Mitigation Measure BIO-3. Removal of the 7.79 acres of oak woodland shall be mitigated through the establishment of a conservation easement, planting additional oak woodland, and restoration of existing oak woodland at a minimum 2:1 mitigation ratio as follows:

The planting and establishment of additional oak woodland shall occur within a suitable location to support the development of oak woodland, such as the County-owned parcel immediately adjacent to the landfill east of the operations and recycling buildings (refer to Figure 3-10, PROPOSED MITIGATION AREA). This area is currently characterized by non-native grassland and has soils suitable for the support of oak woodland establishment. A total of 7.8 acres of oak woodland would be replanted as part of the mitigation for this project.

A total of 7.8 acres of existing oak woodland shall be placed into a conservation easement as mitigation in addition to the 7.8 acres of oak woodland planting. Over eight acres of mature oak woodland exists on parcels adjacent to the landfill, specifically the parcels immediately east of the operations and recycling buildings (refer to Figure 3-10). Placing these oak woodlands into a conservation easement will serve to protect oak woodlands in the vicinity of the project from further disturbance. Some of these woodlands have been degraded by OHV use, and have large areas of erosion, gully, and loss of herbaceous species diversity. Part of the mitigation for oak woodland loss shall include the restoration of these woodlands and the permanent protection of these areas from vehicular travel using fencing, boulders, and signage. Native herbaceous vegetation shall be used for planting in this area. At a minimum, the oak woodland mitigation planting and restoration area shall also be monitored for seven years, as required by the Oak Woodland Conservation Act.





Eastlake Landfill  
CEQA Initial Study  
Lake County, California

Potential Areas of Disturbance w/  
Natural Communities & Stream Setback

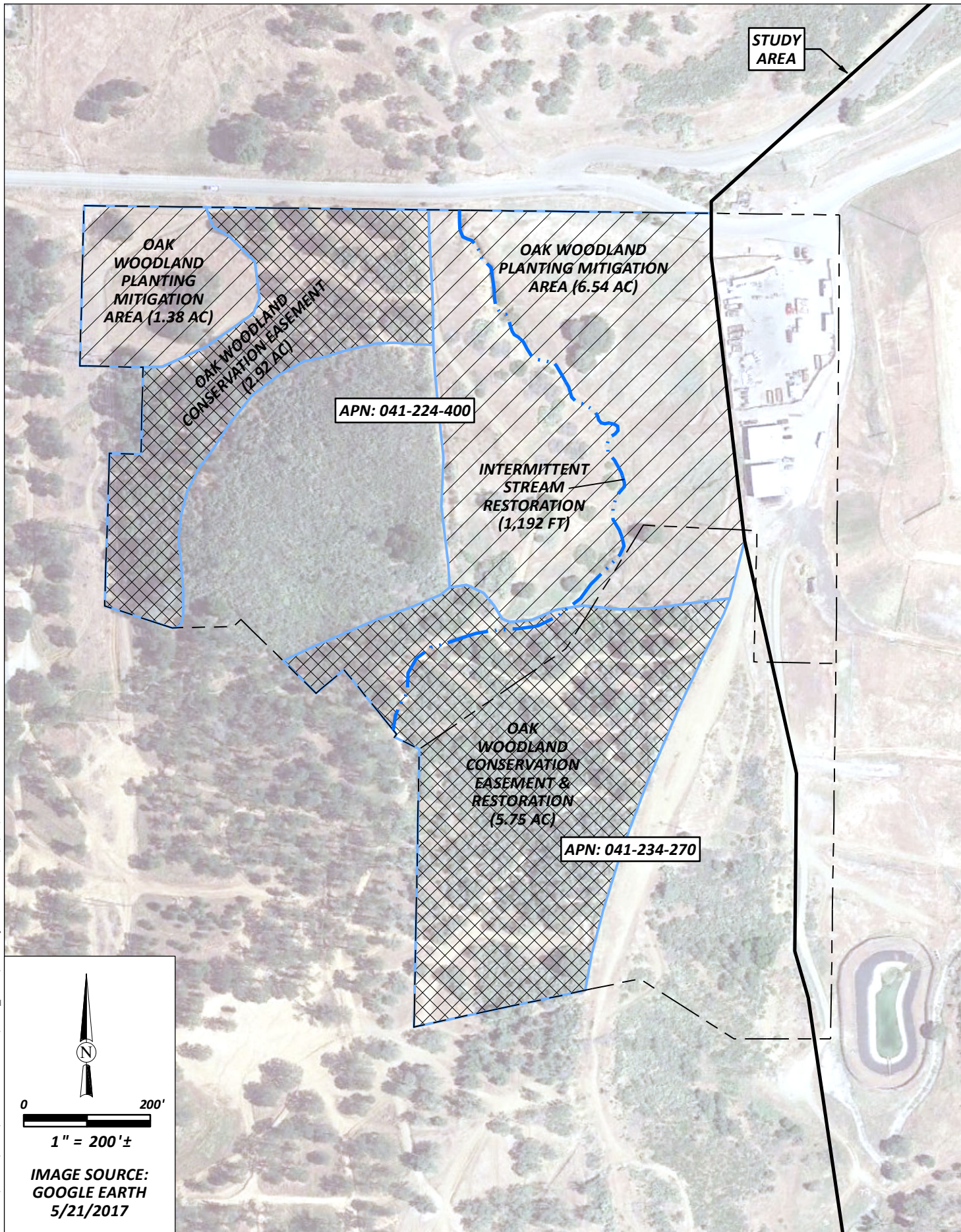
November 2019

Source: SHN, 2019

Figure 3-9



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Eastlake Landfill  
CEQA Initial Study  
Lake County, California

Proposed Mitigation Area

November 2019

Source: SHN, 2019

Figure 3-10



Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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?		X		

**Discussion:** No jurisdictional wetlands were observed within the study area; therefore, the project will not impact wetlands subject to U.S. Army Corps of Engineers (ACOE) jurisdiction. However, an intermittent stream exists along the eastern boundary of the project area and supports scattered areas of riparian woodland and a small seasonal drainage (approximately 450 feet in length) exists within the center of the proposed 4.1-acre stormwater detention basin.

Waterways within Lake County are protected by the regulations for the waterway or WW combining district. Article 37 states that the purpose of these regulations is to “Preserve, protect, and restore significant riparian systems, streams and their riparian, aquatic and woodland habitats; protect water quality; control erosion, sedimentation and runoff; and protect the public health and safety by minimizing dangers due to floods and earth slides. These purposes are to be accomplished by setting forth regulations to limit development activities in significant riparian corridors” (County of Lake, 2014). A minimum stream set back of 30 feet from the top of bank from the intermittent stream along the eastern boundary of the project will be observed by the project, although the disturbance set back exceeds 50 feet from the top of bank along the majority of the eastern boundary. Approximately 330 feet of the seasonal drainage will be impacted with construction of the basin (refer to Figure 3-9, POTENTIAL AREAS OF DISTURBANCE WITH NATURAL COMMUNITIES & STREAM SETBACK). As previously noted under impact discussion IV.a, above, BMPs will be deployed to minimize pollutants from discharging from the site (refer to Section X, *Hydrology and Water Quality*).

The ACOE must authorize construction activities expected to adversely affect this drainage; thus a Section 404 Permit would have to be obtained from the Corps. Construction activities resulting in fill also require a Section 401 Water Quality Certification from the RWQCB. Potential impacts to jurisdictional waters would be reduced through compliance with the regulatory process (i.e., Section 404 Permit and 401 Certification). In addition, filling of this drainage is subject to CDFW permitting requirements. Compliance with Mitigation Measure BIO-4 would reduce potential impacts to a less than significant level.

**Mitigation Measures:** The following mitigation measure has been developed to reduce potential impacts related to biological resources to less than significant levels:

**Mitigation Measure BIO-4.** Prior to issuance of a grading permit affecting any jurisdictional waters, including wetlands, as identified in the project wetland delineation, the County shall obtain the following resource agency permits from the ACOE, CDFW, RWQCB, or any other applicable agency (i.e., USFWS) identified through the permitting process:

- Prior to any discharge of dredged or fill material into “waters of the U.S.,” including wetlands, authorization under a Nationwide Permit or Individual Permit shall be obtained from the ACOE. For any features determined to not be subject to the ACOE jurisdiction during the verification process, authorization to discharge (or a waiver from regulation) shall be obtained from the RWQCB. For fill requiring a ACOE permit, water quality certification shall be obtained from the RWQCB prior to discharge of dredged or fill material.
- Prior to any activities that would obstruct the flow of, or alter the bed, channel, or bank of any intermittent or ephemeral creeks, notification of streambed alteration shall be submitted to the CDFW; and, if required, a 1602 streambed alteration agreement shall be obtained by the County.
- The County shall achieve the mitigation for the permanent loss of streams, wetlands, and other waters through the purchase of mitigation credits at an agency-approved mitigation bank at a minimum 1:1 ratio, or through onsite/offsite habitat restoration at a minimum 3:1 ratio. Should onsite habitat restoration be pursued by the County, the highly degraded and eroded seasonal drainage within the County-owned parcel immediately east of the operations and recycling buildings would allow over 1,000 feet of restoration. This restoration would allow for



a minimum 3:1 replacement ratio for the loss of 330 feet of onsite jurisdictional waters (refer to Figure 3-10, PROPOSED MITIGATION AREA). Should the County move forward with onsite restoration, a detailed mitigation plan, including success criteria, monitoring, maintenance, and reporting as required by the regulatory agencies (i.e., ACOE, CDFW, RWQCB) shall be submitted for review and approval. The affected regulatory agency shall identify when measures shall be implemented and completed for those activities impacting streams, wetlands, or other waters. All measures contained in the permits or associated with any agency approvals shall be implemented to the satisfaction of the lead regulatory agency.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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?		X		

**Discussion:** The landfill exists between the developed lands within the City of Clearlake and the surrounding undeveloped lands and sparsely developed lands to the north, east, and south. It is unlikely that large scale terrestrial linkages exist, however local wildlife movement corridors occur within the surrounding area and portions of the study area. These are expected to be concentrated within riparian or seasonal drainage corridors, and within uninterrupted vegetated areas and oak woodlands. The area surrounding the landfill is also known to be an important flyover location for migratory birds using Clearlake as a stopover location; however it is unlikely that these species would stop within the landfill area.

Ongoing activities at the landfill may have previously altered migration or local travel patterns, but this impact is considered the baseline condition and is not considered an impact for this project. Due to the small scale of the proposed expansion area (approximately 21.8 acres), the movement of any native resident or migratory wildlife species or established native resident or migratory wildlife corridors is not anticipated to be significant. The project does not propose to alter any streams or rivers or otherwise impact fish movements.

In accordance with the Article 37, implementation of the proposed landfill expansion will limit disturbance a minimum 30 feet from the top of bank from the intermittent stream along the eastern boundary of the project area to minimize impacts to wildlife movement corridors, although the disturbance set back exceeds 50 feet from the top of bank along the majority of the eastern boundary. Implementation of the landfill expansion will require the construction of a new 4.1-acre stormwater detention on the southern portion of the site, impacting a seasonal drainage (330 feet) and oak woodland habitat. In addition to observing the 30 to 50-foot setback from the intermittent stream along the eastern boundary of the project area, it is not anticipated that implementation of the proposed expansion area will significantly impact wildlife movement corridors with the implementation of mitigation for the loss of blue oak woodland and the seasonal drainages (refer to Mitigation Measure BIO-3 and Mitigation Measure BIO-4, above). Impacts would be less than significant in this regard.

**Mitigation Measures:** Implement Mitigation Measure BIO-3 and Mitigation Measure BIO-4.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?		X		

**Discussion:** Refer to impact discussion under IV.b, above. With incorporation of mitigation, impacts would be less than significant.

**Mitigation Measures:** Implement Mitigation Measure BIO-3.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community, Conservation Plan, or other approved local, regional, or State habitat conservation plan?				X

**Discussion:** No habitat conservation plans, or other similar plans have been adopted for the project site or project area. No impact would occur in this regard.

**Mitigation Measures:** No mitigation measures are required.

## Findings

In the course of the above evaluation, impacts associated with *Biological Resources* were found to be less than significant with the implementation of the mitigation measures.

## References and Citations

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- SHN Consulting Engineers and Geologists, Inc. 2019. *Natural Resources Assessment Eastlake Expansion Project*. August 2019.

## V. Cultural Resources

The purpose of this section is to identify any potential cultural resources within or adjacent to the proposed project, and to assist the Lead Agency, in this case Lake County, in determining whether such resources meet the office definitions of “historical resources,” as provided in the California PRC, in particular under the California Environmental Quality Act (CEQA). The analysis in this section has been prepared in accordance with Section 15064.5 of the State CEQA Guidelines, which considers the potential impacts on prehistoric, historic, and paleontological resources. This section describes the potential cultural resources within the project study area, and the applicable regulations that govern those resources.

CEQA requires a lead agency to determine whether a project may have a significant effect on historical resources (Section 21084.1). If it can be demonstrated that a project will cause damage to resources Eligible for or Listed in the California Register of Historic Resources (CRHR), Tribal Cultural Resources (TCRs) and other resources on local County or Local lists, or those determined by the lead agency to be significant. The lead agency may require reasonable efforts be made to permit any or all of the resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (Section 21083.2[a], [b], and [c]).

PRC Section 5024.1 requires an evaluation of historical resources to determine their eligibility for listing in the CRHR. The purpose of the register is to maintain listings of the state’s historical resources and to indicate which properties are to be protected from substantial adverse change. The criteria for listing resources on the CRHR were expressly developed to be in accordance with previously established criteria developed for listing in the NRHP, enumerated below. According to PRC Section 5024.1(c) (1–4), a resource is considered historically significant if it (i) retains “substantial integrity,” and (ii) meets at least one of the following criteria:

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

A historical resource is a resource listed in, or determined to be eligible for listing, in the CRHR (Section 21084.1), a resource included in a local register of historical resources (Section 15064.5[a][2]), or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (Section 15064.5[a][3]).

DZC Archaeological and Cultural Resource Management completed a cultural resource inventory report and extend phase I testing on the project site in January 2018. The cultural resources review was completed to satisfy the requirements of the CEQA and the Lake County General Plan. It was conducted at a level which also satisfies the requirements of the National Environmental Policy Act (NEPA) of 1969 and Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended. As part of this evaluation an archival research, Sacred Lands Search, and a review of previous surveys adjacent to and within the study area were documented.

### Environmental Setting

Within the study area, one previously recorded resource was documented and six previous archaeological surveys were conducted. Within the landfill site, three previously recorded resources were documented during the review, including three previous archaeological surveys conducted. In total, four cultural resources were documented within one-quarter-mile radius of the study area as a result of these investigations. The study area was determined to not overlay any known Traditional Cultural Property (refer to Section XVIII, *Tribal Cultural Resources*). The probability of encountering undocumented cultural resources on the surface within the study area is considered moderate to high.

Historical documents indicate that the project’s study area was purchased from the United States government for homesteading or agricultural purposes in the late-19th century. Aerial photographs determined that development of the landfill within the study area began in the late-20th century. The probability of uncovering historic-era cultural resources within the study area is considered moderate. Because use of the land as a refuse repository is contemporary, the potential for the study area to yield historic artifacts (over 50 years old) is considered high within the immediate activity area of the landfill.



## Impact Analysis

The following includes an analysis of environmental parameters related to *Cultural Resources* based on Appendix G of the State CEQA Guidelines. The discussion not only includes the areas for which there is potential for environmental impacts but also provides justification for the conclusions that either no impacts, less than significant impacts, or less than significant impacts with mitigation could occur. The CEQA Checklist question, discussion, and environmental significance conclusion are provided below under each individual environmental parameter related to *Cultural Resources*.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?				X

**Discussion:** Based on the result of the Cultural Resource Inventory Report there are no National Register of Historic Places (NRHP) or CRHR sites located at the project, or within close proximity of the site, that would call for the retention of the historical structure or listing. Therefore, no impacts to historical resources would occur with implementation of the proposed project.

**Mitigation Measures:** No mitigation measures are required.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?		X		

**Discussion:** A total of 73 acres of the Eastlake Sanitary Landfill site was intensively surveyed in transects of 15 meters or less (DZC, 2018). Survey efforts were unable to relocate the previously recorded site CA-LAK-973 and it is believed to no longer exist. A new resource, Eastlake Landfill Site No. 2 (ELF-2), was recorded during survey efforts.

Archaeological site ELF-2 is a highly disturbed, sparse obsidian lithic scatter. An Extended Phase 1 test was conducted at the location of the newly recorded resource to determine the presence of a subsurface deposit and ascertain if mitigation is needed. Forty-one shovel test units were excavated. A shallow (less than 20 cm) subsurface deposit was observed; cultural material recovered consisted entirely of broken obsidian flakes, believed to be sources to Borax Lake, a local obsidian deposit. The site has incurred physical impacts from standard operating procedures related to the Eastlake Landfill and from private land use, prior to this study and prior to the permitting process. As a result, ELF-2 has been largely demolished and exhibits severe material alteration of its sole type of constituent, obsidian flakes. Site ELF-2 has incurred substantial adverse change that has altered its historic significance and no longer retains the ability to convey a cohesive historic significance. As a result, site ELF-2 is not a historical resource under CEQA (PRC Section 5024.1(c)) and is not eligible for inclusion in the CRHR. Implementation of the proposed project would not affect historic or archaeological. Less than significant impacts would occur in this regard

There is a possibility that cultural resources, including buried archaeological materials, could exist in the area and may be uncovered during the life time of the landfill. Therefore, if any resources are found during the construction of the proposed project, they will be mitigated through implementation of Mitigation Measure CR-1. Adherence to protocols established by Mitigation Measure CR-1 would serve to avoid impacts that would result in a substantial adverse change in the significance of an archaeological resource as defined in CEQA Guidelines Section 15064.5. Impacts would be less than significant with mitigation incorporated.

**Mitigation Measures:** The following mitigation measure has been developed to reduce potential impacts related to undocumented cultural resources to less than significant levels:

**Mitigation Measure CR-1.** If cultural resources, such as chipped or ground stone, or bone are discovered during ground-disturbance activities, work shall be stopped within 50 feet of the discovery, as required by the California Environmental Quality Act (CEQA; January 1999 Revised Guidelines, Title 14 California Code of Regulations [CCR] 15064.5 (f)). Work near the archaeological finds shall not resume until a professional archaeologist, who meets the Secretary of the Interior’s Standards and Guidelines, has evaluated the material and offered recommendations for further action.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
c) Disturb any human remains, including those interred outside of formal cemeteries?		X		

**Discussion:** There are no known burial sites on or immediately adjacent to the proposed project site. If human remains are unearthed during future development of the site, the provisions of California Health and Safety Code Section 7050.5 shall apply. Under this Section, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition, pursuant to California Public Resources Code Section 5097.98 and Mitigation Measure CR-2. Impacts are considered less than significant with mitigation incorporated.

**Mitigation Measures:** The following mitigation measure has been developed to reduce potential impacts related to unknown human burials to less than significant levels:

**Mitigation Measure CR-2.** If In the event that previously unidentified evidence of human burial or human remains are discovered during project construction, work will stop at the discovery location, within 20 meters (66 feet), and any nearby area reasonably suspected to overlie human remains (Public Resources Code, Section 7050.5) The Lake County Coroner must be informed and consulted, per State law. If the coroner determines the remains to be Native American, he or she shall contact the Native American Heritage Commission within 24 hours. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descendent. The most likely descendent will be given an opportunity to make recommendations for means of treatment of the human remains and any associated grave goods. when the commission is unable to identify a descendant or the descendants identified fail to make a recommendation, or the landowner or his or her authorized representative rejects the recommendation of the descendants and the mediation provided for in subdivision (k) of Section 5097.94, if invoked, fails to provide measures acceptable to the landowner, the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American human remains with appropriate dignity on the property in a location not subject to further and future subsurface disturbance. Work in the area shall not continue until the human remains are dealt with according to the recommendations of the County Coroner, Native American Heritage Commission and/or the most likely descendent have been implemented.

## Findings

In the course of the above evaluation, impacts associated with *Cultural Resources* were found to be less than significant with the implementation of the mitigation measures.

## References and Citations

DZC Archaeological and Cultural Resource Management. 2018. *Phase I Cultural Resource Inventory Report and Extended Phase I Testing for the Eastlake Landfill Expansion Project, Lake County, California*. January 2018.

## VI. Energy

The purpose of the section of the Initial Study is to analyze the potential direct and indirect environmental impacts associated with the project's projected energy consumption. Such impacts can include the depletion of nonrenewable resources (e.g., oil, natural gas, coal, etc.). Analyses of emissions of air quality and GHG pollutants during both the construction and long-term operational phases of the project are analyzed in Section III, *Air Quality*, and Section VIII, *Greenhouse Gas Emissions*.

### Environmental Setting

Energy consumption at the Eastlake Sanitary Landfill occurs primarily in the form of electric power and gasoline/diesel fuel use. Electric utility service is provided by Pacific Gas & Electric (PG&E), and is used to power the Scalehouse, Hazmat, and Operations/Equipment Shop buildings, and the landfill gas (LFG) blower/flare station. Gasoline and diesel fuel is used in on-site utility trucks and heavy equipment (scrapers, loaders, dozers, compactors) which are necessary for day-to-day landfill operations.

The Lake County General Plan (2008) Policy PFS-6.4, Energy Conservation, states that "The County shall support the use of energy conservation devices and renewable energy sources in residential, commercial and industrial developments, and shall continue to develop renewable energy sources for County facilities when practical."

### Impact Analysis

The following includes an analysis of environmental parameters related to *Energy* based on Appendix G of the State CEQA Guidelines. The discussion not only includes the areas for which there is potential for environmental impacts but also provides justification for the conclusions that either no impacts, less than significant impacts, or less than significant impacts with mitigation could occur. The CEQA Checklist question, discussion, and environmental significance conclusion are provided below under each individual environmental parameter related to *Energy*.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X	

**Discussion:** Expansion of the Eastlake Landfill is proposed solely for the purpose of meeting long-term community public service and waste disposal needs. No new buildings or structures requiring electric power service or additional energy consumption are proposed. No changes in landfill staffing or hours of operation, which would affect electric power use in existing buildings, are proposed.

No changes in waste quantities received, other than to accommodate planned growth in the Lake County service area are proposed. Daily operations for waste placement, compaction and cover placement will remain the same. Over the long-term, on-site diesel fuel consumption for landfill operations/heavy equipment may increase incrementally, commensurate with the forecasted increase in MSW deliveries. However, this will be offset to some extent as older landfill equipment is replaced with newer, more fuel-efficient units. Lastly, energy resources for waste disposal operations due to population and economic growth would be expended regardless (i.e., at other out-of-County landfills) if the expansion project is not approved. No significant change in energy consumption for day-to-day landfill operations is anticipated relative to existing conditions. No inefficient or unnecessary use of energy resources is envisioned. Therefore this impact on energy consumption is considered less than significant. Note that during the project lifetime (through year 2045), forecasted waste delivery rates (and by extension, fuel consumption for day-to-day landfill operations) will in fact be less than in the recent past (2013-2016) when waste was imported from Mendocino County.



Landfill expansion will take place in four phases with discrete cells or modules constructed every 4 to 9 years. Each construction project will be short duration, up to 4 months. Project construction will require energy consumption in the form of fuel use for construction vehicles and heavy equipment. Fuel consumed during construction would be temporary in nature and would not represent a significant demand on available supplies. Therefore this impact during construction phases is considered less than significant.

**Mitigation Measures:** No mitigation measures are required. Impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?				X

**Discussion:** No new buildings or structures that will increase energy demand, or require energy conservation measures are proposed. Therefore this aspect related to new developments in the General Plan Policy on energy conservation does not apply to the project. The project has no effect on the County's efforts to develop renewable energy sources for County facilities when practical. Therefore the proposed landfill expansion project does not conflict with Lake County General Plan Policy PFS-6.4, Energy Conservation.

**Mitigation Measures:** No mitigation measures are required. Impacts would be less than significant.

## Findings

Based upon the review of the information above, implementation of the proposed project will have a less than significant or no impact with respect to *Energy*.

## References and Citations

Lake County. 2008. *Lake County General Plan*. September 2008.

SCS Engineers. 2018. *Report of Disposal Site Information/Report of Waste Discharge/Preliminary Final Closure and Post-Closure Plan: CCR Title 27 – Joint Technical Document for Eastlake Sanitary Landfill, Clearlake, California*. July 30, 2018.

## VII. Geology and Soils

The purpose of this section is to describe the geologic and seismic setting of the project area, identify potential impacts associated with implementation of the proposed project, and, as necessary, recommend mitigation to reduce the significance of impacts. The issues addressed in this section are risks associated with faults, strong seismic ground shaking, seismic-related ground failure such as liquefaction, landslides, and unstable geological units and/or soils. Information in this section is drawn from the *Geologic and Seismic Siting Assessment for the Proposed Eastlake Landfill Expansion, Lake County, California* (SHN, 2018) and other published references, as cited. The report is included in Appendix D, *Geologic and Seismic Siting Assessment*.

### Environmental Setting

Published geologic mapping and reports in the immediate vicinity of the Eastlake Sanitary Landfill indicates that the local basement rock consists of unnamed upper Cretaceous age sandstone. North of the site, Franciscan Complex bedrock composed of pervasively sheared and fractured metamorphosed sandstone, chert, and basalt is present. Bedrock encountered during drilling activities consists of predominantly fractured and weathered sandstone, with Interbedded shale. These materials are consistent with the type of material found in the Great Valley sequence.

Late Tertiary age Cache formation is overlying the basement rocks and is visible in localized outcrops at the site. The Cache formation consists of freshwater sediments comprised of coarse gravel, sand, silt, and clay, and basal strata of poorly sorted gravel with sand and silt, deposited in an alluvial environment. The slope of the contact between the Cache formation and the basement rock is toward the south at a moderately steep angle based on drill data. A southward dipping contact is consistent with the topography and a south-southwest groundwater gradient determined for the site.

Active faults are defined as faults that have had surface displacement in the Holocene epoch (in the past 11,000 years) based on CCR Division 2, Title 14, also known as the Alquist-Priolo Earthquake Fault Zoning Act (A-P Act). Potentially active faults are defined by the A-P Act as faults showing surface displacement during mid to late Quaternary time (about 1.6 million years before present) that have a relatively high potential for ground rupture. In general, Quaternary faults that do not record evidence of Holocene surface displacement are not considered as being active by the State.

Based on the most recent available data, no active or potentially active faults are reported to be present within the boundaries of the project site. The Eastlake Landfill is not located within an A-P Earthquake Fault Hazard Zone. Regional active faults within about 50 miles of the Eastlake Landfill include the Konocti Bay fault zone, Big Valley fault, Hunting Creek Berryessa fault, the north section of the Maacama fault zone, San Andreas fault, Bartlett Springs fault and Great Valley 03 Mysterious Ridge blind thrust fault.

A review of the Soil Survey Geographic (SSURGO) database map for Lake County, California (CA033) revealed that the project site consists predominantly of Bally-Phipps-Haploxerafls association (30 to 75% slopes), and Phipps complex (5 to 15% slopes). Bally-Phipps-Haploxerafls association constitutes approximately 88%, and Phipps complex constitutes approximately 12% of the underlying soil associations/complexes within the project site. The Bally-Phipps-Haploxerafls association is localized entirely in the active landfill and surrounding areas. The Phipps complex is located in the southern portion of the site; the meadow encompassing most of the proposed expansion of the landfill.

Bally-Phipps-Haploxerafls association exhibits 35% Bally, 20% Phipps, 20% Haploxerafls, and 20% other minor component soil types. Bally, being the predominant soil type, will be the only soil type discussed at length. The Bally soil type, is typically located on 30 to 50% slopes. This component is found on hills and backslopes. The parent material consists of alluvium. Depth to a restrictive layer is greater than 80 inches and this class is well drained, exhibiting a very high runoff rate. Water movement in the most restrictive layer is moderately low to moderately high, with water available to a depth exceeding 80 inches. A typical soil profile for this soil type reads 0 to 10 inches: gravelly sandy clay loam; 10 to 18 inches: very gravelly sandy clay loam; 18 to 37 inches: very gravelly sandy clay; and 37 to 65 inches: very gravelly sandy clay loam.

Phipps complex exhibits 80% Phipps soils and 20% other minor component soil types. Phipps, being the predominant soil type, will be the only soil type discussed at length. The Phipps soil type, is typically located on 5 to 15% slopes. This component is found on backslopes and side slopes. The parent material consists of alluvium. Depth to a restrictive layer is more than 80 inches and this class is well drained, exhibiting a high runoff rate. Water movement in the most restrictive

layer is moderately low to moderately high, with water available to a depth exceeding 80 inches. A typical soil profile for this soil type reads 0 to 7 inches: clay loam; 7 to 42 inches: clay; 42 to 60 inches: clay loam.

## Impact Analysis

The following includes an analysis of environmental parameters related to *Geology and Soils* based on Appendix G of the State CEQA Guidelines. The discussion not only includes the areas for which there is potential for environmental impacts but also provides justification for the conclusions that either no impacts, less than significant impacts, or less than significant impacts with mitigation could occur. The CEQA Checklist question, discussion, and environmental significance conclusion are provided below under each individual environmental parameter related to *Geology and Soils*.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
<p>a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:</p> <ul style="list-style-type: none"> <li>i) Rupture of a known earthquake, fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publications 42.</li> <li>ii) Strong seismic ground shaking?</li> <li>iii) Seismic-related ground failure, including liquefaction?</li> <li>iv) Landslides?</li> </ul>			X	

**Discussion:** The project may potentially expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

*i. Rupture of a known earthquake fault:*

As described above, the Eastlake Sanitary Landfill is not located within an A-P Earthquake Fault Hazard Zone and not active or potentially active faults are located onsite. In addition to the regional active faults, multiple unnamed and early Quaternary faults have been identified within the limits of the proposed northern and southern landfill expansion areas (Hearn and others, 1995). None of these faults, however, are zoned as Holocene-active faults. The most recent fault activity map of California (Jennings, 2010) indicates the local faults are less than 1.6 million years old but lack evidence of movement in the middle to late Quaternary (i.e. the last 700,000 years). Therefore, the potential for movement to recur in the future of these fault traces is considered to be very low and impacts are considered to be less than significant.

*ii. Strong seismic ground shaking:*

The entire northern California region is subject to the potential for moderate to strong seismic shaking due to distant seismic sources. Seismic shaking can be generated on faults many miles from the project vicinity. Seismic shaking potential is considered minimal and the hazard is not higher or lower at the project site than throughout the region.

Historic seismicity data were reviewed to evaluate whether measurable seismic activity may have occurred within or near the Eastlake Sanitary Landfill on the identified unnamed faults that project through the site. This assessment was performed using a data base assembled by the Northern California Earthquake Data Center and accessed through the United States Geological Survey (USGS) historic seismicity database. All recorded historic earthquakes with a magnitude greater than 2.5 were plotted in relation to the project site. The results of this evaluation indicate that no historic seismic or microseismic activity has been recorded within the Eastlake Sanitary Landfill boundaries. Therefore, the potential for Holocene active faults to be located within 200 feet of the proposed landfill expansion areas is unlikely. Standard design and construction practices meeting current California Building Code (where applicable) will provide adequate protection for relocated buildings onsite.



In addition, a seismic stability analysis has been performed based on proposed facility design elements and known site-specific geologic site conditions. Preliminary design for the landfill expansion has been undertaken to meet 27 CCR stability criteria. For final design, all critical interfaces of the base liner, slope liner and preferential pathway liner systems must meet or exceed the displacement shear strength parameters identified in the stability analysis report. As a result, the potential for strong seismic ground shaking to impact the proposed project is considered to be less than significant (RMC, 2019).

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

Landfills can be located within areas of potential rapid geologic change (landslides, subsidence, liquefaction) if containment features are designed, constructed, and operated to prevent failure. Previous geologic investigations determined that the site is underlain by firm rock which is not susceptible to liquefaction, and combined with groundwater levels between 20 and 55 feet, the potential for liquefaction is low. Due to the low liquefaction potential, the likelihood for seismically induced ground failure to occur is also considered low. Therefore, there is no risk that the proposed project will be subject to liquefaction or seismically induced ground failure.

*iv. Landslides:*

Detailed geological site investigations of the landfill site and expansion area have provided information used in waste cell engineering design including height and final slope angles. Although landslide deposits have been mapped onsite, generally in the northern area of the proposed landfill expansion, these are identified as relict features. Final design will include mapping of onsite landslides. No active landslides are present in proposed southern landfill expansion areas. Thus no landslides or other conditions of potential rapid geologic change are expected. There are no current or proposed structures at the site that might be subject to landslide issues and no offsite structures that would be impacted by any localized landslides at the project site.

**Mitigation Measures:** No mitigation measures are required. Impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
b) Result in substantial soil erosion or the loss of topsoil?			X	

**Discussion:** Soils, including topsoils, will be removed from the areas identified for landfill expansion. Earthfill will be required for various uses, including soils for base liner construction; daily and intermediate covers for waste; final cover system soil layers; and access haul roads. These materials will be produced from waste cell and storm water basin excavations.

The proposed final grades of the Landfill have been designed to promote runoff and minimize erosion during storms. The final cover system design includes maximum 3H:1V slopes for Areas I and II, starting at the existing grade and ascending to an elevation of 1,827 feet above MSL. This design will aid in the prevention of erosion while promoting runoff and minimizing percolation into the underlying soil cover and liner system. These grades are also designed to compensate for potential settlement, maintain slope integrity, and to minimize ponding of water on the surface.

For day to day landfill operations, the County will continue to implement measures to control and monitor surface water contaminant releases in accordance with the General Industrial Storm Water Permit #5817SO14858 and requirements of WDR R5-2019-0009 (or new permits administered by the State Water Resources Control Board and RWQCB), and a Storm Water Pollution Prevention Plan (SWPPP) for the landfill. These measures will include:

- Wet- and dry-season inspections to verify the integrity of all drainage systems and slopes, and sediment/debris removal from drainage structures (ditches, culverts and sedimentation basin).

- Wet season preparations including the establishment of an all-weather winter tipping pad; grading to divert stormwater runoff away from landfill tipping areas and to perimeter drainage ditches.
- Grading, compacting and application of straw or hydroseed in soil borrow areas and completed landfill slopes
- Placement of straw wattles to divert and direct run-off, and remove sediment.
- Slope inspections for signs of erosion, and implementation of corrective repairs as needed.

Earthwork, grading, and soil stockpiling activities associated with new cell construction will be conducted in accordance with the conditions of: a grading permit issued by the Lake County Community Development Department; the Lake County Grading Ordinance; and a Construction SWPPP and Notice of Intent (NOI) administered by the Central Valley Regional Water Quality Control Board (RWQCB). The Construction SWPPP will specify Best Management Practices (BMPs) for erosion and sediment control measures. Therefore, the potential for substantial soil erosion and loss of topsoil is considered to be less than significant.

**Mitigation Measures:** No mitigation measures are required. Impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?			X	

**Discussion:** Refer to impact discussion under Section VII.a, above.

**Mitigation Measures:** No mitigation measures are required. Impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?			X	

**Discussion:** Moderate and highly plastic silts and clays, when located near the ground surface, can exhibit expansive characteristics (shrink-swell) that can have adverse effects on slope stability and be detrimental to landfills during periods of fluctuating soil moisture content. Earth materials encountered at the site consist of the Cache Creek Formation which is composed predominantly of coarse-grained granular soil and gravels. Underlying Cache Creek Formation sediments is very dense, and fresh to slightly decomposed sandstone bedrock of the Great Valley Formation. Swelling clays and to a lesser extent silts, derived from residual soils have not been encountered to date at the locations of previous borehole locations. Based on the horizontal and vertical distribution of bedrock materials within the project area, it is not anticipated that moderate to highly plastic silts and clays to be present onsite. Excavation that is expected during site grading of the proposed landfill cell will further change the current near-surface conditions by the removal of the surficial zone of weathering and soil formation. Therefore, the risk of damage due to expansive soils is considered less than significant.

**Mitigation Measures:** No mitigation measures are required. Impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?				X

**Discussion:** The proposed landfill expansion does not propose installation or operation of a new septic systems or other onsite wastewater system. The proposed project has an existing onsite septic system that disposes of domestic wastewater. This system would continue to be utilized for the permanent workers at the site, and is not proposed to be expanded to accommodate other future onsite uses. Should the facility need to expand the system, they would be required to follow standard County procedures for septic system development as provided for by the Lake County Department of Environmental Health. Therefore, there is no potential for septic tank wastewater to adversely affect the project site.

**Mitigation Measures:** No mitigation measures are required.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X

**Discussion:** No paleontological resources or unique geologic features have been identified on the proposed project site, and the potential for their occurrence is considered minimal. No impacts are anticipated in this regard.

**Mitigation Measures:** No mitigation measures are required.

## Findings

Based upon the review of the information above, implementation of the proposed project will have a less than significant impact with respect to *Geology and Soils*.

## References and Citations

- RMC Geoscience, Inc. 2019. *Preliminary Seismic and Stability Evaluation, Lake County Eastlake Landfill Expansion Project*. March 12, 2019.
- SHN Consulting Engineers and Geologists, Inc. 2018a. *Geologic and Seismic Siting Assessment for the Proposed Eastlake Landfill Expansion, Lake County, California*. March 5, 2018.
- SHN Consulting Engineers and Geologists, Inc. 2018b. *Hydrogeologic and Hydrologic Evaluation for the Proposed Eastlake Sanitary Landfill Expansion, Lake County, California*. March 28, 2018.
- SCS Engineers. 2018. *Report of Disposal Site Information/Report of Waste Discharge/Preliminary Final Closure and Post-Closure Plan: CCR Title 27 – Joint Technical Document for Eastlake Sanitary Landfill, Clearlake, California*. July 30, 2018.



## VIII. Greenhouse Gas Emissions

This section evaluates greenhouse gas (GHG) emissions associated with the proposed project and analyzes project compliance with applicable regulations. Consideration of the project’s consistency with applicable plans, policies, and regulations, as well as the introduction of new sources of GHGs, is included in this section. This section is based upon the *Eastlake Landfill Expansion CEQA Air Quality and Greenhouse Gas Impact Analysis* (SCS, 2019) and is included as Appendix B, *Air Quality and Greenhouse Gas Analysis Report*.

### Environmental Setting

Greenhouse gases are gases in the atmosphere that absorb and emit radiation. The greenhouse effect traps heat in the troposphere through a three-fold process, summarized as follows: short wave radiation emitted by the sun is absorbed by the earth; the earth emits a portion of this energy in the form of long wave radiation; and GHGs in the upper atmosphere absorb this long wave radiation and emit this long wave radiation into space and toward the Earth. This “trapping” of the long wave (thermal) radiation emitted back toward the Earth is the underlying process of the greenhouse effect. The main GHGs in the Earth’s atmosphere are water vapor, carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), O<sub>3</sub>, hydrofluorocarbons (HCFs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>).

California has passed Assembly Bill 32, mandating a reduction in GHG emissions and Senate Bill 97, evaluating and addressing GHG under CEQA. On April 13, 2009, Governor’s Office of Planning and Research (OPR) submitted to the Secretary for Natural Resources its proposed amendments to the state CEQA Guidelines for GHG emission, as required by Senate Bill 97 and they became effective March 18, 2010. As a result of these revisions to the CEQA Guidelines, lead agencies are obligated to determine whether a project’s GHG emissions significantly affect the environment and to impose feasible mitigation to eliminate or substantially lessen any such significant effects.

Landfills are considered a potential source of GHG emissions. This can result from uncontrolled surface emissions of LFG (by-product of waste decomposition processes) which contains both CH<sub>4</sub> and CO<sub>2</sub>. An LFG collection and control system (GCCS) is currently in place at the Eastlake Landfill, and is operated in accordance with California’s Landfill Methane Rule (LMR), which was promulgated specifically for controlling GHG emissions, and LCAQMD permit conditions. Collected LFG is thermally destroyed in the gas flare. During the landfill expansion project lifetime, the GCCS wellfield (collection wells, trenches and piping) will be expanded laterally concurrent with fill operations and as required by regulation and permit conditions.

### Impact Analysis

The following includes an analysis of environmental parameters related to *Greenhouse Gas Emissions* based on Appendix G of the State CEQA Guidelines. The discussion not only includes the areas for which there is potential for environmental impacts but also provides justification for the conclusions that either no impacts, less than significant impacts, or less than significant impacts with mitigation could occur. The CEQA Checklist question, discussion, and environmental significance conclusion are provided below under each individual environmental parameter related to *Greenhouse Gas Emissions*.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	

**Discussion:** The following analysis related to direct and indirect GHG impacts is based on the *Eastlake Landfill Expansion CEQA Air Quality and Greenhouse Gas Impact Analysis* (SCS, 2019), included in Appendix B, *Air Quality and Greenhouse Gas Analysis Report*.

### Direct Impacts

The LCAQMD defers to the BAAQMD “Thresholds of Significance,” contained within its CEQA Air Quality Guidelines. GHG significance thresholds apply only to operational activity increases. There are no construction related GHG significant thresholds. Based on the BAAQMD CEQA guidelines, operational impacts from a proposed project are considered potentially significant under CEQA if the project resulted in a net emissions increase of 1,100 metric tons of CO<sub>2e</sub> equivalent emissions (CO<sub>2e</sub>) for operational related activity.

Annual GHG operation related estimated emissions summary is provided in Table 3-9, GREENHOUSE GAS EMISSION ESTIMATES, below. Worksheets with details on GHG emission estimate calculations, governing assumptions and results are provided in Appendix B.

**Table 3-9  
GREENHOUSE GAS EMISSION ESTIMATES**

Annual Estimated Emissions (tons/year)	CO <sub>2</sub>	CH <sub>4</sub>	CH <sub>4</sub> GWP <sup>1</sup>	N <sub>2</sub> O	N <sub>2</sub> O GWP <sup>1</sup>	CO <sub>2e</sub>
Future Landfill Traffic Exhaust (2050)	34.5	0.0001	21	0.002	310	35.2
Future Landfill Gas (2050)	2,579	940	21		310	22,316
Current Landfill Traffic Exhaust (2024)	36.0	0.0002	21	0.002	310	36.5
Current Landfill Gas (2024)	2,048	746	21		310	17,723
Project Emissions CO <sub>2e</sub> TPY rate growth – 26 years						4,591
Project Emissions CO <sub>2e</sub> MT/Year rate growth – 26 years						4,174
Average CO <sub>2e</sub> MT/year rate increase per year						161
BAAQMD Threshold (MT) <sup>2</sup>						1,100
Exceeds BAAQMD Threshold						No

Notes:

1. [http://www.baaqmd.gov/~media/files/planning-and-research/emission-inventory/by2011\\_ghgsummary.pdf](http://www.baaqmd.gov/~media/files/planning-and-research/emission-inventory/by2011_ghgsummary.pdf) (Table B).
2. BAAQMD CEQA Air Quality Guidelines, Table2-1.

Source: SCS Engineers. 2019. *Eastlake Landfill Expansion CEQA Air Quality and Greenhouse Gas Impact Analysis*. December 6, 2019.

As noted above in Table 3-9, direct GHG estimated emissions will be less than significant.

### Indirect Impacts

With regards to indirect emissions, this Eastlake Sanitary landfill project will provide capacity for refuse that otherwise would have to be shipped out to landfills further away. Therefore, this project will reduce indirect GHGs that otherwise would require substantial on-road vehicle miles traveled. Impacts are considered less than significant in this regard.

**Mitigation Measures:** No mitigation measures are required. Impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

**Discussion:** LCAQMD is in attainment for all criteria air pollutants, does not have an air quality management plan, and does not have a GHG reduction plan.

**Mitigation Measures:** No mitigation measures are required. Impacts would be less than significant.

## Findings

Based upon the review of the information above, implementation of the proposed project will have a less than significant impact with respect to *Greenhouse Gas Emissions*.

## References and Citations

SCS Engineers. 2019. *Eastlake Landfill Expansion CEQA Air Quality and Greenhouse Gas Impact Analysis*. December 6, 2019.

SCS Engineers. 2018. *Report of Disposal Site Information/Report of Waste Discharge/Preliminary Final Closure and Post-Closure Plan: CCR Title 27 – Joint Technical Document for Eastlake Sanitary Landfill, Clearlake, California*. July 30, 2018.



## IX. Hazards and Hazardous Materials

The purpose of this section is to identify, to the extent feasible, the potential for hazards associated with historic and current site uses, surrounding sites, and recognized environmental conditions in connection with the proposed project site and to identify potential risks to human health, including uses of the proposed project site, workers, and construction workers. Information in this section focuses on the potential for the proposed project to create a significant hazard to the public or the environment through the use, transport, disposal or accidental release of hazardous materials. This section also addresses hazards associated with wildfires.

### Environmental Setting

Hazards are those physical safety factors that can cause injury or death, and while by themselves in isolation may not pose a significant safety hazard to the public, when combined with development of projects can exacerbate hazardous conditions. Hazardous materials are typically chemicals or processes that are used or generated by a project that could pose harm to people, working at the site or on adjacent areas. Many of these chemicals can cause hazardous conditions to occur should they be improperly disposed of or accidentally spilled as part of project development or operations. Hazardous materials are also those listed as hazardous pursuant to Government Code Section 65962.5.

The Lake County Division of Environmental Health is the administering agency and the Certified Unified Program Agency (CUPA) for Lake County with responsibility for regulating hazardous materials handlers, hazardous waste generators, underground storage tank facilities, above ground storage tanks, and stationary sources handling regulated substances. A Hazardous Materials Business Plan (HMBP) is required of businesses in Lake County that handle, use, generate, or store hazardous materials. The primary purpose of this plan is to provide readily available information regarding the location, type and health risks of hazardous materials to emergency response personnel, authorized government officials, and the public. Large cases of hazardous materials contamination or violations are referred to the Central Valley Regional Water Quality Control Board (RWQCB) and the California Department of Toxic Substances Control (DTSC).

Under Government Code Section 65962.5, both the DTSC and the State Water Resources Control Board (SWRCB) are required to maintain lists of sites known to have hazardous substances present in the environment. Both agencies maintain up-to-date lists on their websites. A search of the DTSC and SWRCB lists identified no open cases of hazardous waste violations within one-mile of the project site.

The EPA maintains the Enforcement and Compliance History Online (ECHO) program. The ECHO website provides environmental regulatory compliance and enforcement information for approximately 800,000 regulated facilities nationwide. The ECHO website includes environmental permit, inspection, violation, enforcement action, and penalty information about EPA-regulated facilities. Facilities included on the site are Clean Air Act (CAA) stationary sources; Clean Water Act (CWA) facilities with direct discharge permits, under the National Pollutant Discharge Elimination System; generators and handlers of hazardous waste, regulated under the Resource Conservation and Recovery Act (RCRA); and public drinking water systems, regulated under the Safe Drinking Water Act (SDWA). ECHO also includes information about EPA cases under other environmental statutes. When available, information is provided on surrounding demographics, and ECHO includes other EPA environmental data sets to provide additional context for analyses, such as Toxics Release Inventory data. According to the ECHO program, the project site is not listed as having a hazardous materials violation.

The CALFIRE Fire and Resource Assessment Program (FRAP), delineates the project area as a part of a designated “Very High Fire Hazard Severity Zone” (VHFHSZ). The FRAP designates lands in three general classifications, “Moderate”, “High” and “Very High” Fire Hazard Severity Zones. Fire suppression for the area is provided by a combination of first responders such as CALFIRE (designated as a State Responsibility Area) with additional fire fighting support from the nearby Lake County Fire Department main station located approximately 2 miles from the site.

### Impact Analysis

The following includes an analysis of environmental parameters related to *Hazards and Hazardous Materials* based on Appendix G of the State CEQA Guidelines. The discussion not only includes the areas for which there is potential for environmental impacts but also provides justification for the conclusions that either no impacts, less than significant impacts, or less than significant impacts with mitigation could occur. The CEQA Checklist question, discussion, and

environmental significance conclusion are provided below under each individual environmental parameter related to *Hazards and Hazardous Materials*.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	

**Discussion:** The waste types allowed to be discharged at the Eastlake Sanitary Landfill (per Title 27 Section 20220), are generally limited to “Nonhazardous Solid Waste,” defined as: “all putrescible<sup>3</sup> and non-putrescible solid, semi-solid, and liquid wastes, including garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction waste, abandoned vehicles and parts thereof, discarded home and industrial appliances, manure, vegetable or animal solid and semi-solid wastes and other discarded waste (whether of solid or semi-solid consistency); provided that such wastes do not contain waste which must be managed as hazardous wastes, or wastes which contain pollutants in concentrations which exceed applicable water quality objectives, or could cause degradation of water of the state (i.e., designated waste).”

The Eastlake Sanitary Landfill receives mixed municipal wastes and construction/demolition debris. Customers with source-separated brush, yard waste and clean wood waste are directed to the recycling center, operated under contract by Southlake Refuse Company LLC, and located just inside the landfill gate. Other source-separated recyclable materials such as scrap metal, cardboard, paper, beverage containers, and other acceptable packaging are received and diverted for recycling at the recycling center. Treated wood waste and non-friable asbestos have been added to the materials list for disposal with the approval of CalRecycle and the RWQCB.

As a Class III facility, no hazardous waste is accepted for disposal. Pursuant to the Solid Waste Handling and Recycling Services Agreement, Southlake Refuse’s recycling yard operations accepts lead-acid batteries, household batteries, appliances, cathode ray tubes and used oil which cannot be disposed in the landfill. Any other hazardous waste discovered that is not accepted at the recycling yard is stored in the Hazmat building onsite until the next mobile collection date.

Businesses that store hazardous materials are subject to the County’s HMBP program, which is regulated by the Lake County Environmental Health Division as part of the Certified Unified Program. The program requires the preparation of a document that provides an inventory of hazardous materials onsite, emergency plans and procedures in the event of an accidental release, and training for employees on safety procedures for handling hazardous materials and in the event of a release or threatened release. These plans are routine documents that are intended to disclose the presence of hazardous materials and provide information on what to do if materials are inadvertently released.

Project operations would continue to allow the transport and temporary storage of typical household hazardous materials for offsite disposal. These materials are regulated by a number of different State and federal agencies and safety regulations are in place to limit the potential for accidental release. All hazardous materials temporarily stored would be handled in accordance with County, State, and federal regulations.

No major changes are proposed to the current types of materials accepted and temporarily stored onsite. As a result, the proposed landfill expansion does not have the potential to significantly create a hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Impacts would be less than significant.

**Mitigation Measures:** No mitigation measures are required. Impacts would be less than significant.

<sup>3</sup> Putrescible: Liable to decay; subject to putrefaction.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	

**Discussion:** Potential construction-related hazards could be created during the course of individual landfill waste cell construction projects, given that construction activities involve the use of heavy equipment, which uses small and incidental amounts of oils and fuels and other potentially flammable substances. The level of risk associated with the accidental release of hazardous substances is not considered significant due to the small volume and low concentration of hazardous materials used during construction. The construction contractor would be required to use standard construction controls and safety procedures that would avoid and minimize the potential for accidental release of such substances into the environment. Standard construction practices would be observed such that any materials released are appropriately contained and remediated as required by local, State, and federal law.

The proposed landfill expansion would continue to allow the routine transport, use, and temporary storage of hazardous materials related to recycled household hazardous materials. All hazardous materials temporarily stored onsite would continue to be handled in accordance with County, State and federal regulations. Because any hazardous materials used for operations would be in small quantities, long-term impacts associated with handling, storing, and disposing of hazardous materials from project operation would be less than significant.

**Mitigation Measures:** No mitigation measures are required. Impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X

**Discussion:** The proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. No impacts would occur in this regard.

**Mitigation Measures:** No mitigation measures are required.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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?				X

**Discussion:** Under Government Code Section 65962.5, both the DTSC and the SWRCB are required to maintain lists of sites known to have hazardous substances present in the environment. Both agencies maintain up-to-date lists on their websites. A search of the DTSC and SWRCB lists identified no open cases of hazardous waste violations on the project site. Therefore, the project site is not on a parcel included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. As a result, this would not create a significant hazard to the public or to the environment and would have no impact.

**Mitigation Measures:** No mitigation measures are required.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?				X

**Discussion:** Per 27 CCR Section 20270(e), existing municipal solid waste landfill units and lateral expansions located within 10,000 feet of any airport runway used by turbojet aircraft or within 5,000 feet of any airport runway used by only piston-type aircraft must demonstrate that the units are designed and constructed so as not to pose a bird hazard to aircraft.

The Lampson Field Airport is located approximately 15.6 miles (approximately 82,400 feet) west of the Eastlake Sanitary Landfill. There are no new landfill waste management units or lateral expansions planned at this time that would be within 5,000 feet of an airport runway. As the proposed project meets the above siting requirements no impact would occur in this regard.

**Mitigation Measures:** No mitigation measures are required.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X

**Discussion:** The proposed landfill expansion does not include any actions that would impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. All construction activities would occur onsite and not impede the use of surrounding roadways in an emergency evacuation. Implementation of the proposed project would result in no impact in this area.

**Mitigation Measures:** No mitigation measures are required.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?			X	

**Discussion:** The majority of the site has been previously disturbed by onsite landfill activities. No intentional burning is currently allowed onsite with the exception of firebreaks or vegetative control burns performed by the local fire authorities. The flanking ridges and hills around the landfill canyon have roads and fire breaks which are maintained with heavy equipment. Lake County Fire Protection District advises the Landfill Supervisor regarding fire safety currently and will continue through the life of the landfill. Incoming loads and the working landfill “face” are carefully monitored by landfill operators. Pursuant to PRC Section 44151, the facility maintains a clearance of flammable material for a minimum distance of 150 feet from the periphery of an exposed flammable solid waste.

Should the facility accidentally receive burning wastes or experience accidental ignition of wastes in the tipping area, the following will occur:



- If burning wastes are received, they are not deposited in the fill. Instead they are deposited in a separate location at a sufficient distance from the fill area to prevent fire from spreading to the normal fill area.
- If a fire originates within the fill, all the burning material is removed and extinguished as described above, or by in-situ practices approved by the LEA, in consultation with the local fire authority. Excavation of burning materials would be undertaken in a planned and controlled manner with sufficient firefighting equipment present to control any flare-ups which may occur as outside air reaches the burning materials.
- If an onsite fire outside the working face area occurs, staff may use fire extinguishers and/or heavy equipment for containment and/or to extinguish.
- If the fire appears to be a greater threat, 911 will be called immediately for assistance from the Lake County Fire Department. The Lake County Fire Department main station is located approximately 2 miles from the landfill. Heavy equipment operators may be able to isolate the material from other wastes to minimize the spread of the fire by depositing it in a safe area where the materials can be spread out and extinguished, or until help arrives.
- In the event of discharges resulting from the fire or fire extinguishing and following the protocol in the facility Business Plan, appropriate agencies are notified. These may include the RWQCB, DTSC, LEA and local Hazmat team.

It is important to note that proposed expansion also includes the installation of 2 new above ground water supply tanks for fire suppression, day-to-day operations, and cell construction. The tanks would have combined capacity of 100,000 gallons that could be immediately available for fire suppression. Through the continued implementation of the above noted fire safe standards the proposed project would not cause significant wildfire risk to the area from project related activities. Based on this evaluation the project would contribute to a less than significant impact related to increased wildfire risk in the area.

**Mitigation Measures:** No mitigation measures are required. Impacts would be less than significant.

## Findings

Based upon the review of the information above, implementation of the proposed project will have a less than significant impact with respect to *Hazards and Hazardous Materials*.

## References and Citations

- CAL FIRE (California Department of Forestry and Fire Protection). 2007. *Fire Hazard Severity Zones*. Fire and Resource Assessment Program. [Online]: [https://frap.fire.ca.gov/media/6205/fhszs\\_map17.pdf](https://frap.fire.ca.gov/media/6205/fhszs_map17.pdf). Accessed October 11, 2019.
- DTSC (California Department of Toxics Substances Control). 2019. *Envirostor Database*. [Online]: <https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=Clearlake%2C+ca>. Accessed October 11, 2019.
- EPA (U.S. Environmental Protection Agency). 2019. Enforcement and Compliance History Online. [Online]: <https://echo.epa.gov/detailed-facility-report?fid=110070088819>. Accessed October 16, 2019.
- SCS Engineers. 2018a. *Landfill Expansion Field Investigation Engineering Analyses and Preliminary Basis of Design – Eastlake Sanitary Landfill, Clearlake, California*. October 2018.
- SCS Engineers. 2018b. *Report of Disposal Site Information/Report of Waste Discharge/Preliminary Final Closure and Post-Closure Plan: CCR Title 27 – Joint Technical Document for Eastlake Sanitary Landfill, Clearlake, California*. July 30, 2018.
- SWRCB (State Water Resources Control Board). 2019. *GeoTracker*. [Online]: [http://geotracker.waterboards.ca.gov/map/?global\\_id=L10009540332](http://geotracker.waterboards.ca.gov/map/?global_id=L10009540332). Accessed October 16, 2019.

## X. Hydrology and Water Quality

The purpose of this section is to describe the hydrologic and water quality setting of the proposed project site and surrounding area. This section contains information based on the *Hydrogeologic and Hydrologic Evaluation for the Proposed Eastlake Sanitary Landfill Expansion, Lake County, California* (SHN, 2018) and is contained in Appendix E, *Hydrogeology and Hydrologic Evaluation*. This section also evaluates potential long-term and short-term water quality impacts associated with construction and long-term operation of the proposed project.

### Environmental Setting

The Eastlake Sanitary Landfill facility is situated within a pre-existing canyon in the headwaters of Molesworth Creek. The drainage area associated with the landfill is approximately 58 acres, including the waste cell area, the borrow area, access roads, and storage areas. Specific drainage areas for the facility have been mapped into separate zones based on surface water flow, which include the proposed expansion areas abutting the north edge of the currently permitted refuse area and the disturbed borrow area. A majority of the drainage from the site discharges to Molesworth Creek to the west. The northeast area of the facility drains to the unnamed tributary to Cache Creek to the south. Both creeks are ephemeral streams that primarily carry surface water in the winter and early spring months. Molesworth Creek drains into Clear Lake, near the southwestern limit of the City of Clearlake and the unnamed tributary to Cache Creek eventually reaches the Sacramento delta.

The annual average rainfall for the City of Clearlake is 31.5 inches and the proposed project is not located in the 100-year flood zone. In addition, approximately 75% of the project site is located in Zone D (Area of Undetermined Flood Hazard) with the remaining easterly and southerly portions located in Zone X (Area of Minimal Flood Hazard) as mapped by the Federal Emergency Management Agency (FEMA).

On September 16, 2014, Governor Jerry Brown signed into law a three-bill legislative package, composed of AB 1739 (Dickinson), SB 1168 (Pavley), and SB 1319 (Pavley), collectively known as the Sustainable Groundwater Management Act (SGMA). SGMA requires governments and water agencies of high and medium priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. For critically over drafted basins, that will be 2040. For the remaining high and medium priority basins, 2042 is the deadline. The proposed project is within the Clear Lake Cache Formation Groundwater Basin. Groundwater levels have not been monitored in the Cache Formation. Other hydrogeologic information for the basin is unavailable. Average-year agricultural groundwater demand in the Clear Lake Cache Formation basin is approximately 90 acre-feet per year. The Clear Lake Cache Formation Groundwater Basin is considered a low priority groundwater basin and therefore not subject to the requirement of developing and implementing a Sustainable Groundwater Plan (SGP).

### Water Quality History

Background water quality has been established at the Eastlake Sanitary Landfill first through the implementation of Mitigation and Reporting Program (MRP) R5-2006-0108 and continues with implementation of MRP R5-2019-0009, issued by the RWQCB. The MRP contains groundwater and surface water sampling locations that are considered background and are sampled during site monitoring events. Constituent concentration limits are established from results of background sample locations and used for comparison purposes to evaluate results from downgradient and downstream sample locations.

Historical groundwater data shows that the Eastlake Sanitary Landfill has been impacted by inorganic constituents and volatile organic compounds (VOCs), primarily located downgradient along the western and southern boundary of the waste unit. A review of historical groundwater VOC data collected at the site indicates the presence of VOCs consisting of both chlorinated solvents and petroleum hydrocarbons. Most VOC concentrations recorded for groundwater samples collected from site wells are relatively stable, follow decreasing trends, or fall below standard laboratory detection limits. However, some constituents do show a slight increasing trend over historical sampling.

Due to the VOC release to groundwater, the Regional Water Quality Control Board (RWQCB) issued Cleanup and Abatement Order (CAO) No. R5-2015-0713 for the Eastlake Sanitary Landfill on July 30, 2015. Through implementation of

the CAO program, the vertical and horizontal delineation of the VOC plume in groundwater has been identified. Corrective action to address the VOC release to groundwater has been proposed through expansion of the LFG capture and control system and is anticipated for implementation in 2020.

## Monitoring and Reporting

The current MRP Order No. R5-2019-0009 consists of groundwater, surface water, stormwater, leachate, landfill gas (LFG), and unsaturated zone monitoring. As described below, there are several additional monitoring locations and requirements that are being implemented to comply with regulations set forth in the revised WDRs.

- Groundwater. The Eastlake Sanitary Landfill groundwater monitoring program consists of 33 wells that are monitored for depth-to-water on a quarterly basis and sampled for water quality semiannually. The well network consists of three background monitoring wells (MW-3, MW-9a, and MW-9b), 25 near-site or downgradient wells, and five deep zone wells (MW-24, MW-25, MW-27, MW-28, and MW-29). Every 5 years, each well is sampled for an expanded set of constituents of concern per the MRP.
- Surface Water. The surface water monitoring is performed at surface water monitoring stations (SWMS) by the collection of samples at locations SWMS-1 through SWMS-6. The MRP requires samples to be collected for water quality semiannually in the 1<sup>st</sup> and 4<sup>th</sup> quarters during the wet season for standard constituents. Every 5 years, each SWMS is sampled for an expanded set of constituents of concern per the MRP. Standard observations and reporting are additionally conducted for surface water monitoring on a weekly and rain event basis per the MRP. In addition to requirements in the MRP, the landfill maintains compliance with the Industrial General Permit (IGP) according to the facility stormwater pollution prevention plan (SWPPP). In accordance with the ESL SWPPP, stormwater monitoring is performed at two discharge locations (DL) leaving the site at Molesworth Creek.
- Leachate Collection. Leachate collection was implemented for Area I of the landfill in 1975 through the installation of a series of perforated pipes constructed in gravel trenches under the waste cell. The collection system was designed to capture and separate water that percolates through the landfill from groundwater seeps under and around the landfill. The leachate collection and recovery system (LCRS) pipe from under Waste Management Unit (WMU) I currently daylight and drains into the surface impoundment leachate pond.

Special studies being conducted at the Eastlake Sanitary Landfill as part of the revised WDRs or as independent RWQCB requests include:

- Per- and Polyfluoroalkyl Substances (PFAS) assessment of both groundwater and leachate. As part of RWQCB Order WQ 2019-0006-DWQ a workplan was developed and implemented for the determination of the presence of PFAS at the landfill. This field program included sampling 10 groundwater monitoring wells and leachate pipes for PFAS and submittal to a qualified laboratory.
- Groundwater separation study was completed is part of an effort to evaluate if there is adequate separation between groundwater and waste with the season fluctuations in groundwater levels. A field program to address data gaps in groundwater separation is expected to be implanted in 2020.
- Inorganic Constituent Evaluation to determine if impacts to groundwater are from leachate of LFG. The assessment and work plan have been completed, sample collection is being implemented and installation of additional wells may be warranted based on findings.
- Leachate Characterization and Quantification involves the collection of samples and installation of flow meters on discharge pipes to the leachate pond. The monitoring program will occur over a 1-year period for determination of impacts to groundwater.

## Impact Analysis

The following includes an analysis of environmental parameters related to *Hydrology and Water Quality* based on Appendix G of the State CEQA Guidelines. The discussion not only includes the areas for which there is potential for environmental impacts but also provides justification for the conclusions that either no impacts, less than significant impacts, or less than significant impacts with mitigation could occur. The CEQA Checklist question, discussion, and environmental significance conclusion are provided below under each individual environmental parameter related to *Hydrology and Water Quality*.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			X	

**Discussion:** The following discusses the environmental protection of groundwater and surface water resources:

Groundwater Resources. Groundwater monitoring at the Eastlake Sanitary Landfill is conducted in accordance with the Waste Discharge Requirements (WDRs) and Monitoring and Reporting Program (MRP) No. R5-2019-0009 issued by the RWQCB. The well network is comprised of 33 monitoring wells that include background wells, detection wells and evaluation monitoring wells. These wells are monitored for depth-to-water on a quarterly basis and sampled for water quality parameters.

Five of the existing groundwater monitoring wells are located in or near the footprint areas of excavation, grading or soil stockpiles for landfill expansion. As necessary, these monitoring wells will be formally abandoned in advance of construction activities in the affected areas, and replacement wells will be installed. Replacement monitoring well installations will be in accordance with RWQCB permit conditions (as specified in WDRs or Orders) and 27 CCR requirements.

27 CCR requires that new waste cells must be sited, designed, constructed and operated to ensure that solid waste will be a minimum of 5 feet above the highest anticipated elevation of underlying groundwater. The proposed landfill expansion cell base grades maintain this physical separation based on previously mapped highest groundwater elevations; however, excavation base grades may vary slightly as part of final design. If deeper excavations are necessary or preferred, an engineered alternative to the 5-foot groundwater separation can be considered as allowed by 27 CCR regulations. Specifically, 27 CCR Section 20080(b) allows for an engineered alternative if the discharger demonstrates that: (1) construction of the prescriptive standard is not feasible; and (2) the alternative is consistent with the performance goal addressed by the standard and affords equivalent protection against water quality impairment.

Proposed landfill expansion cells will be designed and constructed to meet performance standards embodied in 27 CCR regulations for a Class III site and WDRs issued by the Central Valley RWQCB. Proposed containment features in expansion areas are as follows.

- Base Liner System. Under 27 CCR, the minimum (prescriptive) standard for base liner systems at Class III landfills consists of (bottom to top): prepared subgrade, overlain by a 2-foot thick compacted soil layer with hydraulic conductivity of  $1 \times 10^{-7}$  centimeters/second or less, overlain by a geomembrane liner (typically 60-mil thick high-density polyethylene, or HDPE). This is referred to as a single-composite liner system. This prescriptive standard is illustrated above in Figure 2-14, BASE LINER SYSTEM COMPARISON (refer to Section 2.0, *Project Description*). Existing cells in WMU II were constructed with engineered alternative base liner systems, as approved by the RWQCB. These liners use a GCL in place of the low-permeability soil layer on cell excavation floors and sideslopes.

Although not currently required by regulation, recent Central Valley RWQCB precedence for permitting new cells at other landfill sites, and performance demonstration criteria in the existing WDRs (RWQCB, 2019) suggests that a double-composite base liner configuration could be required. This entails two “stacked” liner systems, each composed of an HDPE geomembrane, and a GCL, overlain by a leachate collection layer. To be conservative, a double-composite liner system is proposed. The liner system would have the GCL layers encapsulated between HDPE barriers (to prevent large-scale saturation of the GCL, and loss of shear strength), as per suggested guidance in the current WDRs (RWQCB 2019). The proposed liner systems in new cells to be excavated into native geologic units will specifically consist of the following (bottom to top; refer to Figure 2-14, BASE LINER SYSTEM COMPARISON, and Figure 2-16, LANDFILL EXPANSION, FINAL COVER, BASELINER AND LCRS DETAILS, above in Section 2.0, *Project Description*):



- *Cell Floor:*
  - Prepared subgrade;
  - 60-mil thick HDPE geomembrane textured both sides (secondary composite liner component);
  - GCL
  - 1-foot thick sand drainage layer serving as both a secondary liner protection and a leak detection layer. The drainage layer will follow the contours of the cell excavation and ultimately discharge to separate detection sumps installed below the LCRS sumps. Access to the leak detection sump will be via a slope riser pipe.
  - Geotextile separator;
  - GCL
  - 60-mil thick textured HDPE geomembrane (primary composite liner component);
  - Geotextile cushion (12 ounce per square yard);
  - 1-foot thick LCRS granular layer (see below);
  - Geotextile separator; and
  - 2-foot thick soil operations layer.
- *Sideslopes:*
  - Prepared subgrade;
  - 60-mil thick textured HDPE geomembrane
  - GCL;
  - 60-mil thick textured HDPE geomembrane;
  - GCL;
  - 60-mil thick textured HDPE geomembrane;
  - Geocomposite LCRS layer; and
  - 2-foot thick soil operations layer

As part of final design and permitting, and per conditions of WDR Order R5-2019-009, the County can provide technical demonstration that a single-composite liner system, or another engineered alternative, provides equivalent or greater water quality protection than the prescriptive standard required by regulation. This demonstration, and final details for the proposed containment systems, would be specified as part of future SWFP/WDR permit application.

- Preferential Pathway Liner. Landfill expansion will create new cells with base liners immediately adjacent to, and buttressed against the northwest and northeast perimeter of unlined WMU-I and the eastern perimeter of WMU-2. This is the same concept as the original landfill expansion that created Area II, Modules 1 and 2. This would allow additional filling/capacity over the existing Area I.

On recent landfill expansion projects elsewhere, the permitting agencies have required a modified liner system over existing refuse fill. This modified liner over refuse is sometimes referred to as a “preferential pathway”. The preferential pathway is intended to reduce the potential for liquid migration into the underlying, unlined fill. Such a system is not currently required in the Eastlake Sanitary Landfill permits. However, it is not unreasonable to expect that a preferential pathway liner system may be required by oversight agencies. The preferential pathway would consist of single liner with a 40-mil geomembrane (or GCL), drainage net and/or soil layers (or combination thereof). The preferential pathway would gravity-drain to LCRS sumps in new cells. Refer to Figure 2-15 for a schematic illustration of the preferential pathway.

Proposed landfill expansion cells and groundwater monitoring wells will be designed and constructed to meet performance standards embodied in 27 CCR regulations for a Class III site and WDRs issued by the RWQCB. Less than significant groundwater impacts are anticipated in this regard.

Surface Water Resources. The drainage area associated with the landfill is approximately 57 acres, including the waste cell areas, access roads, and equipment storage areas. Specific drainage areas for the facility include the proposed expansion areas and the existing soil borrow area. A majority of the drainage from the site currently discharges to Molesworth Creek to the west. The northeast area of the facility drains to the unnamed tributary to Cache Creek to the east and south. Both creeks are ephemeral streams that primarily carry surface water in the winter and early spring months. Storm water

conveyance features for landfill expansion will be designed for a 100-year, 24-hour storm event per 27 CCR regulations. Surface water that originates outside the landfill will continue to be routed around the landfill footprint and to existing natural drainage courses. Stormwater that falls within the landfill footprint will be routed through drainage ditches, bench road ditches, rocked culverts and downdrains to a new sedimentation basin south of the landfill. The sedimentation basin will discharge to the unnamed tributary to Cache Creek to the east.

As previously described above under impact discussion item VII.b, the County will continue to implement measures to control and monitor surface water contaminant releases in accordance with the General Industrial Storm Water Permit #5817SO14858 and requirements of WDR R5-2019-0009, and a SWPPP for the landfill. Refer to impact discussion item VII.b in Section VII, *Geology and Soils*, for a description of surface water quality protective measures.

Earthwork, grading, construction and soil stockpiling activities associated with new cell construction will be conducted in accordance with the conditions of a Construction SWPPP and NOI administered by the RWQCB in addition to adherence with the Lake County Grading Ordinance and County grading permit. The Construction SWPPP will specify BMPs for erosion and sediment control measures. Impacts to surface water resources would be less than significant in this regard.

**Mitigation Measures:** No mitigation measures are required. Impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin?				X

**Discussion:** The proposed project is currently served by the Konocti County Water District (KCWD). The KCWD currently maintains an average of 1,800 service connections and provides water from surface diversions from Clear Lake. Other than a small 2,500 gallon tank at the entrance, there are currently no water supply wells, hydrants, or fire suppression storage tanks onsite and no groundwater extraction or supply wells are proposed as part of the expansion.

The KCWD provides approximately 125 gallons per day (gpd) of treated potable water to the Eastlake Sanitary Landfill. This demand would not be increased with the proposed expansion; however, the project would require the installation of two new above ground water supply tanks for fire suppression, day-to-day operations, and cell construction. The tanks would have combined capacity of 100,000 gallons. Water for the tanks would be supplied by through KCWD current surface water allocations.

During the planned temporary construction phases, additional water will be obtained from KCWD for the durations and quantities presented in Table 2-2, ESTIMATED WATER DEMAND – CONSTRUCTION. The four construction phases are estimated to last from 5 to 83 days, with up to 100,000 gallons per day necessary to manage dust and for soil moisture management. For Phase 2, anticipated to occur in 2028 and the longest projected phase estimated to last up to 83 days, about 25 AF of additional water would be obtained from KCWD. Given KCWD’s existing customer demand of 400 to 500 acre feet (AF) annually, and potential community growth, this temporary need is easily accommodated within the quantity limit defined in KCWD’s agreement with YCFCWCD. Refer to impact discussion item XIX.b in Section XIX, *Utilities and Service Systems*. Less than significant impacts would occur in this regard.

**Mitigation Measures:** No mitigation measures are required. Impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) 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: <ul style="list-style-type: none"> <li>i. Result in substantial erosion or siltation on- or offsite;</li> <li>ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;</li> <li>iii. Create or contribute runoff water which would exceed the capacity of existing planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or</li> <li>iv. Impede or redirect flood flows?</li> </ul>			X	

**Discussion:** The proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i. *Result in substantial erosion or siltation on- or offsite:*

The proposed expansion has been designed to maintain a minimum setback of 30 feet from the top bank of mapped intermittent streams. Therefore no disturbance of seasonal streambeds is proposed. As previously discussed above, earthwork, grading, and soil stockpiling activities associated with new cell construction will be conducted in accordance with the conditions of a Construction SWPPP and NOI administered by the RWQCB. The Construction SWPPP will specify BMPs for erosion and sediment control measures. Therefore, the potential for substantial soil erosion and loss of topsoil associated with the proposed landfill expansion is considered to be less than significant.

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

Evaluation of a 100-year 24-hour storm event for the proposed project is estimated as 6.98 inches of rain, with a 90% confidence interval. The total quantity of stormwater generated by this storm over the approximately 58-acre drainage area is estimated at 1,472,000 cubic feet of water during a 24-hour period. The existing drainage system is not adequate to handle anticipated stormwater volume or peak flow from a 100-year, 24-hour storm event, namely the 24-inch culvert to Molesworth Creek. Erosion and damage to drainage features may occur resulting from localized flooding at slope benches and sediment would be deposited in drainage pipes and stormwater collection ditches.

The proposed project would include construction of new stormwater conveyance features (drainage ditches, bench ditches, downchutes, etc.) designed to accommodate the 100-year, 24-hour storm event per 27 CCR regulations. As part of onsite stormwater management a new 4.1-acre stormwater retention basin will be constructed, generally southeast of the existing Class II liquid impoundment. Use of the sedimentation basin located at the site borrow area is essential for controlling suspended sediment in stormwater runoff prior to discharging from the site. As a result the proposed landfill expansion does not have the potential to result in significant flooding on- or offsite. Less than significant impacts would occur in this regard.

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

Refer to impact discussion under Sections X.a, X.c.i and X.c.ii, above. Impacts would be less than significant.

iv. *Impede or redirect flood flows.*

Based on a review of Federal Emergency Management Agency (FEMA) flood insurance maps the proposed project is not located within a 100-year floodplain zone. The landfill is situated in a canyon area and is topographically elevated above

the surrounding area. Thus the facility is consistent with State and federal floodplain siting criteria. No impacts would occur in this regard.

**Mitigation Measures:** No mitigation measures are required. Impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				X

**Discussion:** The location of the project site is in an area where inundation from dam failures would not occur. In addition, there are no levees near the proposed project. The threat of a tsunami wave is not applicable to inland areas; there is no potential for the generation of a seiche. No impact has been identified.

**Mitigation Measures:** No mitigation measures are required.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?				X

**Discussion:** The proposed project is within the Clear Lake Cache Formation Groundwater Basin. Groundwater levels have not been monitored in the Cache Formation. Other hydrogeologic information for the basin is unavailable. Average-year agricultural groundwater demand in the Clear Lake Cache Formation basin is approximately 90 acre-feet per year (AFY).

The Clear Lake Cache Formation Groundwater Basin is considered a low priority groundwater basin and is not subject to developing and implementing sustainable groundwater management strategies as requirement under the SGMA. Given the relatively minor expansion proposed by the project, the potential for interference with groundwater recharge that would impact the Clear Lake Cache Formation Groundwater Basin is considered to be less than significant.

**Mitigation Measures:** No mitigation measures are required.

## Findings

Based upon the review of the information above, implementation of the proposed project will have a less than significant impact with respect to *Hydrology and Water Quality*.

## References and Citations

DWR (California Department of Water Resources). 2006a. *Final Lake County Groundwater Management Plan*. March 31, 2006.

DWR. 2006b. *Lake County Water Inventory and Analysis*. March 2006.

DWR. 2019. *SGMA Groundwater Management*. [Online]: <https://water.ca.gov/Programs/Groundwater-Management/SGMA-Groundwater-Management>. Accessed September 19, 2019.

FEMA (Federal Emergency Management Agency). 2005. *Flood Map #06033C0703D*. September 30, 2005.

KCWD (Konocti County Water District). 2019. *Water Rate Analysis*. February 2019.



Lake County. 2019. *Zoning Ordinance (Articles 1 through 72)*. 2019.

SHN Consulting Engineers and Geologists, Inc. 2018. *Hydrogeologic and Hydrologic Evaluation for the Proposed Eastlake Sanitary Landfill Expansion, Lake County, California*. March 28, 2018.

SCS Engineers. 2018. *Report of Disposal Site Information/Report of Waste Discharge/Preliminary Final Closure and Post-Closure Plan: CCR Title 27 – Joint Technical Document for Eastlake Sanitary Landfill, Clearlake, California*. July 30, 2018.

## XI. Land Use and Planning

This section describes the impacts on land use and planning that would result from implementation of the proposed project, including consistency with relevant local land use plans and compatibility with surrounding land uses

### Environmental Setting

The Eastlake Sanitary Landfill is located in the County of Lake at 16015 Davis Street along the eastern edge of the City of Clearlake. Access to the facility is from Davis Street via 40th Avenue, off of State Highway (SR) 53 in Clearlake. The facility's approximate 35-acre permitted disposal area is located on Assessor's Parcel Numbers (APN) 10-008-030 and 10-053-130. The entire permitted facility of approximately 80 acres incorporates the additional parcels of 010-008-390, 041-224-40, 041-234-270, and 041-244-180. These parcels include a number of smaller parcels that were acquired in 1993 or earlier and have been merged into larger parcels. The County also owns additional adjacent property that is not included in the permitted boundaries of the facility, but provides additional buffer zones, including APN 010-053-120, a 23.35-acre parcel northeast of the facility, and 010-008-410, a 77.20-acre parcel south of the facility.

The site is currently designated Public Facilities (PF) in the Lake County General Plan and zoned Open Space – Water Way Combining District (O-WW). The General Plan describes the Eastlake Sanitary Landfill as the primary non-geothermal soil waste disposal facility in the County (and now the only facility). The parcels proposed for the landfill expansion are solely under the jurisdiction of Lake County and currently designated as Public Facilities (PF) in the County's General Plan. Some existing landfill features including the entrance road, recycle center, maintenance buildings and Area I landfill slope are within the jurisdiction of the City of Clearlake. These parcels have a City General Plan land use designation of Resource-Protection-Special Study area and are zoned Resource Protection. The proposed landfill expansion areas would be located entirely within unincorporated County jurisdiction and would not require a land use or zone change by the City of Clearlake.

Surrounding properties to the west and southwest of the landfill are comprised primarily of residential developments. These properties are zoned as Single Family Residential (R-1). A portion of the land generally located northwest of the landfill is zoned Neighborhood Commercial (C-1). A larger and more significant portion of the land is designated as Resource Protection (RP). The remaining adjoining properties to the north, east and south are comprised of unincorporated lands of the County that include the following zoning designations: Unclassified (U); Open Space (OS), Planned Development Commercial (PDC); Rural Lands (RL); and Agriculture Preserve (APZ). The United States Department of the Interior (DOI), Bureau of Land Management (BLM) owns the land east of the landfill. The County owns the approximate 77.2-acre parcel south of the facility.

### Impact Analysis

The following includes an analysis of environmental parameters related to *Land Use and Planning* based on Appendix G of the State CEQA Guidelines. The discussion not only includes the areas for which there is potential for environmental impacts but also provides justification for the conclusions that either no impacts, less than significant impacts, or less than significant impacts with mitigation could occur. The CEQA Checklist question, discussion, and environmental significance conclusion are provided below under each individual environmental parameter related to *Land Use and Planning*.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Physically divide an established community?				X

**Discussion:** The existing, permitted landfill area is 35 acres and the proposed expansion would occupy approximately 21.8 acres resulting in a total landfill area of approximately 56.8 acres. An additional approximately 14.4 acres of land outside of the disposal footprint areas is proposed to accommodate a new access road and road cuts, a new storm water basin, and soil stockpile. The project does not have the potential to physically divide an established community; the project does not propose to divide land or rezone the parcel. Access to the site is limited and the land surrounding the property on three sides is relatively undeveloped. No impact has been identified in this regard.

**Mitigation Measures:** No mitigation measures are required.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?				X

**Discussion:** The County's General Plan serves as the overall guiding policy document for land use and development. As noted above, the subject parcels are designated in the General Plan as Public Facilities (PF) and zoned Open Space – Water Way Combining District (O-WW).

It is important to note that the County previously approved a General Plan Conformity Determination (GPC 06-10) for the existing landfill operations. This determination, approved by the Lake County Planning Commission on September 28, 2006, found that the Eastlake Sanitary Landfill is in conformity with the Lake County General Plan based on its consistency with the Public Facilities (PF) designation, as well as the objectives and policies related to public services, and the landfill remains compatible with surrounding low density and Service Commercial land uses.

As the proposed project includes a relatively minor expansion of landfill-related activities onsite and not results in a change to landfill operations, the proposed expansion does not contain elements that would conflict with the County's Public Facilities (PF) designation or zoning for the site. Therefore, no impacts would occur in this regard. Additionally, the project will not conflict with any conservation plans as there is no Habitat Conservation Plan or Natural Community Conservation Plan for the area.

**Mitigation Measures:** No mitigation measures are required.

## Findings

In the course of the above evaluation, impacts associated with *Land Use and Planning* were found to not be significant because of the inability of a project of this scope to create such impacts or the absence of project characteristics producing effects of this type.

## References and Citations

City of Clearlake. 2017. *Clearlake 2040 General Plan Update*. February 23, 2017.

Lake County. 2008. *Lake County General Plan*. September 2008.

Lake County. 2006. *Staff Report – General Plan Conformity, GPC 06-10; CE 06-102*. September 28, 2006.

Lake County. 2019. *Zoning Ordinance (Articles 1 through 72)*. 2019.

SCS Engineers. 2018. *Report of Disposal Site Information/Report of Waste Discharge/Preliminary Final Closure and Post-Closure Plan: CCR Title 27 – Joint Technical Document for Eastlake Sanitary Landfill, Clearlake, California*. July 30, 2018.

## XII. Mineral Resources

The purpose of this section of the Initial Study is to address potential impacts of the proposed project on mineral resources.

### Environmental Setting

The proposed project site has historically been used as a sanitary landfill since the early 1970's. The project area has not been designated by the State or Lake County as an area of significant mineral resources or an area of locally important minerals.

### Impact Analysis

The following includes an analysis of environmental parameters related to *Mineral Resources* based on Appendix G of the State CEQA Guidelines. The discussion not only includes the areas for which there is potential for environmental impacts but also provides justification for the conclusions that either no impacts, less than significant impacts, or less than significant impacts with mitigation could occur. The CEQA Checklist question, discussion, and environmental significance conclusion are provided below under each individual environmental parameter related to *Mineral Resources*.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?				X
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?				X

**Discussion:** A mineral resource is land on which known deposits of commercially viable mineral or aggregate deposits exist. The designation is applied to sites determined by the California Geological Survey (CGS) as being a resource of regional significance and is intended to help maintain any quarrying operations and protect them from encroachment of incompatible uses. The project would not 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 and would not result in the loss of availability of a locally-important mineral resource recovery site. The site has not been designated as an important mineral resource recovery site by a local general plan, specific plan, or other land use plan or by the State. No impact would occur in this regard.

**Mitigation Measures:** No mitigation measures are required.

### Findings

In the course of the above evaluation, impacts associated with *Mineral Resources* were found to not be significant because of the inability of a project of this scope to create such impacts or the absence of project characteristics producing effects of this type.

### References and Citations

DOC (California Department of Conservation). 2013. *Publications of the SMARA Mineral Land Classification Project Dealing with Mineral Resources in California*. [Online]: <https://www.conservation.ca.gov/cgs/minerals/mineral-land-classification-smara>. Accessed: October 11, 2019.

DOC. 2019. *The CGS Information Warehouse: MLC*. [Online]: <https://maps.conservation.ca.gov/cgs/informationwarehouse/mlc/>. Accessed October 11, 2019.



### XIII. Noise

The purpose of this section is to evaluate noise source impacts to onsite and surrounding land uses as a result of project implementation. This section evaluates short-term construction-related impacts, as well as ongoing landfill operation condition based on the *Noise and Vibration Memorandum for the Eastlake Sanitary Landfill Expansion Project* (LSA, 2019) and is included in Appendix F, *Noise and Vibration Memorandum*.

#### Noise Standards

Noise impacts are those that exceed general plan or other local ordinances developed to provide reasonable control of noise to residences, parks, open spaces and other specific designated sites. Noise sources typically include roadways, freeways, schools, industrial and commercial operations and other facilities that can generate noise. The Lake County General Plan Noise Element provides guidelines and direction for noise sources and attenuation requirements for various uses.

The goal of the Lake County General Plan Noise Element is “to protect County residents from the harmful exposure of excessive noise and prevent incompatible land uses from encroaching upon existing and planned land uses”. Additionally, Policy N-1.7 of the Noise Element, Noise Controls During Construction, states that “The County shall require contractors to implement noise-reducing mitigation measures during construction when residential uses or other sensitive receptors are located within 500 feet.”

Article 41, Section 21-41.11 of the County’s Zoning Ordinance establishes maximum sound emissions that shall not be exceeded based on the zoning of the receiving property. The County’s Zoning Code also provides a list of situations and sources which are exempt from the hourly noise standards presented in Table 3-10, HOURLY NOISE LEVEL STANDARDS, below, which includes construction site sounds between 7:00 a.m. and 7:00 p.m. Table 3-10 presents the A-weighted hourly noise level standards which would be applicable at the neighboring property lines to the project site.

Table 3-10  
HOURLY NOISE LEVEL STANDARDS (dBA  $L_{eq}$ )

Receiving Property Zoning District	Time Interval	Hourly Noise Level (dBA)
Residential	10:00 p.m. to 7:00 a.m.	45
	7:00 a.m. to 10:00 p.m.	55
Commercial	10:00 p.m. to 7:00 a.m.	55
	7:00 a.m. to 10:00 p.m.	60
Industrial	10:00 p.m. to 7:00 a.m.	60
	7:00 a.m. to 10:00 p.m.	65

Source: LSA. 2019. *Noise and Vibration Memorandum for the Eastlake Sanitary Landfill Expansion Project*. October 18, 2019.

Because the County does not establish construction noise thresholds, for the purposes of analyzing significance under CEQA, the Federal Transit Administration (FTA) Manual criteria are used. The FTA provides reasonable criteria for assessing construction noise impacts based on the potential for adverse community reaction when the noise criteria are exceeded. For residential uses, the daytime noise threshold is 80 dBA  $L_{eq}$ . Additionally, the County’s Noise Element and Zoning Ordinance do not provide specific vibration impact criteria associated with construction activities; therefore, the FTA criteria will be used in this analysis.

The criteria for potential building damage from ground-borne vibration and noise are based on the maximum levels for a single event. Table 3-11, CONSTRUCTION VIBRATION DAMAGE CRITERIA, lists the potential vibration building damage criteria associated with construction activities, as suggested in the FTA Manual. FTA guidelines show that a vibration level of up to 0.5 in/sec peak particle velocity (PPV) is considered safe for buildings consisting of reinforced concrete, steel, or timber (no plaster), and would not result in any construction vibration damage. For a non-engineered (those not designed by an engineer or architect) timber and masonry building, the construction building vibration damage criterion is 0.2 in/sec PPV.

**Table 3-11**  
**CONSTRUCTION VIBRATION DAMAGE CRITERIA**

Building Category	PPV (in/sec)
Reinforced concrete, steel, or timber (no plaster)	0.50
Engineered concrete and masonry (no plaster)	0.30
Non-engineered timber and masonry	0.20
Buildings extremely susceptible to vibration damage	0.12

Source: LSA. 2019. *Noise and Vibration Memorandum for the Eastlake Sanitary Landfill Expansion Project*. October 18, 2019.

## Environmental Setting

The project site is surrounded by existing single-family homes to the west and south, an existing composting facility to the north, and vacant land to east. In order to assess the existing noise environment surrounding the project site, two long-term noise measurements were gathered. The long-term 24-hour measurements were taken from June 26, 2019, to June 27, 2019. The locations of the noise measurements are shown on Figure 3-11, NOISE MONITORING LOCATIONS, with the results shown in Table 3-12, LONG-TERM 24-HOUR NOISE LEVEL MEASUREMENTS. A review of the data gathered indicates that existing noise levels at the nearest residential uses, the single-family home near 36th Avenue and Parker Avenue, range from 44.2 to 54.8 dBA  $L_{eq}$ . Noise levels in the area of the existing measurement locations are greatly affected by traffic on local unfinished, dirt roads, and birds. In addition to the noise levels data gathered, weather information, specifically winds speeds, was reviewed. Though it was indicated that wind speeds in excess of 10 mile per hour occurred from 12:00 p.m. to approximately 6:00 p.m. on June 26th, resulting in potentially higher than usual noise levels, noise levels still remained below the County's hourly noise levels standard of 55 dBA  $L_{eq}$  during daytime hours.

The neighboring sensitive receptors are all located west and south of the project site. The closest residential structure is located approximately 400 feet southwest of the limit of work for landfill expansion Phase 2 construction, while the residential uses to the west along Konocti Avenue are approximately 1,200 feet from the edge of the project site. In addition to the noise level measurements at the surrounding sensitive uses, reference noise level measurements were collected for existing operations on June 26, 2019, to identify the specific noise impacts associated with each piece of equipment used in daily operations. Table 3-13, REFERENCE NOISE LEVELS OF EQUIPMENT USED AT THE LANDFILL FOR DAILY OPERATIONS, provides a summary of those measurements.

**Table 3-12**  
**LONG-TERM 24-HOUR NOISE LEVEL MEASUREMENTS**

Location	Daytime Noise Levels <sup>1</sup> (dBA $L_{eq}$ )	Evening Noise Levels <sup>2</sup> (dBA $L_{eq}$ )	Nighttime Noise Levels <sup>3</sup> (dBA $L_{eq}$ )	Average Daily Noise Level (dBA CNEL)
LT-1: Near the closest residence south of the landfill at the intersection of 36th Avenue and Parker Avenue	44.2 – 54.8	45.2 – 48.0	37.1 – 48.2	51.3
LT-2: Near the closest residence west of the landfill at the intersection of 42nd Avenue and Konocti Avenue	40.3 – 51.4	42.4 – 47.3	36.9 – 45.4	48.1

Notes:

1. Daytime Noise Levels = noise levels during the hours of 7:00 a.m. to 7:00 p.m.
2. Evening Noise Levels = noise levels during the hours of 7:00 p.m. to 10:00 p.m.
3. Nighttime Noise Levels = noise levels during the hours of 10:00 p.m. to 7:00 a.m.

Source: LSA. 2019. *Noise and Vibration Memorandum for the Eastlake Sanitary Landfill Expansion Project*. October 18, 2019.

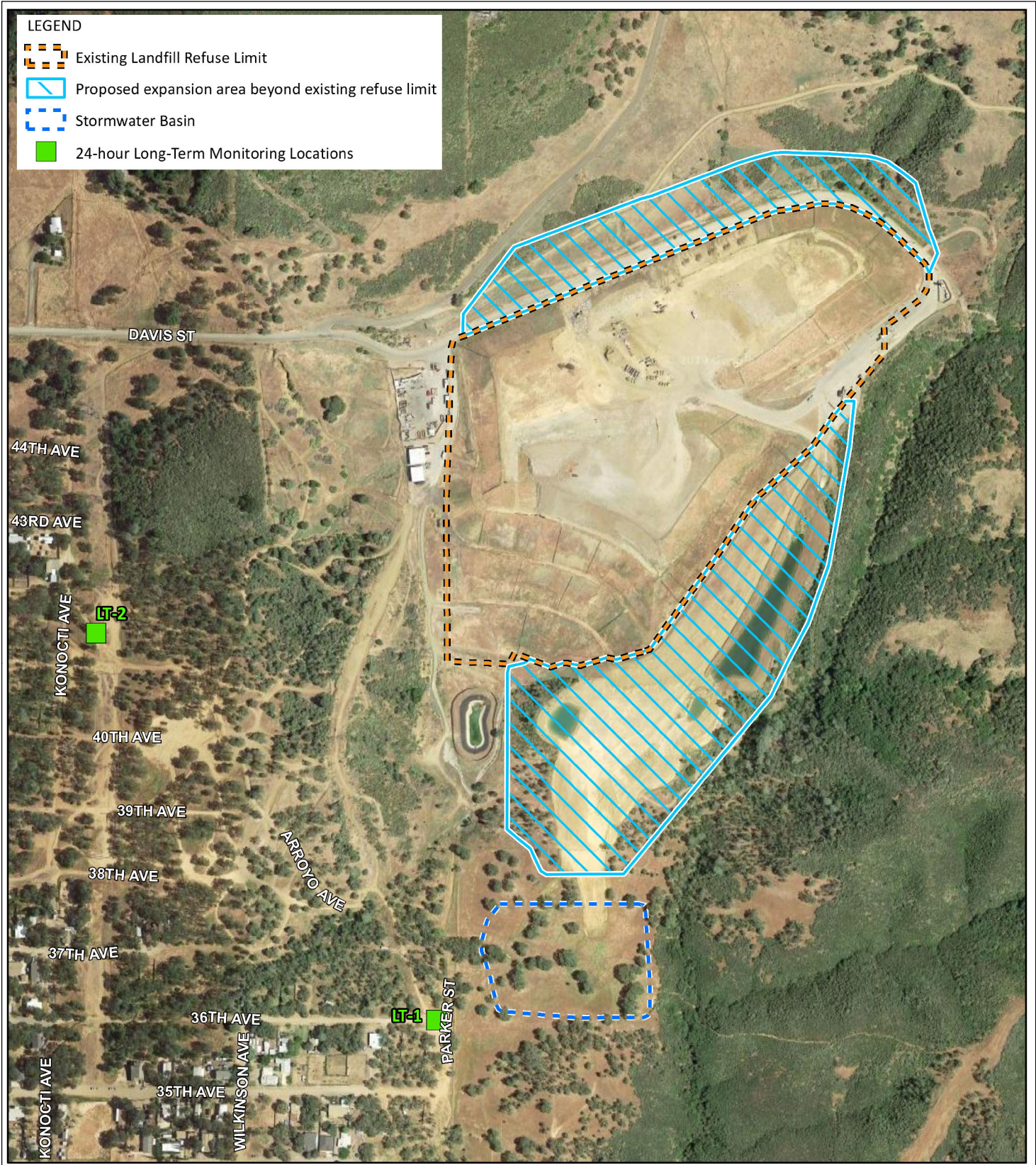
**Table 3-13**  
**REFERENCE NOISE LEVELS OF EQUIPMENT USED AT THE LANDFILL FOR DAILY OPERATIONS**

Equipment	Average Noise Level at 50 feet (dBA $L_{eq}$ )	Notes
Water Truck	80.2	Pass-bys occur as needed during daily operations
Loader	80.2	973C – dominate source of noise during a typical hour of activity
Compactor	61.9	826K – Studded wheels used to press trash
Scraper	75.5	623G – Used to move dirt for areas of cover
Rock Crusher	75.3	RM 100GO! – Utilized to process excavated materials

Source: LSA. 2019. *Noise and Vibration Memorandum for the Eastlake Sanitary Landfill Expansion Project*. October 18, 2019.



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Eastlake Landfill  
CEQA Initial Study  
Lake County, California

November 2019

Source: LSA, 2019

Noise Monitoring Locations

Figure 3-11



## Thresholds of Significance

A project would normally have a significant effect on the environment related to noise if it would substantially increase the ambient noise levels for adjoining areas or conflict with the adopted environmental plans and the goals of the community in which the project is located. The applicable noise standards governing the project site are the criteria in the Noise Element of the County's General Plan and the County's Zoning Ordinance. Typically, the following criteria are used to determine when a project results in a significant noise or vibration impact:

- For offsite transportation-related impacts:
  - Where the project-related permanent increase in ambient noise levels of 3 dBA CNEL or greater occurs.
- For non-transportation-related stationary source impacts, including daily waste receipt, compaction and cover placement operations at the project site:
  - If existing noise levels experienced due to operations at the project site are less than the hourly daytime noise level standard of 55 dBA  $L_{eq}$ , then an exceedance of the standards listed in Table 3-10, above, would constitute a potentially significant impact.
  - If existing noise levels experienced due to operations at the project site are greater than the hourly daytime noise level standard of 55 dBA  $L_{eq}$ , then a perceptible increase of 3 dBA or more would constitute a potentially significant impact.
- For construction-related noise impacts:
  - If construction activities do not comply with the stated construction hours in the Zoning Ordinance or exceed the 80 dBA  $L_{eq}$  FTA standard for residential uses.
- For construction-related vibration impacts:
  - If vibration impacts exceed the FTA impact criteria listed above in Table 3-11, above.

## Impact Analysis

The following includes an analysis of environmental parameters related to *Noise* based on Appendix G of the State CEQA Guidelines. The discussion not only includes the areas for which there is potential for environmental impacts but also provides justification for the conclusions that either no impacts, less than significant impacts, or less than significant impacts with mitigation could occur. The CEQA Checklist question, discussion, and environmental significance conclusion are provided below under each individual environmental parameter related to *Noise*.

Would the Project:		Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a)	Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	

**Discussion:** Standards and ordinances applicable to the proposed project would be associated with day-to-day landfill operations, new cell construction, long-term traffic, and stationary noise. The proposed project consists of construction activities and operations over the course of four expansion phases.

Construction Noise. As presented under the local noise standards, the threshold used for determining significance related to construction noise is compliance with Article 41, Section 21-41.11 of the County's Zoning Code and the FTA criteria. As stated above in the project description, Phase 2 of the landfill expansion will be the most intensive with respect to heavy equipment and staffing needs. Based on information provided in the Estimated Heavy Equipment Use Memorandum, the following is a list of construction equipment expected to be in use during the overlap of Phase 2 soil excavation and the bottom liner installation:



Soil Excavation:

- Excavator: Two (2) CAT 330 with 5 foot bucket
- Haul Truck: Six (6) CAT 752C2
- Dozer: Three (3) CAT D6 or D8
- Water Truck: Two (2) Freightliner

Bottom Liner Installation:

- Excavator: One (1) CAT 330 with 5 foot bucket
- Haul Truck: Two (2) CAT 752C2
- Telehandler: One (1) Bobcat V519
- Utility Vehicle: One (1) Bobcat 3400

Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full-power operation followed by 3 or 4 minutes at lower power settings. Table 3-14, TYPICAL MAXIMUM CONSTRUCTION EQUIPMENT NOISE LEVELS, lists typical construction equipment noise levels recommended for noise impact assessments, based on a distance of 50 feet between the equipment and a noise receptor, taken from the FHWA Roadway Construction Noise Model. Based on the information in Table 3-14, the maximum noise level generated by each piece of equipment is logarithmically added in order to determine a composite maximum noise level.

In order to calculate the noise levels expected to result from short-term construction and long-term operational stationary source activities, the software SoundPLAN was used. SoundPLAN is a noise modeling program that allows 3-D calculations to be made taking into account topography, ground attenuation, and shielding from structures and walls. Within the model, the noise library allows for the input of many noise sources and calculates the composite noise levels experienced at any receptor necessary. The results from any calculation can be presented both in both tabular and graphic formats.

In SoundPLAN, the composite activity is modeled as an area source that is representative of an area in which the equipment is likely to work within a given hour. The usage factors from Table 3-14 are incorporated to produce a composite noise level for the duration of an hour so an hourly  $L_{eq}$  can be determined at the surrounding sensitive receptors dependent on the location of construction activities. In order to assess the greatest expected construction noise levels experienced during construction at the nearest residential uses surrounding the project site, a model run was completed that assumes the construction activities would occur simultaneously at the southernmost portion of Phase 2.

Table 3-14  
TYPICAL MAXIMUM CONSTRUCTION EQUIPMENT NOISE LEVELS ( $L_{max}$ )

Type of Equipment	Acoustical Usage Factor	Suggested Maximum Sound Levels for Analysis (dBA $L_{max}$ at 50 ft)
Air Compressor	40	80
Backhoe	40	80
Cement Mixer	50	80
Concrete/Industrial Saw	20	90
Crane	16	85
Excavator	40	85
Forklift	40	85
Generator	50	82
Grader	40	85
Loader	40	80
Paver	50	85
Roller	20	85
Rubber Tire Dozer	40	85
Scraper	40	85
Tractor	40	84
Truck	40	84
Welder	40	73

Source: LSA. 2019. *Noise and Vibration Memorandum for the Eastlake Sanitary Landfill Expansion Project*. October 18, 2019.

Figure 3-11, NOISE MONITORING LOCATIONS, depicts the locations for which modeling of potential construction noise impacts were performed. As stated above, according to the Zoning Code, construction activities are limited to the hours between 7:00 a.m. and 7:00 p.m. Compliance with the zoning code hours would ensure that construction noise does not disturb residents during the times they are most likely to be home or during hours when ambient noise levels are likely to be lower (i.e., at night).

As stated above, the FTA's daytime construction noise criteria or threshold for residential uses is 80 dBA  $L_{eq}$  for an 8-hour period. For the purposes of this analysis, it was assumed that the modeled hourly noise level could occur for multiple consecutive hours and possibly over an 8-hour period. Therefore, the modeled hourly noise levels could be equivalent to an 8-hour  $L_{eq}$ .

As shown on Figure 3-12, CONSTRUCTION NOISE IMPACTS – PHASE 2, construction noise levels would approach 67.7 dBA  $L_{eq}$  and would not exceed the FTA hourly noise level standard at the closest noise sensitive use. Consistent with Policy N-1.7 of the General Plan, when construction activities occur within 500 feet of the nearest residences, the following noise reduction practices are required:

- Prior to issuance of permits, the Lake County General Manager, or designee, (or its contractor), shall verify that grading and construction plans include the following requirements:
  - Construction equipment, fixed or mobile, shall be equipped with properly operating and maintained noise mufflers consistent with manufacturer's standards.
  - Construction staging areas shall be located away from offsite sensitive uses during the later phases of project development.
  - The project contractor shall place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site whenever feasible.

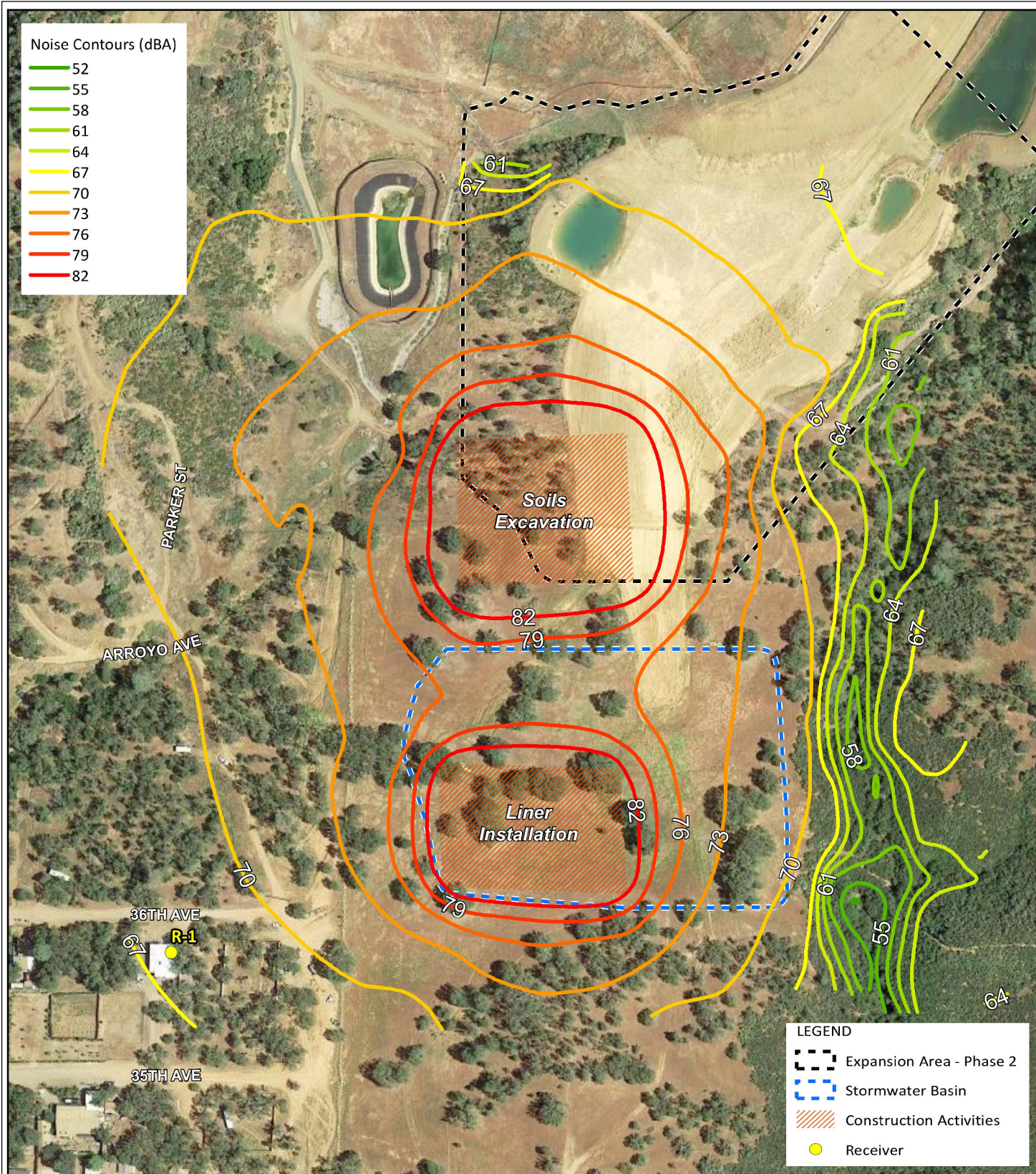
Construction activities associated with the proposed landfill expansion will be conducted in accordance with Lake County General Plan Policy N-1.7. With adherence with noise reduction measures outlined in Policy N-1.7 and compliance with the County's hours of allowed construction, construction noise impacts would be less than significant.

Long-Term Offsite Traffic Noise. To assess the potential traffic noise impacts related to the landfill expansion, the *Transportation Memorandum for the Eastlake Sanitary Landfill Expansion Project* (LSA, 2019) was utilized. Based on the analysis results, it was determined that up to an additional 20 passenger vehicle trips and 26 large truck trips per day would be generated by the project. As presented in the Transportation Memorandum, the existing ADT along Davis Street east of Phillips Avenue is approximately 780. Due to the existing low traffic volume, this segment has the potential to experience the greatest effect due to traffic noise increases.

The results of the analysis show that an increase of approximately 0.4 dBA CNEL (Community Noise Equivalent Level measured in A-weighted decibels) is expected. A noise level increase of less than 1 dBA would not be perceptible to the human ear. The noise increase on all other roadway segments which additional traffic has the potential to occur would be less than 0.4 dBA CNEL. Therefore, noise impacts related to operational traffic would be less than significant.

Long-Term Landfill Operations Noise. In order to ensure that the goals of the Noise Element are achieved, noise level standards provided in the County's Zoning Ordinance will be utilized to determine potential impacts. As part of the proposed project, the existing onsite noise generation for day-to-day landfill operations would be relocated, dependent on phase, and would likely cause an increase in noise generated to surrounding sensitive uses. Figure 3-13, EXISTING OPERATIONS NOISE IMPACTS, and Figure 3-14, FUTURE PHASE 2 OPERATIONS NOISE IMPACTS, provide the locations of the sources today assuming a "busy day" and sources during Phase 2 assuming a "busy day", respectively. The term "busy day" refers to the condition as dictated by landfill operations staff that occurs one to two times per week when there is a peak in waste deliveries and requires a greater amount of heavy equipment use throughout the day as compared to typical days (this is common at landfill sites depending on customer deliveries, commercial activity and other factors). The existing and proposed operations are conservative in nature (i.e., all operations that would occur during a typical day are occurring simultaneously). Given that the analysis assumes that all equipment would be operating simultaneously, it was determined that the best metric to identify typical increases in the noise environment is the hourly average noise level ( $L_{eq}$ ). While maximum noise levels for each piece of equipment may be higher than the  $L_{eq}$ , it is unlikely that the maximum noise level for all pieces of equipment operating onsite would occur simultaneously.





Eastlake Landfill  
CEQA Initial Study  
Lake County, California

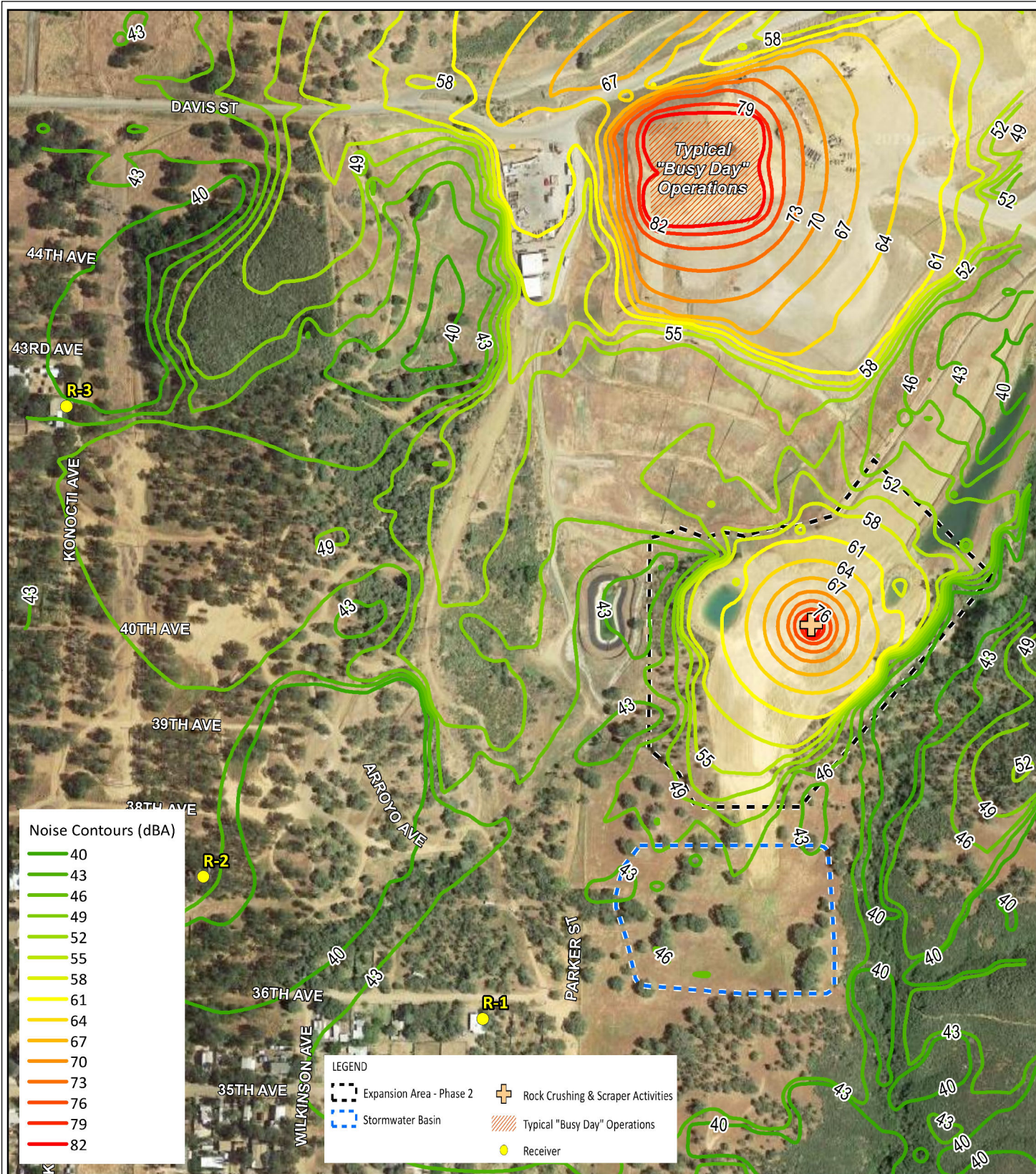
Construction Noise Impacts - Phase 2

November 2019

Source: LSA, 2019

Figure 3-12





Eastlake Landfill  
CEQA Initial Study  
Lake County, California

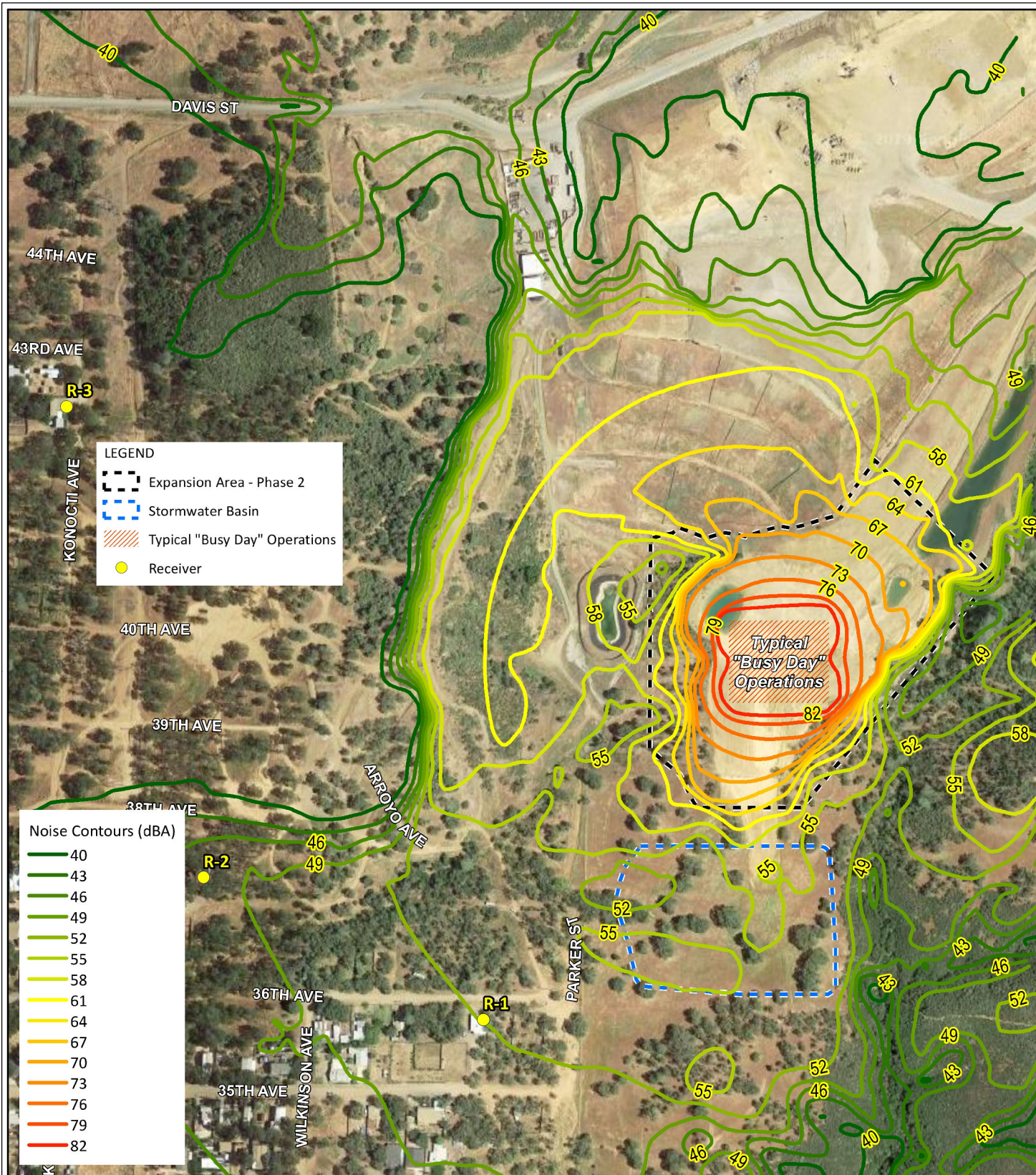
Existing Operations Noise Impacts

November 2019

Source: LSA, 2019

Figure 3-13





Eastlake Landfill  
CEQA Initial Study  
Lake County, California

Future Phase 2 Operations Noise Impacts

November 2019

Source: LSA, 2019

Figure 3-14

In order to assess the potential noise levels created by the existing and future operations at the project site, a variety of reference noise levels were gathered. The results of the reference measurements are presented in Table 3-14, above. In order to model the potential noise impact when all sources are operating simultaneously, the sound-pressure levels associated with each piece of equipment are converted to A-weighted sound power levels (LwA). The noise sources measured and their respective sound power level included in the analysis represent the loudest daytime noise hour when the greatest amount of equipment is in operation.

A description of the sources measured and their respective sound power level included in the analysis, which represent the loudest daytime noise hour when the greatest amount of equipment is in operation, is as follows:

- **Water Truck:** This piece of equipment is used to suppress dust throughout the project site and is used near daily operations as well. The sound-power level for this piece of equipment is 114.8 LwA.
- **Loader:** This piece of equipment is used to move waste once dumped in an active area, generally to spread around and remove piles from forming. The sound-power level for this piece of equipment is 114.9 LwA.
- **Compactor:** This piece of equipment is used to densify waste once dumped at the active work face area, generally to flatten bulky items or piles of waste. The sound-power level for this piece of equipment is 94.6 LwA.
- **Scraper:** This piece of equipment is used to gather soil onsite and relocated to another part of the site. Typically, this activity occurs when soil is being placed over waste as daily cover. The sound-power level for this piece of equipment is 110.2 LwA.
- **Rock Crusher:** This piece of equipment is used to crush larger pieces of large rock or hard material into smaller pieces such that the resulting material can be used for various applications. The sound-power level for this piece of equipment is 109.9 LwA.

For the existing operations condition on a busy day, as shown in Figure 3-13, EXISTING OPERATIONS NOISE IMPACTS, it is assumed that two loaders, two compactors, two scrapers and water truck would be in use near the northwest portion of the project site where the existing open cell is located. Additionally, the rock crusher operations and associated scraper activities would occur near the existing retention pond on the southern portion of the project site. To model a condition that would produce the loudest noise levels to the nearest existing receptor for future conditions, as shown in Figure 3-14, FUTURE PHASE 2 OPERATIONS NOISE IMPACTS, it is assumed that two loaders, two compactors, two scrapers and water truck would be in use in the Phase 2 expansion area in the southern portion of the project site.

While Figures 3-13 and 3-14 provides a graphic representation of the noise contours generated by landfill operation under each condition, Table 3-15, COMPARISON OF DAILY OPERATIONS CONTRIBUTIONS – LOUDEST MODELED HOUR, shows the results of the noise modeling for existing and future operations.

**Table 3-15**  
**COMPARISON OF DAILY OPERATIONS CONTRIBUTIONS – LOUDEST MODELED HOUR (dBA L<sub>eq</sub>)**

Receiver Location	Existing Noise Level (dBA L <sub>eq</sub> )	Phase 2 Operations Noise Level (dBA L <sub>eq</sub> )
R1: Near the closest residence south of the landfill at the intersection of 36th Avenue and Parker Avenue	45.0	52.1
R2: Near the closest residence southwest of the landfill between 37th and 38th Avenues, east of Konocti Avenue	44.0	48.4
R3 - Near the closest residence west of the landfill at the intersection of 42nd Avenue and Konocti Avenue	41.3	34.0

Source: LSA. 2019. *Noise and Vibration Memorandum for the Eastlake Sanitary Landfill Expansion Project*. October 18, 2019.

The results show that noise levels generated by landfill operation at all of the receivers would remain below the County's Zoning Code exterior noise standard of 55 dBA L<sub>eq</sub> in both the existing and future conditions. Additionally, it shall be noted that noise levels generated by landfill operations for future conditions would be less than existing noise levels based on measurements gathered and presented in Table 3-14, above. The existing data suggests that existing noise levels at the surrounding receptors/uses are affected greatly by local traffic on unfinished, uneven dirt roads and periodic high winds. Therefore, no significant noise impacts would occur, and no mitigation is required.



**Mitigation Measures:** No mitigation measures are required. Impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
b) Generation of excessive ground borne vibration or ground borne noise levels			X	

**Discussion:** Heavy equipment operation during construction as well as typical daily landfill activities can generate varying degrees of ground-borne vibration depending on the procedures and the equipment used. The operation of heavy equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of the operations often varies depending on soil type, ground strata, and construction characteristics of the receptor buildings. The results from ground-borne vibration can range from no perceptible effects at the lowest ground-borne vibration levels to low rumbling sounds and perceptible ground-borne vibration at moderate levels, to slight damage at the highest levels. Ground-borne vibration from heavy equipment activities rarely reaches the levels that damage structures.

The greatest levels of vibration are anticipated to occur with the operations of heavy equipment such as dozers and scrapers, which are expected to generate levels similar to a large bulldozer. All other equipment are expected to result in lower vibration levels. As shown in Table 3-16, VIBRATION SOURCE AMPLITUDES FOR HEAVY EQUIPMENT, bulldozers and other heavy-tracked construction equipment generate approximately 0.089 in/sec PPV of ground-borne vibration when measured at 25 feet.

**Table 3-16**  
**VIBRATION SOURCE AMPLITUDES FOR HEAVY EQUIPMENT**

Equipment	Reference at 25 ft PPV (in/sec)
Hoe Ram	0.089
Large Bulldozer	0.089
Caisson Drilling	0.089
Loaded Trucks	0.076
Jackhammer	0.035
Small Bulldozer	0.003

Source: LSA. 2019. *Noise and Vibration Memorandum for the Eastlake Sanitary Landfill Expansion Project*. October 18, 2019.

The distance to the nearest buildings for vibration impact analysis is measured between the nearest offsite buildings and the project boundary (assuming the heavy equipment would be used at or near the project boundary) because vibration impacts occur normally within the buildings. With the vibration attenuation through distance divergence at 400 feet, vibration levels would be reduced to less than 0.001 in/sec PPV or less. This level is below the FTA's criteria for the most sensitive buildings (0.12 in/sec PPV); therefore, vibration levels from heavy equipment operations would not have the potential to cause vibration damage at the nearest structures, and no mitigation is required. Impacts are less than significant in this regard.

**Mitigation Measures:** No mitigation measures are required. Impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X

**Discussion:** The project site is not located within 2 miles of any airport, airport land use plan or private airstrip. The closest airport is Lampson Field Airport located 15.6 miles west of the project site. Therefore, the project would not expose people residing or working in the project area to excessive noise levels.

**Mitigation Measures:** No mitigation measures are required.

## Findings

Based upon the review of the information above, implementation of the proposed project will have a less than significant impact with respect to *Noise*.

## References and Citations

- FTA (Federal Transit Administration). 2018. *Transit Noise and Vibration Impact Assessment Manual*. Office of Planning and Environment. Report No. 0123. September.
- Lake County. 2008. *Lake County General Plan*. September 2008.
- Lake County. 2019. *Zoning Ordinance (Articles 1 through 72)*. 2019.
- LSA. 2019a. *Noise and Vibration Memorandum for the Eastlake Sanitary Landfill Expansion Project*. October 18, 2019.
- LSA. 2019b. *Transportation Memorandum for the Eastlake Sanitary Landfill Expansion Project*. October 2, 2019.
- SCS Engineers. 2018a. *Landfill Expansion Field Investigation Engineering Analyses and Preliminary Basis of Design – Eastlake Sanitary Landfill, Clearlake, California*. October 2018.
- SCS Engineers. 2018b. *Report of Disposal Site Information/Report of Waste Discharge/Preliminary Final Closure and Post-Closure Plan: CCR Title 27 – Joint Technical Document for Eastlake Sanitary Landfill, Clearlake, California*. July 30, 2018.



## XIV. Population and Housing

This section addresses potential impacts of the project on population, housing, and employment at the project site and provides an overview of current population estimates and projected population growth.

### Environmental Setting

Lake County has an existing population of approximately 65,071 persons based on the January 1, 2019 population estimates provided by the California Department of Finance (DOF). This reflects an increase of approximately 406 persons or 0.6% since 2010 based on the 2010 population and housing estimates reported by the DOF. Lake County maintains approximately 34,409 existing housing units (DOF, 2019a). Of these, approximately 7,797 housing units are within the City of Clearlake (DOF, 2019b).

The City of Clearlake's population of 15,917 people grew by about 4.4% between 2010 and 2018, compared to about 0.6% for all of Lake County. Clearlake's population consists of approximately 24% of the County's population. Compared to other areas, the City of Clearlake is growing in population, slightly faster than the majority of the county. In the 3-year period between 2014-2018, the City gained 230 residents, which resulted in a 1.46% increase in population. The City of Lakeport saw a similar increase of 3.1%, while Lake County's population increased by only 0.035%. The median household income for the City in 2017 was \$27,034, compared to more than \$40,446 for Lake County.

### Impact Analysis

The following includes an analysis of environmental parameters related to *Population and Housing* based on Appendix G of the State CEQA Guidelines. The discussion not only includes the areas for which there is potential for environmental impacts but also provides justification for the conclusions that either no impacts, less than significant impacts, or less than significant impacts with mitigation could occur. The CEQA Checklist question, discussion, and environmental significance conclusion are provided below under each individual environmental parameter related to *Population and Housing*.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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)?				X

**Discussion:** During the lifetime of the proposed project the municipal solid waste disposal rate at the facility is expected to increase from 130 tons per day (tpd) (2018) to 180 tpd in 2045. This disposal rate accounts for the planned increase in County population as forecast for years 2015-2030 in the Lake County General Plan. This 1.3% annual growth rate was utilized as the basis for estimating future waste disposal rates and overall landfill capacity design. Therefore, implementation of the proposed project is considered to accommodate planned growth in Lake County and would not serve substantial unplanned population growth. No impacts are anticipated in this regard.

**Mitigation Measures:** No mitigation measures are required.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

**Discussion:** The project site is currently utilized as the Eastlake Sanitary Landfill and does not contain onsite housing. In addition, the proposed expansion would not displace any people or existing housing. No impact has been identified in this regard.

**Mitigation Measures:** No mitigation measures are required.

## Findings

In the course of the above evaluation, impacts associated with *Population and Housing* were found to not be significant because of the inability of a project of this scope to create such impacts or the absence of project characteristics producing effects of this type.

## References and Citations

- DOF (California Department of Finance). 2019a. *Table E-1: City/County Population Estimates with Annual Percent Change*. January 1, 2019.
- DOF. 2019b. *Table E-5: City/County Population and Housing Estimates*. January 1, 2019.
- DOF. 2010. *Table E-5: City/County Population and Housing Estimates*. April 1, 2010.
- City of Clearlake. 2019. *Clearlake Housing Element Update*. October 10, 2019.
- Lake County. 2008. *Lake County General Plan*. September 2008.
- SCS Engineers. 2018a. *Landfill Expansion Field Investigation Engineering Analyses and Preliminary Basis of Design – Eastlake Sanitary Landfill, Clearlake, California*. October 2018.
- SCS Engineers. 2018b. *Report of Disposal Site Information/Report of Waste Discharge/Preliminary Final Closure and Post-Closure Plan: CCR Title 27 – Joint Technical Document for Eastlake Sanitary Landfill, Clearlake, California*. July 30, 2018.

## XV. Public Services

This section describes the affected environment for public services that serve the project area. It also describes the impacts on existing public services that would result from implementation of the proposed project and mitigation measures, if necessary, that would reduce these impacts.

### Environmental Setting

The Eastlake Sanitary Landfill site adjoins the City of Clearlake along the city's eastern boundary. The City currently maintains public services available to residential, commercial and industrial users in its jurisdiction. Fire protection is provided by the Lake County Fire Protection District (LCFPD). The LCFPD is an independent special district that provides fire protection services to the eastern shore of Clear Lake which covers the City of Clearlake and the unincorporated area of Lower Lake and responds to over 4,500 calls per year including structure and wildland fires, vehicle accidents, technical rescue, hazardous materials, and medical aid. Station 70 is located at 14815 Olympic Drive in Clearlake, approximately 2.6 miles west of the Eastlake Sanitary Landfill.

Law enforcement to the area is provided by the Lake County Sheriff's Department, City of Clearlake Police Department, and the California Highway Patrol (CHP). The proposed project is located in County Sheriff Beat 6B – Lower Lake. The City of Clearlake Police Department is located at 14050 Olympic Drive, approximately 3.5 miles west of the project site. Adventist Medical Hospital is the nearest hospital facility located approximately 2.5 miles southwest in the in the City of Clearlake. Within the vicinity of the project site Burns Valley Elementary School (K-6) and Pomo Elementary School (K-7) provide public education services, with the closest high schools located in Lower Lake south of the site. There are no developed parks in the immediate vicinity of the proposed project.

### Impact Analysis

The following includes an analysis of environmental parameters related to *Public Services* based on Appendix G of the State CEQA Guidelines. The discussion not only includes the areas for which there is potential for environmental impacts but also provides justification for the conclusions that either no impacts, less than significant impacts, or less than significant impacts with mitigation could occur. The CEQA Checklist question, discussion, and environmental significance conclusion are provided below under each individual environmental parameter related to *Public Services*.

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Fire Protection?			X	
Police Protection?			X	

**Discussion:** Fire and police protection services to the proposed project are currently provided by County, City, and State agencies and private emergency responders. Implementation of the proposed landfill expansion is not expected to significantly increase response times to the site or result in an increase in the demand for these protection services or require any additional fire or law enforcement facilities. Less than significant impacts are anticipated in this regard.

**Mitigation Measures:** No mitigation measures are required. Impacts would be less than significant.

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Schools?				X

**Discussion:** The purpose of the proposed project is the expansion of the existing Eastlake Sanitary Landfill facility in Lake County, to provide this necessary public service for environmentally sound waste disposal to County residents and businesses. Implementation of the proposed landfill expansion will not result in an increase of student populations in the City of Clearlake or other areas in unincorporated Lake County. The proposed project does not result in an increase in housing or population in the city or County which would require additional educational facilities. Therefore, the proposed landfill expansion would have no impact in this area.

**Mitigation Measures:** No mitigation measures are required.

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Parks?				X

**Discussion:** As stated previously, the need for additional parkland is primarily based on an increase in population to an area. Given that the proposed project would not increase the population of the City of Clearlake or Lake County, the project would not burden any parks in the surrounding area beyond capacity by generating additional recreational users. Therefore, the proposed project would not require the construction or expansion of park and recreational facilities and would also not result in an increase in demand for parks and recreation facilities in the surrounding area. There would be no impact to parks from implementation of the proposed project.

**Mitigation Measures:** No mitigation measures are required.

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Other public facilities?			X	

**Discussion:** The proposed project does not involve a substantial change in the land use, does not substantially increase the numbers of people employed in the region, and does not create or require new housing or related facilities, an increased demand on public facilities is unlikely to occur. There would be a less than significant impact to other public services related to this project.

**Mitigation Measures:** No mitigation measures are required. Impacts would be less than significant.

## Findings

Based upon the review of the information above, implementation of the proposed project will have a less than significant impact with respect to *Public Services*.

## References and Citations

City of Clearlake. 2019. [Online]: <https://www.clearlake.ca.us/210/Police-Department>. Accessed October 3, 2019.

Konocti Unified School District. 2019. *Schools*. [Online]: <http://konoctiusd.org/>. Accessed October 3, 2019.

Lake County Sheriff's Department. 2019. *Beat Map*. [Online]: <http://www.lakesheriff.com/About/Beats.htm>. Accessed October 3, 2019.



## XVI. Recreation

The recreation analysis is intended to determine the extent to which a project contributes to the physical deterioration of publicly provided recreation facilities. This section discusses any increased demand for various recreational facilities and identifies any potential need for new recreational facilities generated by the project. This section also describes the recreational resources within the project area.

### Environmental Setting

Clear Lake is the County's single most valuable natural resource, important for its habitat, aesthetic and economic values. It also represents a significant recreational amenity in the County. There are no developed parks or other recreational facilities in the immediate vicinity of the landfill with the exception of lands administered by the BLM north of the landfill site.

### Impact Analysis

The following includes an analysis of environmental parameters related to *Recreation* based on Appendix G of the State CEQA Guidelines. The discussion not only includes the areas for which there is potential for environmental impacts but also provides justification for the conclusions that either no impacts, less than significant impacts, or less than significant impacts with mitigation could occur. The CEQA Checklist question, discussion, and environmental significance conclusion are provided below under each individual environmental parameter related to *Recreation*.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X

**Discussion:** The proposed project does not propose to add significant new numbers of people that would require housing and ancillary recreation facilities, therefore the proposed project would not 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. Implementation of the proposed landfill expansion will maintain the existing access to adjacent BLM lands. No impact would occur in this regard.

**Mitigation Measures:** No mitigation measures are required.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X

**Discussion:** The proposed project would not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. No impact would occur in this regard.

**Mitigation Measures:** No mitigation measures are required.

## Findings

In the course of the above evaluation, impacts associated with *Recreation* were found to not be significant because of the inability of a project of this scope to create such impacts or the absence of project characteristics producing effects of this type.

## References and Citations

City of Clearlake. 2017. *Clearlake 2040 General Plan Update*. February 23, 2017.

Lake County. 2008. *Lake County General Plan – Open Space, Conservation & Recreation Element*. September 2008.

## XVII. Transportation and Traffic

This section is based upon the *Transportation Memorandum for the Eastlake Sanitary Landfill Expansion Project* (LSA, 2019). The study is including in Appendix G, *Transportation Memorandum*. The purpose of the evaluation is to address traffic and transportation impacts of the proposed project on surrounding streets and intersections.

### Environmental Setting

Lake County residents and businesses currently generate approximately 40,000 to 50,000 tons of municipal solid waste (MSW) per year requiring disposal at the Eastlake Sanitary Landfill. These totals exclude wildfire debris that has been disposed at the landfill over the period of 2015 through 2018 under waivers allowing additional intake and associated traffic, as granted by the oversight agencies. Over the course of a year, the average daily traffic count is approximately 175 vehicles. This includes deliveries by franchised waste haulers (in packer trucks, roll-off bins, and transfer truck/trailers) and by self-haul customers (the general public, landscapers, and other trades).

The current average daily MSW intake and vehicles are generally well below existing permit allowances. Based on MSW intake information from the County, as well as a one-day survey of the Eastlake Sanitary Landfill, 664.73 tons of MSW were delivered to the landfill on June 26, 2019, by 248 vehicles (109 passenger vehicles and 139 large trucks) during the permitted hours of operation (7:30 a.m. to 3:00 p.m.). Although that one-day intake is approximately three times more than the average daily intake of 200 tons, the surveyed number of vehicles is within the maximum-allowable 300 daily vehicles. For traffic analysis purposes, the focus is vehicle trips. One vehicle equates to two trips (one inbound and one outbound).

Because each vehicle represents two trips, the 248 vehicles (109 passenger vehicles and 139 large trucks) generated 496 trips (218 passenger vehicle trips and 278 large truck trips) on June 26, 2019. This would equate to approximately 0.16 passenger car per ton per day and 0.21 large truck per ton per day. Peak-hour trip rates were developed as a proportion of the existing peak-hour trips (by vehicle type) by the total number of vehicles (by vehicle type) per day (refer to Appendix G, *Transportation Memorandum*).

Separate trip rates were developed for passenger cars and large trucks. The inbound and outbound trip rates then were applied to the additional 63 tons per day of MSW to calculate the project trip generation. The increase of 63 tons per day of MSW would require 46 daily trips (20 passenger vehicle trips and 26 large-truck trips). Applying a passenger car equivalent (PCE) factor of 2 to the daily trucks would result in 72 average daily trips (ADT), with 7 trips in the a.m. peak hour (3 inbound and 4 outbound) and 3 trips in the p.m. peak hour (0 inbound and 3 outbound). The remaining 62 PCE trips would occur outside the peak-hour periods.

It should be noted that the County is in the process of implementing mandatory waste collection services. The percentage of self-haul disposal of MSW and corresponding traffic volumes are anticipated to decrease as future mandatory waste collection requirements take effect Countywide. Under these circumstances, a higher percentage of MSW will be disposed of via franchised collection vehicles. As a result of this shift in MSW delivery methods (from self-haul vehicles to franchised collection vehicles), the traffic volumes to and from the Eastlake Sanitary Landfill may decrease. However, the project trip increases have been used to present a conservative, worst-case traffic analysis (refer to Appendix G).

Key roadways in the vicinity of the proposed project are as follows:

- State Route 53 (SR-53) is a four-lane, north-south principle arterial between State Route 20 (SR-20) in Clearlake Oaks and State Route 29 (SR-29) in Lower Lake. SR-53 is the only major arterial traversing through Clearlake.
- Moss Avenue is located immediately east of SR-53. It is a two-lane, north-south major collector between 40<sup>th</sup> Avenue and Davis Avenue.
- Phillips Avenue is a two-lane, north-south major collector between 18<sup>th</sup> Avenue and Davis Avenue.
- 40<sup>th</sup> Avenue is a two-lane, east-west major collector between SR-53 and Parker Street.
- Davis Avenue is a two-lane, east-west major collector from east of SR-53 to the Eastlake Sanitary Landfill.

## Impact Analysis

The traffic analysis was prepared consistent with the objectives and requirements of the City, the County, the California Department of Transportation (Caltrans), and applicable provisions of CEQA. The traffic analysis examined the following two scenarios: Existing conditions and Existing Plus Project conditions.

The traffic analysis evaluated the following four intersections (refer to Figure 3-15, STUDY AREA INTERSECTIONS):

- State Route 53 (SR-53) & 40<sup>th</sup> Avenue
- Moss Avenue & 40<sup>th</sup> Avenue
- Phillips Avenue & 40<sup>th</sup> Avenue
- Phillips Avenue & Davis Avenue

Intersections were evaluated using the Highway Capacity Manual (HCM), 6<sup>th</sup> Edition methodology. Synchro (version 10) for the HCM was utilized for the analysis of all study area intersections. The study area intersection level of service (LOS) analysis was conducted for the weekday a.m. and p.m. peak hours. The HCM worksheets are provided as an attachment.

The HCM intersection methodology presents LOS in terms of delay (in seconds per vehicle). The resulting delay is expressed in terms of LOS, where LOS A represents free-flow activity and LOS F represents overcapacity operation. The relationship between LOS and the delay for signalized and unsignalized intersections is provided in Table 3-17, LOS AND DELAY, below:

Table 3-17  
LOS AND DELAY

Level of Service	Signalized Intersection Delay per Vehicle (seconds)	Unsignalized Intersection Delay per Vehicle (seconds)
A	≤0.60	≤10.0
B	>0.60 and ≤0.70	>10.0 and ≤15.0
C	>0.70 and ≤0.80	>15.0 and ≤25.0
D	>0.80 and ≤0.90	>25.0 and ≤35.0
E	>0.90 and ≤1.00	>35.0 and ≤50.0
F	>1.00	>50.0

Source: LSA. 2019. *Transportation Memorandum for the Eastlake Sanitary Landfill Expansion Project*. October 2, 2019.

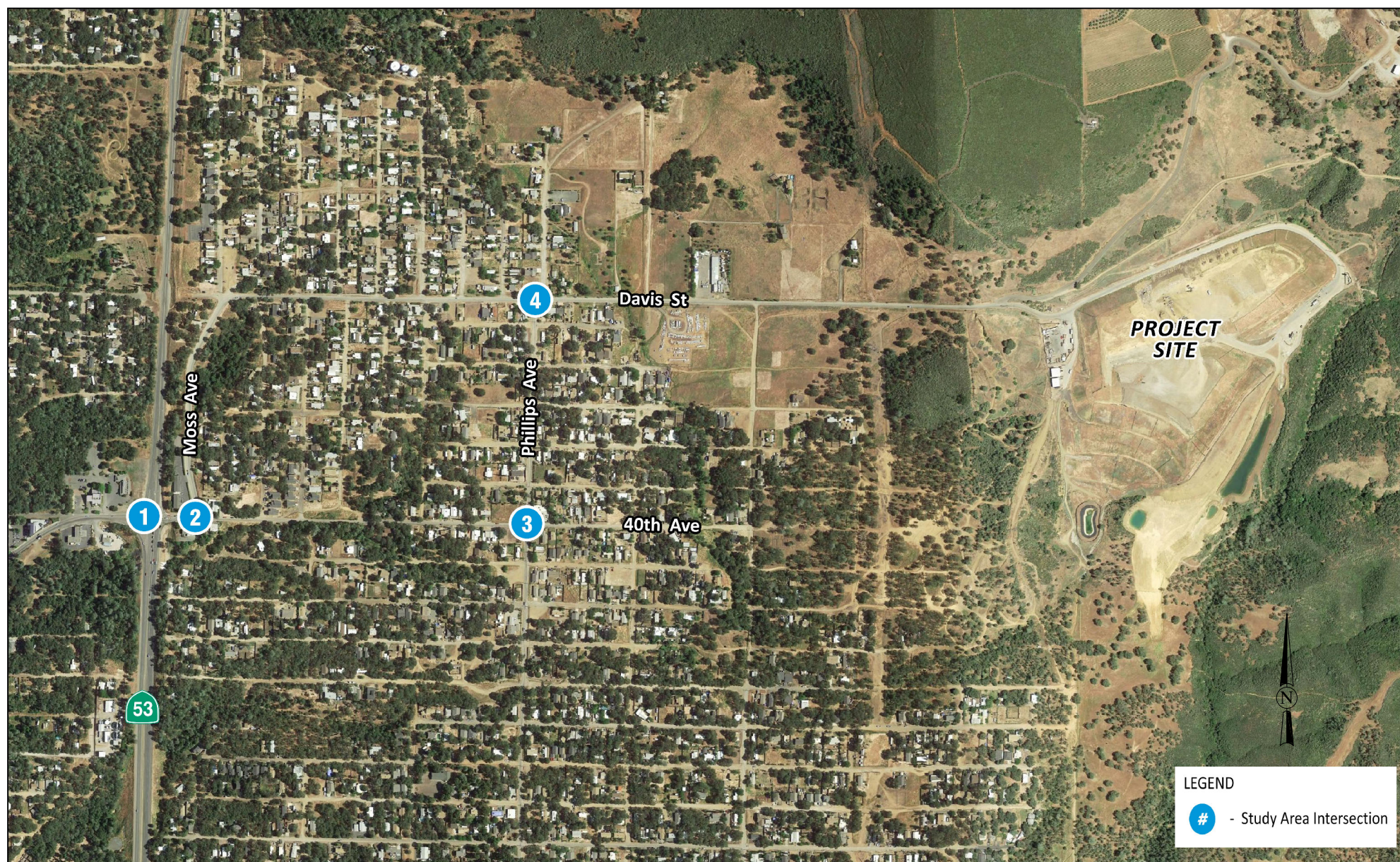
The City of Clearlake strives to maintain LOS D or better for both signalized and unsignalized intersections. Therefore, the proposed project is considered to have a significant impact if the project would result in an intersection that deteriorates from an acceptable LOS (D or better) in the No Project condition to an unacceptable LOS (E or F) in the Plus Project condition.

**Project Trip Generation, Distribution, and Assignment.** As previously described, the trip generation from the proposed project was estimated based on a survey of the Eastlake Sanitary Landfill conducted on June 26, 2019. Separate trip rates were developed for passenger cars and large trucks. The inbound and outbound trip rates then were applied to the additional 63 tons per day of MSW to calculate the project trip generation.

As shown in Appendix G, *Transportation Memorandum*, (Table A), the additional intake of 63 tons per day of MSW would require 23 total vehicles (10 passenger vehicles and 13 large trucks). This would be equivalent to 46 average daily trips (ADT), 20 passenger vehicle trips, and 26 large-truck trips. In addition, a PCE factor of 2 was applied to the large trucks.

The proposed project would generate 72 ADT, with 7 trips in the a.m. peak hour (3 inbound and 4 outbound) and 3 trips in the p.m. peak hour (0 inbound and 3 outbound), in PCEs. The remaining 62 PCE trips would occur outside the peak-hour periods.





Eastlake Landfill  
CEQA Initial Study  
Lake County, California

Study Area Intersections

November 2019

Source: LSA, 2019

Figure 3-15



The directions of approach to and departure from the site are based on the residential and commercial uses served by the landfill, as well as the major arterial traversing Clearlake (SR-53). Approximately 30 percent of the trips are destined north on SR-53, 30 percent are destined south on SR-53, 20 percent are destined west on 40<sup>th</sup> Avenue, and 20 percent are destined south on Phillips Avenue. The project trips have been added to the existing traffic volumes to represent Existing Plus Project conditions.

**Existing Traffic Volumes and LOS Analysis.** Existing traffic volumes were collected by Counts Unlimited on June 26, 2019 for the study area intersections. Table B in Appendix G summarizes the results of the existing peak-hour LOS for the study area intersections. All study area intersections currently operate at satisfactory LOS.

The following includes an analysis of environmental parameters related to *Transportation and Traffic* based on Appendix G of the State CEQA Guidelines. The discussion not only includes the areas for which there is potential for environmental impacts but also provides justification for the conclusions that either no impacts, less than significant impacts, or less than significant impacts with mitigation could occur. The CEQA Checklist question, discussion, and environmental significance conclusion are provided below under each individual environmental parameter related to *Transportation and Traffic*.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			X	

**Discussion:** As previously stated, transportation impacts were analyzed with respect to the following two scenarios: Existing conditions and Existing Plus Project conditions. Because the existing number of disposal vehicles (248 vehicles on June 26, 2019) and the anticipated number of disposal vehicles (23 project vehicles) would not exceed the maximum allowable 300 daily vehicles, no change is required for SWFP No. 17-AA-001.

The project trips (72 ADT, with 7 trips in the a.m. peak hour [3 inbound and 4 outbound] and 3 trips in the p.m. peak hour [0 inbound and 3 outbound], in PCEs) were added to the existing traffic volumes to represent Existing Plus Project conditions. Table B in Appendix G summarizes the peak-hour LOS results for the Existing Plus Project analysis. All study area intersections are anticipated to operate at satisfactory LOS with implementation of the proposed project. As a result, a significant project impact would not occur at any study area intersection, and no mitigation is required.

Although the proposed project is an expansion of the existing landfill that would generate vehicles/trucks (self-haul vehicles or mandatory waste collection franchised vehicles), it would not preclude alternative modes of transportation or facilities (e.g., transit, bicycle, or pedestrian). Therefore, the proposed project would not conflict with any program, plan, ordinance, or policy addressing the circulation system. Impacts are less than significant in this regard.

**Mitigation Measures:** No mitigation measures are required. Impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?			X	

**Discussion:** State CEQA Guidelines Section 15064.3, Subdivision (b) states that for land use projects, transportation impacts are to be measured by evaluating the project's vehicle miles traveled (VMT), as outlined in the following:

*“Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.”*

Since the County does not provide defined thresholds for VMT (and has until July 1, 2020, to do so), the proposed project cannot be analyzed, and significance cannot be concluded at this point on the basis of VMT. However, using the current, effective LOS standards, it can be concluded that the project’s implementation will result in a less than significant impact.

Furthermore, the proposed project would continue landfill operations onsite and potentially decrease the need to haul waste from surrounding areas to landfills located farther away than the Eastlake Sanitary Landfill. Although the proposed project could generate a minimal increase in traffic (self-haul vehicles or mandatory waste collection franchised vehicles), it would generate VMT consistent with the existing landfill that has a low VMT profile. As a result, the project would not likely exceed potential thresholds for VMT. Impacts are less than significant in this regard.

**Mitigation Measures:** No mitigation measures are required. Impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	

**Discussion:** Access to the proposed project will be provided at the existing landfill driveway via Davis Avenue. In addition, the proposed expansion of the Eastlake Sanitary Landfill is compatible with the current landfill operations onsite. Therefore, the proposed project would not substantially increase hazards for vehicles due to a geometric design feature or incompatible uses. Impacts are considered to be less than significant.

**Mitigation Measures:** No mitigation measures are required. Impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
d) Result in inadequate emergency access?				X

**Discussion:** Adequate existing access is provided to the site with locally maintain roads. The project does not change the existing access or the amount of truck trips to the project site; therefore, the ability for emergency vehicles and personnel to access the subject property will remain at existing condition levels. Upon completion of the proposed project (landfill closure) the existing operational trips associated with the landfill will cease. Landfill operations will continue to comply with State and local Fire Safe Standards and applicable regulations for emergency vehicle access to the project site. No impacts are anticipated in this regard.

**Mitigation Measures:** No mitigation measures are required. Impacts would be less than significant.

## Findings

Based upon the review of the information above, implementation of the proposed project will have a less than significant impact with respect to *Transportation and Traffic*.

## References and Citations

LSA. 2019. *Transportation Memorandum for the Eastlake Sanitary Landfill Expansion Project*. October 2, 2019.

SCS Engineers. 2018. *Report of Disposal Site Information/Report of Waste Discharge/Preliminary Final Closure and Post-Closure Plan: CCR Title 27 – Joint Technical Document for Eastlake Sanitary Landfill, Clearlake, California*. July 30, 2018.



## XVIII. Tribal Cultural Resources

Effective July 1, 2015, Assembly Bill 52 (AB 52) amended CEQA to require that: 1) a lead agency provide notice to any California Native American tribes that have requested notice of projects proposed by the lead agency; and 2) for any tribe that responded to the notice within 30 days of receipt with a request for consultation, the lead agency must consult with the tribe. Topics that may be addressed during consultation include tribal cultural resources, the potential significance of project impacts, type of environmental document that should be prepared, and possible mitigation measures and project alternatives.

Pursuant to AB 52, Section 21073 of the Public Resources Code defines California Native American tribes as “a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of the Statutes of 2004.” This includes both federally and non-federally recognized tribes. This section of the Initial Study describes the affected environment and regulatory setting for Tribal Cultural Resources (TCRs) on the project site.

### Environmental Setting

Ethnographically, the project area is the tribal territory of the Southeastern Pomo, one of seven linguistic divisions of the Pomo language. Because there were no aboriginal names for the languages, they were given directional designations: Northeastern, Eastern, Southeastern, Northern Central, Southern, and Southwestern. The Southeastern Pomo dialect was spoken by a number of village communities around Clear Lake in the Coast Range. The Southeastern Pomo did not have a name for themselves, as opposed to other native speakers of other dialects or languages, but had a general term calling themselves “people.”

The Southeastern territory includes Clear Lake, which is approximately 19 miles long and seven miles wide. The irregular shoreline breaks up the territory into smaller units called Upper Lake, Clear Lake proper, East Lake, and Lower Lake, with the Southeastern Pomo living around East Lake and Lower Lake units.

Prior to contact, the Southeastern Pomo lived among three main village-communities *qamdot*, *lem*, and *xqoyi*. The area consisted primarily of chaparral vegetation and tule marshes. The tule was used to build houses, boats and skirts for women, and mantles for men. The men also wore woven tule moccasins and leggings. Food was served on tule mats, and shredded tule was used for babies’ diapers and bedding. The tule roots and shoots were also a form of subsistence.

The Southeastern Pomo had an annual cycle for subsistence that was adapted to the environment in which they inhabited. They primarily focused on fishing activities during the spawning season when fish were plentiful and in shallow waters. This enabled the Pomo to catch more fish in a shorter amount of time. The fish were not only eaten but also dried and stored for subsistence throughout the year. Besides fish, their diet consisted of acorns for making bread and mush, grains, pepperwood nuts and buckeyes, all of which were stored and eaten throughout the year. Waterfowl, fresh meat, fruits, berries, bulbs and roots supplemented their daily diet when seasonally available.

Clothing was worn by men typically only for ritual, utilitarian, or social purposes. When weather called for it, mantles of tule bark were worn, while men of great wealth wore animal skins and women donned skirts made from shredded redwood bark. During cold weather, both men and women wore rabbit-skin blankets. Feather robes were sometimes worn in ceremony, but usually only by wealthy men. Personal adornments such as bracelets, belts, and neckbands were made of shell beads, bone, and feathers, and were indicators of wealth and social positions (Bean and Theodoratus 1978a).

Southeastern Pomo societies were organized on the basis of kinship, which determined who lived together in communal houses and the extent of one’s adult specializations. Chiefly succession was also likely based on kinship and membership in the society was solely through the kinsmen. These kinship ties allowed the Southeastern Pomo to extend their trading and ceremonial networks outside of their own villages.

A Pomo tribelet was composed of one or more bilaterally related extended kinship groups, ranging in size from 100 to 2,000 people. Each had a headman or minor chief; these men together composed the ruling elite of the individual tribelets and functioned as council. The tribelets were independent political units but sometimes did confederate. On the Russian River, a confederation of several linked tribelets combined to control 16 miles of the river plus the adjacent land and hills.

The Pomo maintained regular military trade alliances among themselves and with other groups. Kin groups were the most significant social unit, united by the ghost and secret societies. However, non-kin friendships were maintained by a system of reciprocal gift exchange (Bean and Theodoratus 1978a).

The first contact between Pomo and non-Native Americans may have occurred as early as 1579 when Sir Francis Drake visited the bay believed to be just south of their territory. By the late 1700s, European trade goods were arriving from San Francisco, and the Spanish were raiding Pomo territories for potential converts to their mission at the Presidio. By 1817, Mission San Rafael was established, extending Spanish influence into Pomo territory, and in 1823 Mission San Francisco de Solano extended influence in to Wappo territory. At least 600 Pomo were baptized at these two missions (Bean and Theodoratus 1978b: 299). About the same time, Russians began exploiting Pomo territory on the coast and established Fort Ross in Kashaya territory in 1811. As opposed to the forced missionization of native people by the Spanish, the Russians contracted with the Pomo for use of their area and employed tribal members as agricultural workers. Many Pomo adopted Russian customs and occasionally intermarried with Russians (Bean and Theodoratus 1978b). Descendants of the ancient Pomo still live in the area today.

## Impact Analysis

On June 21, 2019, the County initiated environmental review under CEQA for the project. On July 3, 2019, the County sent project notification letters to the California Native American tribes that are listed on the County's tribal notification list (refer to Item 11. Tribal Consultation, of the County's Environmental Checklist of this Initial Study [page x]). Each recipient was provided a description of the project and its location, the lead agency contact information, and a notification that the tribe has 30 days to request consultation. The 30-day response period concluded on August 3, 2019. Of the 23 letters mailed, responses were received only from the tribes indicated below. No other responses were received, either during or after the close of the 30-day response period.

- On July 5, 2019 the Redwood Valley Pomo replied with updated contact information and to indicate they defer to all reviews, comments or concerns from Lake County tribes, specifically with Elem Indian Colony (Elem) and Koi Nation. The Redwood Valley Pomo did not request consultation.
- On July 8, 2019, Middletown Rancheria responded with their conclusion that the project is not within their aboriginal territories and decline to comment on the project. Middletown Rancheria did not request consultation.
- On July 15, 2019, the Habematolel Pomo of Upper Lake responded with suggesting contacting Alix Tyler with Elem Indian Colony. The Habematolel Pomo also stated they may request consultation after they consult with Elem. Therefore, on July 18, 2019, the County initiated consultation the Habematolel Pomo of Upper Lake, but no response was ever received.
- On July 29, 2019, the County received a letter from Yocha Dehe declining consultation and deferring to Middletown Rancheria, which had already declined consultation on July 8, 2019.
- On July 16, 2019, Alix Tyler of the Elem Indian Colony responded to indicate that there are sensitive cultural sites in the proposed project area, and they would like to request consultation and be informed of timelines and meetings. Therefore, on July 18, 2019, the County initiated consultation with Elem Indian Colony.

The consultation meeting with Elem Indian Colony was held at the Lake County office on July 31, 2019. In attendance were representatives from the County, Legal Counsel, consultants and representatives of the Elem Indian Colony. During the meeting, Elem requested a copy of the cultural resources technical study that was prepared for the project area. Later that day, the technical report for the study was emailed to Ms. Tyler.

On August 9, 2019, Ms. Tyler sent an email to the project team stating that after their review of the cultural resources technical study, there will be no significant impact to Elem's culture and requested tribal monitoring during ground disturbance activities to ensure that in the event a discovery is made, it is appropriately addressed by the tribe. Consultation was terminated on January 24, 2020 by the County. In addition, the Habematolel Pomo of Upper Lake did not engage in the consultation process and on January 24, 2020 concluded its consultation with the tribe.

Tribal consultation pursuant to AB 52, as summarized above, failed to identify any TCRs within the project area. Additional information about potential impacts to TCRs was drawn from the ethnographic context (summarized above), the results of the cultural resources records search and field survey conducted by DZC Archaeology & Cultural Resource Management, and the results of a search of the Sacred Lands File of the NAHC, which were obtained by DZC in 2017. The Sacred Lands File failed to identify any sacred lands or tribal resources in or near the project area. The cultural resources records search and field survey also determined that there are no significant Native American archaeological sites within the project area.

The following includes an analysis of environmental parameters related to *Tribal Cultural Resources* based on Appendix G of the State CEQA Guidelines. The discussion not only includes the areas for which there is potential for environmental impacts but also provides justification for the conclusions that either no impacts, less than significant impacts, or less than significant impacts with mitigation could occur. The CEQA Checklist question, discussion, and environmental significance conclusion are provided below under each individual environmental parameter related to *Tribal Cultural Resources*.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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), or				X

**Discussion:** As described above, no known TCRs have been identified (as defined in Section 21074) within the project area. Therefore, the project would not cause a significant adverse change in the significance of a TCR that is either listed in, or eligible for listing in, the CRHR, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k). The proposed project would not cause a substantial adverse effect to a known TCR.

**Mitigation Measures:** No mitigation measures are required.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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.		X		

**Discussion:** As described above, the County, in its discretion and taking into consideration the views of the consulting tribes, must determine whether or not substantial evidence of a TCR exists within the project area. After a review of the tribal consultation record, ethnographic record, and results of cultural resources technical studies, the County determined that the project would not cause a significant adverse change in significance of a known TCR. However, TCRs may be discovered during ground-disturbing activities associated with project implementation. If so, this could adversely affect a presently unknown TCR. This could result in a potentially significant impact, without mitigation. After implementation of Mitigation Measure TCR-1 and Mitigation Measure TCR-2, the proposed project would result in less than significant impacts to TCRs.

**Mitigation Measures:** The following mitigation measures have been developed to reduce potential impacts related to *Tribal Cultural Resources* to less than significant levels:

Mitigation Measure TCR-1. A minimum of seven calendar days prior to the initiation of ground-disturbing activities, the County or its designee shall send a written notice to the Elem Indian Colony with an initial start date, safety protocols, and contact information for the facility to provide the tribe with the opportunity to send a tribal representative to observe, at

its own discretion, liability, and expense, any or all ground-disturbing activity throughout the lifetime of the facility's operations. Should the tribe choose not to send an observer, facility activities may continue as scheduled, as long as the initial notification was made and documented.

**Mitigation Measure TCR-2.** If any potential tribal cultural resources, such as unusual amounts of bone or shell, artifacts, or human remains, are encountered during ground disturbing activities, work shall be suspended within 100 feet of the find, and the construction supervisor shall immediately notify the County representative, who shall immediately notify the Elem Indian Community. If the find includes human remains, or remains that are potentially human, the County shall also immediately notify the Lake County Coroner so that the procedures in Section 7050.5 of the California Health and Safety Code and, if applicable, Section 5097.98 of the Public Resources Code, are followed. The County shall consult with the Elem Indian Community and Most Likely Descendent, if identified by the California Native American Heritage Commission for human remains (if applicable), to develop, document, and implement appropriate and feasible management recommendations, should potential impacts to newly discovered tribal cultural resources be found by the County to be significant. Possible management recommendations could include documentation, data recovery, or (if deemed feasible by the County) preservation in place. The facility operator shall implement any measures deemed by County staff to be necessary and feasible to avoid, minimize, or mitigate significant effects to the Tribal Cultural Resources.

## Findings

In the course of the above evaluation impacts associated with *Tribal Cultural Resources* were found to be less than significant with implementation of mitigation. Mitigation measures for the protection of currently unknown but discovered resources are also provided for in Section IV, *Cultural Resources*.

## References and Citations

- Bean, Lowell John and Dorothea Theodoratus. 1978a. Eastern Pomo and Southeastern Pomo. *Handbook of North American Indians, Vol. 8: California*, edited by R. F. Heizer, pp. 306-323. Smithsonian Institution, Washington, D.C.
- Bean, Lowell John and Dorothea Theodoratus. 1978b. Pomo: An Introduction. *Handbook of North American Indians, Vol. 8: California*, edited by R. F. Heizer, pp. 274-288. Smithsonian Institution, Washington, D.C.
- DZC Archaeology & Cultural Resource Management. 2018. *Phase I Cultural Resource Inventory Report and Extended Phase 1 Testing for the Eastlake Landfill Expansion Project, Lake County, California*. January 2018.



## XIX. Utilities and Service Systems

This section addresses the proposed project’s potential impacts on certain utilities and services: electric, water, wastewater, stormwater, and solid waste.

### Environmental Setting

Pacific Gas & Electric (PG&E) currently provides power to the Eastlake Sanitary Landfill. Electric, communication, and water utility services are provided to the existing onsite hazmat, operations, and scale house buildings.

Potable water service is currently provided by the Konocti County Water District (KCWD) via a 1½-inch diameter municipal connection located in Davis Street near the site entrance. A 2,500 gallon water storage tank is currently located near the site entrance. There are currently no water supply wells, hydrants or fire suppression storage tank facilities onsite. Water for day-to-day potable needs is supplied by KCWD, while water for facility operations such as dust control is pumped from the soil borrow pit.

KCWD obtains raw water directly from Clear Lake under an agreement with Yolo County Flood Control and Water Conservation District (YCFCWCD). As authorized under the agreement, KCWD can divert up to 2,500 acre-feet per year (AFY) directly from Clear Lake. Currently, KCWD only diverts treats and deliveries between 400 and 500 AF annually to serve approximately 1,800 customer connections, including the existing Eastlake Sanitary Landfill facility. A 2007 Water Master Plan completed for KCWD anticipated potential growth could nearly double the current annual water demand to between 900 to 1,000 AF, which is still less than half the annual volume allowed under the YCFCWCD agreement. KCWD’s current intake, water treatment plant, and distribution facilities are adequate to serve the needs of its customers, which include the water needs at the existing Eastlake Sanitary Landfill site. However, during periods of low Lake levels, KCWD’s existing intake facility can be strained, leading to potential triggering of KCWD’s water shortage plan (KCWD Ordinance 14-02). During such conditions, the landfill is also subject to conditions defined in the water shortage plan. A raw water intake-improvement project nearing completion will resolve the current constraints and improve KCWD’s ability to reliably extract adequate water from the Clear Lake to meet all customer demands.

### Impact Analysis

The following includes an analysis of environmental parameters related to *Utilities and Service Systems* based on Appendix G of the State CEQA Guidelines. The discussion not only includes the areas for which there is potential for environmental impacts but also provides justification for the conclusions that either no impacts, less than significant impacts, or less than significant impacts with mitigation could occur. The CEQA Checklist question, discussion, and environmental significance conclusion are provided below under each individual environmental parameter related to *Utilities and Service Systems*.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X	

**Discussion:** The proposed project has an existing onsite septic system that disposes of domestic wastewater. This system would continue to be utilized for the permanent workers at the site, and is not proposed to be expanded to accommodate other future onsite uses. Should the facility need to expand the system, they would be required to follow standard County procedures for septic system development as provided for by the Lake County Department of Environmental Health. The proposed project is currently served by existing water supplies and systems that are owned and operated by KCWD, and there would be no impact on other water systems. There is sufficient power provided to the site for the proposed project, and there are no stationary generators proposed for the project. Less than significant impacts are anticipated in this regard.

In addition, as previously described in Section X, *Hydrology and Water Quality*, the proposed project would require construction of a new 4.1-acre stormwater retention basin to control suspended sediment in stormwater runoff prior to discharging from the site. Implementation of mitigation measures identified throughout this Initial Study would serve to reduce potential environmental impacts to less than significant levels.

**Mitigation Measures:** No mitigation measures are required. Impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X	

**Discussion:** The proposed project will not increase the day-to-day water demand for facility operations and will continue to be served with water from KCWD. During the planned temporary construction phases, additional water will be obtained from KCWD for the durations and quantities presented in Table 2-2, ESTIMATED WATER DEMAND – CONSTRUCTION. The four construction phases are estimated to last from 5 to 83 days, with up to 100,000 gallons per day necessary to manage dust and for soil moisture management. For Phase 2, anticipated to occur in 2028 and the longest projected phase estimated to last up to 83 days, about 25 AF of additional water would be obtained from KCWD. Given KCWD’s existing customer demand of 400 to 500 AF annually, and potential community growth, this temporary need is easily accommodated within the quantity limit defined in KCWD’s agreement with YCFCWCD. As such, there will be sufficient water to meet the temporary increase in demand occurring during the construction phases. If KCWD triggers its water shortage plan during any of the temporary construction phases, water for construction may be limited accordingly during the shortage condition. Less than significant impacts would occur in this regard.

**Mitigation Measures:** No mitigation measures are required. Impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments?				X

**Discussion:** The proposed project is served by an onsite septic system that is operated by the facility; there are no impacts to community/public wastewater systems, as there are none in the immediate area. No impacts would occur in this regard.

**Mitigation Measures:** No mitigation measures are required.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?				X

**Discussion:** The proposed expansion would increase the capacity of the exiting landfill and extend the life of the landfill. Therefore, the project would result in a significant beneficial impact to Lake County.

**Mitigation Measures:** No mitigation measures are required.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
e) Comply with Federal, State, and local management and reduction statutes and regulations related to solid waste?				X

**Discussion:** The proposed project does not generate any solid waste requiring regulatory oversight but will increase the economic viability of an existing solid waste disposal site. The proposed project complies with all regulations related to solid waste at the federal, State and local level and will not negatively impact the waste management structure of Lake County.

**Mitigation Measures:** No mitigation measures are required.

## Findings

Based upon the review of the information above, implementation of the proposed project will have a less than significant impact with respect to *Utilities and Service Systems*.

## References and Citations

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## XX. Wildfire Hazards

This section provides an analysis of potential wildfire impacts. Relevant considerations include that the project site and its surroundings are in a “Very High Fire Hazard Severity Zone”, the project site includes some slopes that exceed 25 percent and human activities such as equipment operation cause the vast majority of wildland fires that occur on average each in throughout the State. The analysis considers potential impacts of the project on emergency access and evacuation routes to, through, and from the project area and the exacerbation of fire risk or that may result in temporary or ongoing impacts to the environment during or following a fire.

### Environmental Setting

From May to October of each year, Lake County faces a serious wildland fire threat. The threat of wildfire and potential losses are constantly increasing as human development and population increase and the wildland urban interface areas expand. Due to its high fuel load and long, dry summers, most of Lake County continues to be at risk from wildfire.

The CALFIRE Fire and Resource Assessment Program (FRAP), delineates the project area as a part of a designated “Very High Fire Hazard Severity Zone” (VHFHSZ). The FRAP designates lands in three general classifications, “Moderate”, “High” and “Very High” Fire Hazard Severity Zones. Fire suppression for the area is provided by a combination of first responders such as CALFIRE (designated as a State Responsibility Area) with additional fire fighting support from the nearby Lake County Fire Department main station located approximately 2 miles from the site.

### Impact Analysis

The following includes an analysis of environmental parameters related to *Wildfire* based on Appendix G of the State CEQA Guidelines. The discussion not only includes the areas for which there is potential for environmental impacts but also provides justification for the conclusions that either no impacts, less than significant impacts, or less than significant impacts with mitigation could occur. The CEQA Checklist question, discussion, and environmental significance conclusion are provided below under each individual environmental parameter related to *Wildfire*.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?				X

**Discussion:** Refer to impact discussion under Section XVII.d, above. No impacts would occur in this regard.

**Mitigation Measures:** No mitigation measures are required.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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?			X	

**Discussion:** The majority of the existing landfill site has been previously disturbed and developed. The proposed expansion does not propose changes to the project site that would exacerbate wildfire risks. In addition, there is no significant change in use or operations onsite that would lead to the project exacerbating wildfires and related pollutant contamination. Through the continued implementation of fire safe standards noted under impact discussion IX.g, above,



the proposed project would not cause significant wildfire risk to the area from project related activities. Based on the historical use of the site, onsite fire safe standards, the project will result in impacts that are less than significant in this regard.

**Mitigation Measures:** No mitigation measures are required. Impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?			X	

**Discussion:** The existing onsite scales, scale house, leachate pond, LFG flare and maintenance buildings would remain in place. Landfill expansion (i.e., excavation and cell construction) will occur in four discrete phases with the construction of a new all-weather main access road in advance of the first new cell excavation.

Currently there is a 2,500 gallon water storage tank onsite for fire suppression. The proposed expansion would include the installation of 2 new above ground water supply tanks for fire suppression, day-to-day operations, and cell construction. The tanks would have combined capacity of 100,000 gallons. The project does not include the installation or maintenance of fuel brakes, new power lines or other utilities. There are no temporary or ongoing activities that will exacerbate the fire risk in the area. Impacts are considered less than significant in this regard.

**Mitigation Measures:** No mitigation measures are required. Impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?			X	

**Discussion:** The location of the proposed project does not fall within a FEMA flood zone, nor are there any sheer or unstable cliffs in the immediate area. There is no reason to believe that the expansion area would be exposed to significant risks from flooding or landslides as a result of post fire runoff. Impacts are considered to be less than significant in this regard.

**Mitigation Measures:** No mitigation measures are required. Impacts would be less than significant.

## Findings

Based upon the review of the information above, implementation of the proposed project will have a less than significant impact with respect to *Wildfire*.

## References and Citations

CAL FIRE (California Department of Forestry and Fire Protection). 2019a. *State Responsibility Area Viewer*. [Online]: [http://www.fire.ca.gov/firepreventionfee/srviewer\\_launch](http://www.fire.ca.gov/firepreventionfee/srviewer_launch). Accessed: October 11, 2019.

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CAL FIRE. 2007. *Fire Hazard Severity Zones*. [Online]: [https://frap.fire.ca.gov/media/6205/fhszs\\_map17.pdf](https://frap.fire.ca.gov/media/6205/fhszs_map17.pdf). Accessed October 11, 2019.

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## XXI. Mandatory Findings of Significance

Based on the analysis undertaken as part of this Initial Study the, following findings can be made:

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Does the project have the potential to 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 the self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		

**Discussion:** Evaluation of the proposed project in this document (Section IV, *Biological Resources*) has shown that the activities of the proposed project do not have the potential to degrade the quality of the environment and will not substantially reduce the habitat or cause wildlife populations to drop below self-sustaining levels. Mitigation measures for *Biological Resources* have been developed to reduce potential impacts on sensitive habitats and species to less than significant levels.

Also, based on the discussion and findings in Section V, *Cultural Resources*, there is evidence to support a finding that the proposed project is not eligible for listing in the NRHP or CRHR under any significance criteria. Considering the history of extensive agricultural disturbance within the project area and all its previous uses, including over 100 years of documented and related activities, the potential for discovery of intact archaeological deposits or features by implementation of this project is considered moderate. Although no archaeological deposits or features were found during the Cultural Resources study, implementation of mitigation measures will ensure that any additional archaeological deposits or features may be discovered are fully protected during implementation of the project.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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 the effects of past projects, the effects of other current projects, and the effects of probable future projects)?		X		

**Discussion:** As discussed throughout this document, implementation of the proposed project has the potential to result in impacts to the environment that are individually limited, but are not cumulatively considerable, including impacts to biological and cultural resources.

In all instances where the project has the potential to contribute to cumulatively considerable impacts to the environment (including the resources listed above) mitigation measures have been imposed to reduce the potential effects to less than significant levels. As such, with incorporation of the mitigation measures imposed throughout this document, the proposed project would not contribute to environmental effects that are individually limited, but cumulatively considerable, and impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Potentially Significant Impact Unless Mitigation Incorporated	Less-Than-Significant Impact	No Impact
c) Does the project have potential environmental effects which may cause substantial adverse effects on human beings, either directly or indirectly?			X	

**Discussion:** Based on the discussion and findings in all Sections above, there is no evidence to support a finding that the proposed project has potential environmental effects which may cause substantial adverse effects on human beings, either directly or indirectly.

## Findings

Based upon the review of the information above, implementation of the proposed project is not anticipated to have a substantial adverse effect on the environment. Therefore, there is no significant impact.



## Section 4.0 CEQA Determination

### DETERMINATION: (To be completed by the Lead Agency)

On the basis of the 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.

Copies of the Initial Study and related materials and documentation may be obtained at the Lake County Development Department – Planning Division, 255 North Forbes Street, Third Floor, Room 323, Lakeport, CA 95453. Contact: Michalyn DelValle, Community Development Director (707) 263-2221.



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Michalyn DelValle  
Community Development Director  
Lake County Community Development Department

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1/31/2020

Date

## Section 5.0 References and Citations

The following technical studies, reference documents, and data sources were utilized as primary references in developing the Eastlake Sanitary Landfill Expansion Initial Study:

### Section I – Aesthetics

- Caltrans (California Department of Transportation). 2018. *California Scenic Highway System*. [Online]: [http://www.dot.ca.gov/hq/LandArch/16\\_livability/scenic\\_highways/index.htm](http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm). Accessed October 22, 2019.
- City of Clearlake. 2017. *Clearlake 2040 General Plan Update*. February 23, 2017.
- Lake County. 2008. *Lake County General Plan*. September 2008.
- FHWA (Federal Highways Administration) National Scenic Byways Program. 2018. [Online]: <https://www.fhwa.dot.gov/byways/states/CA>. Accessed October 22, 2019.
- National Wild and Scenic Rivers System. 2018. [Online]: <https://www.rivers.gov/california.php>. Accessed October 22, 2019.
- SCS Engineers. 2018a. *Landfill Expansion Field Investigation Engineering Analyses and Preliminary Basis of Design – Eastlake Sanitary Landfill, Clearlake, California*. October 2018.
- SCS Engineers. 2018b. *Report of Disposal Site Information/Report of Waste Discharge/Preliminary Final Closure and Post-Closure Plan: CCR Title 27 – Joint Technical Document for Eastlake Sanitary Landfill, Clearlake, California*. July 30, 2018.

### Section II – Agricultural Resources

- City of Clearlake. 2017. *Clearlake 2040 General Plan Update*. February 23, 2017.
- DOC (California Department of Conservation). 2019. *Farmland Mapping and Monitoring Program*. [Online]: <https://maps.conservation.ca.gov/DLRP/CIFF/>. Accessed August 22, 2019.
- Lake County. 2008. *Lake County General Plan*. September 2008.

### Section III – Air Quality

- SCS Engineers. 2019. *Eastlake Landfill Expansion CEQA Air Quality and Greenhouse Gas Impact Analysis*. December 6, 2019.

### Section IV – Biological Resources

- Caltrans (California Department of Transportation). 2007. [Online]: [https://www.i80.dot.ca.gov/hq/env/bio/files/caltrans\\_birds\\_10-7-2007b.pdf](https://www.i80.dot.ca.gov/hq/env/bio/files/caltrans_birds_10-7-2007b.pdf). Accessed October 29, 2019.
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## **Section V – Cultural Resources**

DZC Archaeological and Cultural Resource Management. 2018. *Phase I Cultural Resource Inventory Report and Extended Phase I Testing for the Eastlake Landfill Expansion Project, Lake County, California*. January 2018.

## **Section VI – Energy**

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## **Section VII – Geology and Soils**

RMC Geoscience, Inc. 2019. *Preliminary Seismic and Stability Evaluation, Lake County Eastlake Landfill Expansion Project*. March 12, 2019.

SHN Consulting Engineers and Geologists, Inc. 2018a. *Geologic and Seismic Siting Assessment for the Proposed Eastlake Landfill Expansion, Lake County, California*. March 5, 2018.

SHN Consulting Engineers and Geologists, Inc. 2018b. *Hydrogeologic and Hydrologic Evaluation for the Proposed Eastlake Sanitary Landfill Expansion, Lake County, California*. March 28, 2018.

SCS Engineers. 2018. *Report of Disposal Site Information/Report of Waste Discharge/Preliminary Final Closure and Post-Closure Plan: CCR Title 27 – Joint Technical Document for Eastlake Sanitary Landfill, Clearlake, California*. July 30, 2018.

## **Section VIII – Greenhouse Gas Emissions**

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## **Section IX – Hazards and Hazardous Materials**

CAL FIRE (California Department of Forestry and Fire Protection). 2007. *Fire Hazard Severity Zones*. Fire and Resource Assessment Program. [Online]: [https://frap.fire.ca.gov/media/6205/fhszs\\_map17.pdf](https://frap.fire.ca.gov/media/6205/fhszs_map17.pdf). Accessed October 11, 2019.

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SCS Engineers. 2018b. *Report of Disposal Site Information/Report of Waste Discharge/Preliminary Final Closure and Post-Closure Plan: CCR Title 27 – Joint Technical Document for Eastlake Sanitary Landfill, Clearlake, California*. July 30, 2018.

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## Section X – Hydrology and Water Quality

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KCWD (Konocti County Water District). 2019. *Water Rate Analysis*. February 2019.

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## Section XI – Land Use and Planning

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## Section XII – Mineral Resources

DOC (California Department of Conservation). 2013. *Publications of the SMARA Mineral Land Classification Project Dealing with Mineral Resources in California*. [Online]: <https://www.conservation.ca.gov/cgs/minerals/mineral-land-classification-smara>. Accessed: October 11, 2019.



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### Section XIV – Population and Housing

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### Section XV – Public Services

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## Section XVI – Recreation

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## Section XVII – Transportation and Traffic

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## Section XVIII – Tribal Cultural Resources

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## Section XIX – Utilities and Service Systems

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## Section XX – Wildfire

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## Technical Appendices

### **Appendix A**

Joint Technical Document

### **Appendix B**

Air Quality and Greenhouse Gas Analysis Report

### **Appendix C**

Natural Resources Assessment

### **Appendix D**

Geologic and Seismic Siting Assessment

### **Appendix E**

Hydrogeology and Hydrologic Evaluation

### **Appendix F**

Noise and Vibration Memorandum

### **Appendix G**

Transportation Memorandum



# **Appendix A**

## Joint Technical Document

## **Appendix B**

### Air Quality and Greenhouse Gas Analysis Report

## **Appendix C**

### Natural Resources Assessment

## **Appendix D**

### Geologic and Seismic Siting Assessment

## **Appendix E**

### Hydrogeology and Hydrologic Evaluation



## **Appendix F**

### Noise and Vibration Memorandum

## **Appendix G**

### Transportation Memorandum

# **Proposed Mitigated Negative Declaration**