

COLUSA COUNTY, CALIFORNIA

WESTSIDE AGGREGATES

INITIAL STUDY

CA Mine ID #91-06-0017



JANUARY | 2026

Lead Agency

County of Colusa Community Development Department

Operator

Westside Aggregates, Inc.

Preparer

Benchmark Resources

COLUSA COUNTY, CALIFORNIA

WESTSIDE AGGREGATES

INITIAL STUDY

CA Mine ID #91-06-0017

JANUARY | 2026

Lead Agency

County of Colusa Community Development Department
1213 Market St, Colusa, CA 95932

Operator

Westside Aggregates, Inc.
P.O. Box 239, Colusa, CA 95932

Preparer

Benchmark Resources
2515 East Bidwell Street, Folsom, CA 95630

TABLE OF CONTENTS

ACRONYMS AND ABBREVIATIONS.....	vi
1. INTRODUCTION.....	1
1.1 Project Title	1
1.2 Lead Agency Name and Address	1
1.3 Contact Person and Phone Number.....	1
1.4 Project Location.....	1
1.5 Project Sponsor's Name and Address	1
1.6 General Plan Designation	2
1.7 Zoning.....	2
1.8 Summary Description of Project.....	2
1.9 Surrounding Land Uses and Setting	3
1.10 Other Public Agencies Whose Approval is Required	3
1.11 California Native American Consultation	3
2. PROJECT DESCRIPTION	5
2.1 Introduction.....	5
2.2 Existing Conditions	7
2.2.1 Topography and Land Cover.....	7
2.2.2 Site Drainage	8
2.2.3 Soils	8
2.2.4 Local Infrastructure and Easements.....	9
2.3 Project Purpose and Objectives.....	9
2.4 Proposed Project.....	10
2.4.1 Project Components	10
2.4.2 Initial Site Development.....	10
2.4.3 Mining.....	11
2.4.4 Plant Site Facilities.....	12
2.4.5 Processing Operations	13
2.4.6 Equipment List.....	13
2.4.7 Access and Vehicle Trips	14
2.4.8 Hours of Operation and Workforce	15
2.4.9 Fuels and Oils Use and Storage.....	15
2.4.10 Water Supply and Usage.....	15
2.4.11 Surface Water Management.....	16
2.4.12 Utilities and Solid Waste Management	17

2.4.13	Lighting.....	17
2.4.14	Project Duration.....	18
2.5	Reclamation Plan	18
2.5.1	Surface Mining and Reclamation Act	18
2.5.2	Subsequent Property Use	19
2.5.3	Reclamation Phasing	19
2.5.4	Revegetation	20
2.5.5	Post-Closure Site Maintenance Operations	21
2.6	Permits and Approvals.....	21
2.6.1	Colusa County Approvals	21
2.6.2	Other Potential Permits and Approvals.....	22
3.	INITIAL STUDY CHECKLIST	23
	Environmental Factors Potentially Affected	23
	Determination (To be completed by the Lead Agency).....	23
	Evaluation of Environmental Impacts	24
3.1	Aesthetics	26
3.2	Agriculture and Forestry Resources	30
3.3	Air Quality	34
3.4	Biological Resources.....	43
3.5	Cultural Resources	67
3.6	Energy.....	71
3.7	Geology and Soils.....	74
3.8	Greenhouse Gas Emissions	83
3.9	Hazards and Hazardous Materials	88
3.10	Hydrology and Water Quality	95
3.11	Land Use and Planning	111
3.12	Mineral Resources	112
3.13	Noise.....	113
3.14	Population and Housing	124
3.15	Public Services	125
3.16	Recreation	127
3.17	Transportation.....	128
3.18	Tribal Cultural Resources	144
3.19	Utilities and Service Systems	147
3.20	Wildfire	151
3.21	Mandatory Findings of Significance	154

REFERENCES AND RESOURCES.....157**TABLES**

Table 1	Project Parcels and Land Use Designations.....	5
Table 2	Proposed Project Duration and Export Estimates	7
Table 3	Project Equipment List.....	13
Table 4	Estimated Average Daily Criteria Air Pollutant and Precursor Emissions	37
Table 5	Health Risks from Exposure to Diesel Particulate Matter	40
Table 6	Land Cover Types within the study area and Project Site.....	56
Table 7	Recorded Cultural Resources within One-half Mile of Project Site	68
Table 8	Annual Project Energy Consumption Under Maximum Production.....	72
Table 9	Summary of Slope Stability Analysis.....	78
Table 10	Estimated Greenhouse Gas Emissions—Maximum Production.....	85
Table 11	Annual Water Use Estimates.....	101
Table 12	Simulated Drawdowns at Target Locations.....	104
Table 13	Baseline Ambient Noise Conditions at Nearest Sensitive Receptors ¹	114
Table 14	Predicted Construction Noise Levels at Nearest Receptors.....	118
Table 15	Predicted Daytime Noise Levels at Nearest Residential Receptors	119
Table 16	Predicted Nighttime Noise Levels at Nearest Residential Receptors	119
Table 17	Maximum Predicted Noise Levels at Receptors Along Haul Routes in the Project Vicinity	122
Table 18	Project Trip Generation Summary—Average Trips at Maximum Annual Production.....	130
Table 19	Project Trip Distribution	131
Table 20	Project Trip Generation Summary—Peak Hourly Trips at Maximum Annual Production.....	134
Table 21	Existing and Existing with Project Peak Hour Intersection Levels of Service	135
Table 22	Future and Future with Project Peak Hour Intersection Levels of Service	135
Table 23	Summary of Roadway Pavement Conditions	136
Table 24	Traffic Index Summary—30-Year Design Period.....	137
Table 25	Roadway 30-Year Cost Summary	138
Table 26	Available Storage and Queues Under Future Conditions.....	142

FIGURES

Figure 1	Regional Location
Figure 2	Site Location
Figure 3	Existing Conditions Aerial Photograph
Figure 4	General Plan Land Use Designations

Figure 5	Zoning
Figure 6	Operations Components
Figure 7	Operations Components—Pond Locations
Figure 8	Soils
Figure 9	Important Farmlands
Figure 10	Conceptual Plant Site Layout
Figure 11	Excavation Grading Plan
Figure 12	Excavation Grading Cross Sections
Figure 13	Reclamation Plan
Figure 14	Reclamation Plan Cross-Sections
Figure 15	Sensitive Receptors Near the Project Site
Figure 16	Land Cover and Biological Resources
Figure 17	Special-Status Plant Species
Figure 18	Oak Tree Distribution
Figure 19	Sand Creek 100-Year Water Surface Elevation
Figure 20	Western Excavation Area Scour Bend
Figure 21	Seasonal Wetlands.
Figure 22	Archaeological Resources Survey Area of Potential Effects
Figure 23	Regional Faulting and Seismicity Map
Figure 24	Slope Stability Analysis Cross Section Locations
Figure 25	Fire Hazard Severity Zones
Figure 26	Geologic Cross Section of the Colusa Subbasin in Project Vicinity
Figure 27	Changes in Groundwater Elevation in the Colusa Subbasin
Figure 28	Groundwater Sustainability Plan Monitoring Well Network
Figure 29	Study Intersections and Existing Lane Configurations
Figure 30	Summary of Roadway Pavement Conditions

APPENDICES

Appendix A	Reclamation Plan
Appendix B	Soils Field Assessment
Appendix C	Plant Site Soil Conservation Memorandum
Appendix D	Slope Stability Report
Appendix E	Air Quality Analysis
Appendix F	Naturally Occurring Asbestos
Appendix G	Biological Resources
Appendix H	Hydrologic And Hydraulic Evaluation
Appendix I	Hydrology Report

Appendix J	Archaeological Survey Report
Appendix K	Water Supply Assessment
Appendix L	Runoff Analysis
Appendix M	Noise Report
Appendix N	Transportation Impact Study
Appendix O	Pavement Analysis

ACRONYMS AND ABBREVIATIONS

AB	assembly bill
AG	Agricultural General
APN	assessor's parcel number
BAAD	Bay Area Air Quality Management District
bgs	below ground surface
BMPs	best management practices
CAAQS	California ambient air quality standards
CAL ARP	California Accidental Release Program
CAL FIRE	California Department of Forestry and Fire Protection
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCAPCD	Colusa County Air Pollution Control District
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CH ₄	methane
CIRC	Circulation Element
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ E	carbon dioxide equivalent
County	Colusa County

CUPA	Certified Unified Program Agency
CVC	California Vehicle Code
dB	decibels
dBA	A-weighted decibels
DBH	trunk diameter at breast height
DNL	day/night noise level
DPM	diesel particulate matter
E-A	Exclusive Agriculture
EIR	environmental impact report
ESA	Federal Endangered Species Act
ESAL	equivalent single axle loads
fps	feet per second
ft	feet
FTA	Federal Transit Administration
GHG	greenhouse gases
gpm	gallons per minute
HCM	Highway Capacity Manual
Highway 5	US Interstate Highway 5
ITP	Incidental Take Permit
lbs	pounds
L _{dn}	day-night average noise level
L _{max}	maximum daytime noise level
L _{eq}	equivalent noise level
LOS	level of service
MCL	Maximum Contaminant Levels

MEIR	maximum exposed individual resident
msl	above mean sea level
MT	metric tons
MWh	Megawatt hours
N ₂ O	nitrous oxide
NB	northbound
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
NCHRP	National Cooperative Highway Research Program
NO ₂	nitrogen dioxide
NO _x	oxides of nitrogen
NONA	notice of non-applicability
NPDES	National Pollutant Discharge Elimination System
NWIS	U.S. Geological Survey National Water Information System
O ₃	ozone
PCE	passenger car equivalency
PCI	pavement condition index
PBDB	Paleobiology Database
PFCs	perfluorocarbons
PG&E	Pacific Gas and Electric Company
PM ₁₀	respirable particulate matter; particles with diameters less than 10 microns
PM _{2.5}	particulate matter particles with diameters less than 2.5 microns
PRC	Public Resources Code
project	Westside Aggregates Project
Qb	Holocene age basin deposits

Qsc	Holocene age stream deposits
ROG	reactive organic gases
RoWD	Report of Waste Discharge
RTP	Regional Transit Plan
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCH	State Clearinghouse
SF ₆	Sulfur hexafluoride
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMARA	Surface Mining and Reclamation Act
SMARTS	Stormwater Multiple Application and Report Tracking System
SO ₂	sulfur dioxide
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TI	traffic index
TACs	toxic air contaminants
TCAPCD	Tehama County Air Pollution Control District
THPO	Tribal Historic Preservation Officer
TIS	traffic impact study
Tte	Pliocene age Tehama Formation
UCERF	Uniform California Earthquake Rupture Forecast
UCMP	University of California Museum of Paleontology
USACE	United States Army Corps of Engineers
USGS	U.S. Geological Survey

VdB	vibration decibels
VMT	vehicle-miles traveled
WDR	waste discharge requirement
WRCC	Western Regional Climate Center

1. INTRODUCTION

The purpose of this Initial Study is to evaluate the potentially significant environmental impacts associated with implementing the Westside Aggregates Project (project). The Initial Study is organized into the following chapters:

- Chapter 1: Introduction
- Chapter 2: Project Description
- Chapter 3: Initial Study Checklist
- Chapter 4: References

1.1 Project Title

Westside Aggregates Project

1.2 Lead Agency Name and Address

Colusa County Community Development Department
1213 Market Street
Colusa, CA 95932

1.3 Contact Person and Phone Number

Ciara Fisher
Principal Planner
(530) 458-0891
cfisher@countyofcolusaca.gov

1.4 Project Location

The approximately 200-acre project site is located in Colusa County (County), near the intersection of Cortina School Road and Sand Creek Road, and approximately 4 miles west of the community of Arbuckle and U.S. Interstate Highway 5 (Highway 5).

The project site is located on seven parcels with the following Assessor's Parcel Numbers (APNs): 018-250-007, -009, -026, -027, -028, -030, and -032. The project site is located adjacent to Sand Creek.

1.5 Project Sponsor's Name and Address

Westside Aggregate, Inc.
P.O. Box 239
Colusa, CA 95932

1.6 General Plan Designation

All project parcels are designated Agricultural General (AG).

1.7 Zoning

All project parcels are zoned Exclusive Agriculture (E-A).

1.8 Summary Description of Project

Westside Aggregates, Inc., is seeking entitlements to develop, operate, and reclaim, an aggregate mining and processing operation. Project operations would include excavation, processing, and washing of mined materials and transport offsite to regional construction projects.

The project site consists of an approximately 200-acre area that includes the primary operational components listed below, as well as minor operational components such as pipelines, roads, and setbacks. The primary operational components are:

- 1) An approximately 23-acre “Plant Site,” where the mined materials would be washed and sorted into the sizes meeting construction specifications. The facilities on the Plant Site would consist of a screening and wash plant (i.e., processing plant); areas for stockpiles and truck loading; access road to Cortina School Road; scalehouse/office (consisting of a portable building brought onsite) and truck scale; bathroom facilities (with a septic system or portables); fuel storage area; and shop for minor equipment maintenance.
- 2) Five “Excavation Areas,” ranging in size from approximately 3 to 58 acres, where the alluvial aggregates would be mined and sent to the Plant Site via conveyors. The Excavation Areas would be mined to depths of approximately 40-feet below the ground surface (with maximum depths ranging from about 35- to 45-feet below the ground surface).
- 3) A series of settling ponds to which slurry, consisting of wash water and fines (i.e., silts and clays) from the Plant Site, would be pumped. Within the settling ponds, the fines would settle out and the remaining water would be decanted to a 3- to 5-acre water supply pond.
- 4) An approximately 3- to 5-acre water supply pond. The water supply would consist of a combination of recycled wash water from the settling ponds and water pumped from an existing groundwater supply well located on the project site and currently used as a source of irrigation water for agricultural operations.

The proposed project would provide for the extraction of an estimated 9.5 million tons of aggregate resources. The project is seeking flexibility in annual exports to allow the

proposed operation the ability to accommodate variability in regional construction project demand and is therefore proposing maximum annual exports of up to 2,000,000 tons per year. At the maximum rate of production, the resources could be exhausted in as few as 5 years. At lower annual production, the project duration would be extended. The maximum proposed project duration is 30 years.

Upon completion of mining, the project site would be reclaimed to prime farmland, rangeland, and open space suitable for agriculture-related uses, similar to existing conditions.

1.9 Surrounding Land Uses and Setting

The project site is located adjacent to Sand Creek. Sand Creek is an intermittent stream that originates in the eastern foothills of the Coast Range and flows eastward towards the Sacramento Valley. The topography on the project site and surrounding areas consists of hilly terrain to the west and relatively level terrain to the east. Orchards are the primary land use to the east of the project site, while undeveloped foothills used for grazing are located to the west. The nearest residences are located more than ¼ mile from the project site.

1.10 Other Public Agencies Whose Approval is Required

In addition to County approval, other permits and approvals would be required before the changes in operation at the project site could proceed. The other agencies whose approval may be required include:

- Colusa County Air Pollution Control District (CCAPCD) (Authority to Construct and Permit to Operate for new aggregate plant);
- Central Valley Regional Water Quality Control Board (RWQCB) (National Pollutant Discharge Elimination System (NPDES) permits; Application/Report of Waste Discharge); and
- California Department of Conservation, Division of Mine Reclamation (review of reclamation plan and Financial Assurance Mechanism).

1.11 California Native American Consultation

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

Note: Conducting consultation early in the California Environmental Quality Act (CEQA) process allows tribal governments, lead agencies, and project proponents to discuss the level of

environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code, Section 21080.3.2). Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code, Section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code, Section 21082.3 (c) contains provisions specific to confidentiality.

Pursuant to federal and state regulations, consultation has been initiated with affiliated tribes. Colusa County processed the Assembly Bill (AB) 52 notification using the contact list of requested local tribes maintained by County Staff, as well as the list provided by the Native American Heritage Commission (NAHC). The County of Colusa sent letters on June 25, 2025, to notify local tribes of the proposed project and provide an opportunity for the tribes to consult with the County regarding the potential of the project to impact tribal cultural resources. The Yocha Dehe Wintun Nation requested the initiation of consultation on July 21, 2025. An initial meeting between the County of Colusa staff and Tribal representatives from the Yocha Dehe Wintun Nation was held via video conference on July 28, 2025. The applicant and representatives from the applicant's consultant, Benchmark Resources, also attended the meeting and provided a presentation providing an overview of the project. A site visit was then arranged and held on December 15, 2025. Tribal representatives recommended that tribal cultural resources awareness training be conducted for mining personnel and periodic monitoring by a tribal monitor for work in certain areas.

Consultation is ongoing concurrent with the CEQA process.

2. PROJECT DESCRIPTION

2.1 Introduction

Westside Aggregates, Inc., is seeking entitlements to develop, operate, and reclaim, an aggregate mining and processing operation. As shown in Figure 1, “Regional Location,” and Figure 2, “Site Location,” the site is located in western Colusa County, near the intersection of Cortina School Road and Sand Creek Road, and approximately 4 miles west of the community of Arbuckle and U.S. Interstate Highway 5 (Highway 5). Mining operations would be located within seven parcels, which are shown in Figure 3, “Existing Conditions Aerial Photograph.”

The project parcels, their General Plan and zoning designations, and their existing conditions and land use types are summarized in Table 1, “Project Parcels and Land Use Designations,” and shown in Figure 4, “General Plan Land Use Designations,” and Figure 5, “Zoning.”

TABLE 1
PROJECT PARCELS AND LAND USE DESIGNATIONS

Assessor's Parcel Number	Parcel Area (Acres)	General Plan Designation	Zoning	Existing Conditions
018-250-007	320	Agricultural General (AG)	Exclusive Agriculture (E-A)	Orchards. Undeveloped foothills with scattered oak trees and grasslands. Sand Creek watercourse.
018-250-009	166	Agricultural General (AG)	Exclusive Agriculture (E-A)	Orchards. Formerly disturbed, undeveloped land. Past disturbances include mining near Cortina School Road and illegal offroad vehicle use. Sand Creek watercourse.
018-250-030 018-250-028 018-250-027 018-250-026	15 10 10 10	Agricultural General (AG)	Exclusive Agriculture (E-A)	Formerly mined, undeveloped land with a manmade detention basin that is currently used for agricultural water supply. Water supply well (parcel 018-250-030).
018-250-032	21	Agricultural General (AG)	Exclusive Agriculture (E-A)	Soil amendment operation. Formerly disturbed, undeveloped land. Sand Creek watercourse.

Source: Colusa County 2024a. Interactive Map.

Note: Project parcels and their land use designations are shown in Figures 4 and 5.

Project operations would include excavation, processing, and washing of mined materials and transport offsite to regional construction projects. The site would contain the primary operational components listed below, which are shown in Figure 6,

“Operations Components,” and in Figure 7, “Operations Components—Pond Locations.”

- 1) An approximately 23-acre “Plant Site,” where the mined materials would be washed and sorted into the sizes meeting construction specifications.
- 2) “Excavation Areas,” ranging in size from 3 to 58 acres, where the alluvial aggregates would be mined and sent to the Plant Site via conveyors. The excavation areas would be mined to depths of approximately 40-feet below the ground surface (with maximum depths ranging from about 35- to 45-feet below the ground surface).
- 3) An approximately 3- to 5-acre water supply pond at the southernmost end of the Northern Excavation Area and settling ponds in the remainder of the Northern Excavation Area.
- 4) Settling ponds and/or water supply ponds may also be located in the Central, Southeastern, and Eastern Excavation Areas, as needed.

The project site consists of an approximately 200-acre area that includes the primary operational components listed above, as well as minor operational components such as pipelines, roads, and setbacks (shown as the “Site Boundary” in Figures 6 and 7).

The proposed project would provide for the extraction of an estimated 9.5 million tons of aggregate resources. The project is seeking flexibility in annual exports to allow the proposed operation the ability to accommodate variability in regional construction project demand and is therefore proposing maximum annual exports of up to 2,000,000 tons per year. At the maximum rate of production, the resources could be exhausted in as few as 5 years. At lower annual production, the project duration would be extended. The maximum proposed project duration is 30 years. The proposed project duration and estimated export levels are presented in Table 2, “Proposed Project Duration and Export Estimates.”

TABLE 2
PROPOSED PROJECT DURATION AND EXPORT ESTIMATES

Parameter	Proposed Project
Duration of Operations	5 to 30 years
Maximum Annual Export	2,000,000 tons (80,000 loads)
Average Daily Export ² (assuming maximum annual export)	7,692 tons (308 loads)
Average Hourly Export ³ (assuming maximum annual export)	481 tons (19 loads)

Source: Westside Aggregates, Inc. 2025. Application Package.

Notes:

1. Loads assume trucks would carry an average of 25 tons per load.
2. Assumes 260 working days per year (Monday through Friday)
3. Assumes two 8-hour shifts (16 operating hours per day)

Upon completion of mining, the project site would be reclaimed to prime farmland, rangeland, and open space suitable for agriculture-related uses, similar to existing conditions. The reclamation requirements are specified in the *Westside Aggregates Reclamation Plan* (Reclamation Plan) prepared by Benchmark Resources (Benchmark Resources 2025), which is included as Appendix A of this Initial Study.

2.2 Existing Conditions

2.2.1 Topography and Land Cover

The project site is located adjacent to Sand Creek. Sand Creek is an intermittent stream that originates in the eastern foothills of the Coast Range and flows eastward towards the Sacramento Valley. The topography along Sand Creek varies from elevated hilly terrain at its headwaters to a relatively gradual valley downstream, where the project site is located. The Sand Creek watershed has an area of approximately 12,000 acres and extends to a maximum elevation of approximately 1,700 feet. Sand Creek exhibits seasonal flow patterns, with higher discharge rates during the winter and early spring, and with little to no flow during the summer months. In the vicinity of the project site, flatter areas further from the creek have been largely converted to irrigated agriculture, while the areas closer to the creek and areas in hilly terrain have been used for rangeland grazing.

The topography on the project site and adjacent properties also consists of hilly terrain to the west and relatively level terrain to the east. Orchards are present at the location of the Plant Site, while the remaining areas consist of rangeland grazing, agriculture-related land uses (i.e., apiculture, a soil amendment operation, agricultural water supply basin), and open space that has previously been disturbed by mining and other activities (e.g., trespass offroad vehicle use). The existing conditions and land uses on the project site are summarized in Table 1, above, and are shown in Figure 3.

2.2.2 Site Drainage

Site drainage is shown in Figure 3. The majority of the project site drains directly into Sand Creek or into drainage ditches that drain into Sand Creek, with the following exceptions:

- The Northern Excavation Area, which was previously mined, drains internally; and
- An agricultural drainage ditch north of the Plant Site crosses underneath Cortina School Road and drains into an existing pond within the Northern Excavation Area. The pond is used for agricultural purposes. The agricultural ditch primarily carries stormwater runoff from areas west of the project site; however, the Plant Site area drains to the northeast and therefore stormwater runoff from the Plant Site flows towards this agricultural ditch.

2.2.3 Soils

As depicted in Figure 8, “Soils,” regional mapping by the U.S. Department of Agriculture Natural Resources Conservation Service (2024) indicates that the majority of the Excavation Areas are riverwash and adjacent gravelly loam. In contrast, the Plant Site is mapped as Arbuckle Sandy Loam and classified as Prime Farmland, as shown in Figure 9, “Important Farmlands.” Due to the large scale, the regional mapping presented in Figures 8 does not reflect that over approximately 68 acres (about 40 percent) of the Excavation Areas have been subject to extensive disturbance such that the original soil materials are no longer in place.

A Field Assessment of Reclamation Soils and Vegetation Cover (Soils Field Assessment) was completed by Claassen (Claassen 2025) to document existing soils conditions on the site and is included as Appendix B of this Initial Study. These disturbed areas, indicated in Figure 8, occur in the eastern one-third of the Central Excavation Area and across the Northern, Southeastern, and Eastern Excavation Areas. The Western Excavation Area includes three soil mapping units (River wash, Arand very gravelly sandy loam, and Hillgate Loam) and has not been subject to substantial disturbance beyond cattle grazing. The western two-thirds of the Central Excavation Area primarily contains soil mapped as Arand very gravelly sandy loam. Although past land uses (e.g., agricultural disking and unauthorized off-road vehicle use) in the western portion of the Central Excavation Area appear to have completely disturbed the original topsoil horizon, the soil materials are expected to remain in place. The Central Excavation Area is not grazed by cattle.

2.2.4 *Local Infrastructure and Easements*

The project site extends to both the east and west of Cortina School Road, a local County-maintained two-lane road. The road crosses Sand Creek wash at grade, where no pavement remains.

PG&E has two natural gas pipelines that cross the property near Cortina School Road. The pipelines cross the project area from the northwest to southeast. The project has been designed such that the Plant Site and Excavation Areas do not encroach onto the 100-foot-wide pipeline alignment (shown in Figure 3). The operator is conducting ongoing coordination with PG&E to ensure safe operation near these pipelines.

There are two high-tension transmission line alignments that cross the project area from the northwest to the southeast. As shown in Figure 3, both transmission line alignments are located west of Cortina School Road; no towers are located in areas that would be disturbed by the proposed mining activities. Local power distribution lines servicing agricultural wells and other facilities also occur. The project does not require modifying existing powerline alignments.

2.3 Project Purpose and Objectives

The purpose of the project is to provide a local source of construction aggregates. The specific objectives of the project are to:

- Provide locally-sourced aggregate materials to the region, with the associated benefits of minimizing vehicle miles traveled, particulate emissions and greenhouse gas emissions.
- Provide about 12 jobs at the project site with a living wage for skilled workers.
- Establish a productive local business that provides for increased taxes and expenditures for goods and services, benefiting the local County economy.
- Provide a maximum annual permitted export level of 2,000,000 tons per year of local aggregate in order to have the flexibility to meet the demands of projects that may require large volumes of construction aggregate.
- Develop mining and processing facilities on a property that provides sufficient buffer lands to minimize potential land use incompatibilities with sensitive land uses.
- Be located in an area where haul trucks can access the highway without passing through dense population centers.
- Maintain historic agricultural and grazing operations on surrounding lands and portions of the property not subject to surface disturbance.

- Reclaim following mining in a manner that returns the land to continued agricultural and/or open space uses, and potential to develop future groundwater recharge areas that could increase local groundwater infiltration and supply.

2.4 Proposed Project

2.4.1 Project Components

The project site would contain the following primary project components:

- 1) a “Plant Site,” where the mined materials are washed and sorted into the sizes meeting construction specifications;
- 2) “Excavation Areas,” where the alluvial aggregates are mined and sent to the processing plant via conveyors; and
- 3) water supply ponds and settling ponds, that would be located within the Excavation Areas.

These mining and processing components would be located within a total mining and reclamation area of approximately 200 acres that includes minor operational components such as pipelines, roads, and setbacks (shown as the “Site Boundary” in Figures 6 and 7).

2.4.2 Initial Site Development

Initial Site Development Overview

Mining operations would begin with the following activities:

- 1) preparation of the Plant Site through removal of the existing orchard, grading, and installation of Plant Site facilities and related infrastructure;
- 2) excavation of the Northern Excavation Area and conversion of the excavated area to support an approximately 3- to 5-acre water supply pond, with the remaining excavated area supporting settling ponds for silts and clays (as indicated in Figure 7); and
- 3) temporary stockpiling of materials excavated from the Northern Excavation Area at the Southeastern Excavation Area.

Preparation of Plant Site

Preparation of the Plant Site in the initial mining phase would begin with the removal of the orchard trees. Orchard trees would be chipped and incorporated into topsoil or burned, consistent with standard agricultural practices. The Plant Site is located on land classified as prime agricultural land (California Department of Conservation 2024). The topsoil would be left in place and a 6-inch to 1-foot-deep layer of engineered fill composed of fine-textured materials would be placed on the Plant Site. The fill is intended

to provide a level surface on which equipment and facilities could be installed while also protecting the underlying soil, consistent with the recommendations of the *Conservation of Soil Resources at the Westside Aggregates Plant Site* (Plant Site Soil Conservation Memorandum) prepared by Claassen (Claassen 2024) and included as Appendix C of this Initial Study.

As part of the preparation of the Plant Site, a conveyor for mined material, a pipeline to bring water from the water supply pond to the Plant Site, and a pipeline to send process water from the wash plant to settling ponds, would be installed between the Plant Site and Southeastern Excavation Area to transport these materials. The anticipated alignments of the conveyor and pipelines are shown in Figure 10, “Conceptual Plant Site Layout.” A 12-foot by 12-foot box culvert would be constructed under Cortina School Road to accommodate the conveyor and water and process fines pipelines between the Plant Site and the excavation areas located east of Cortina School Road. This culvert would be located across from the groundwater supply well on parcel 018-250-030.

The preparation of the Plant Site would require paving a driveway between Cortina School Road and the Plant Site, which is also shown in Figure 10. The driveway would cross a 100-foot-wide easement for the two PG&E gas pipelines. The engineering of the crossing would meet PG&E requirements to protect its infrastructure. The paved driveway would extend to the scale house and to the western end of the Plant Site.

2.4.3 Mining

The plans for the proposed mining are shown in Figure 11, “Excavation Grading Plan,” and Figure 12, “Excavation Grading Cross Sections.” Mining of the Excavation Areas would occur to a depth of approximately 40 feet below the ground surface, with a range of about 35 to 45 feet. These are the depths at which geologically recent deposits of high-quality alluvial materials are known to occur. The design slopes of the excavation areas range from 2:1 to 2½:1. The final slopes may be over-excavated as steep as 0.75:1 on a temporary basis but would be backfilled with engineered fill and compacted to construct the final 2:1 or 2½:1 slopes in accordance with the recommendations specified in the *Slope Stability Evaluation Report* (Slope Stability Report) prepared by ENGEO (ENGEO 2025a) for the proposed project, which is included as Appendix D of this Initial Study; temporary over-excavation may not occur in the Central Excavation Area adjacent to the PG&E gas pipeline.

The proposed operation would generally involve excavation using conventional mining practices common to the industry. Mining of the Excavation Areas would be initiated by removal and temporary stockpiling of the surface 8 inches of soil for use in reclamation, where soils are present. Vegetation and soil would not be removed from within an

Excavation Area until within one year of when mining is anticipated to occur in that area. Mining excavation would be carried out using an excavator and front-end loader. Mined materials would be placed on a conveyor for transport to the Plant Site. Internal mine roads would be developed as needed.

While exploration by test pits has been selectively completed, alluvial materials may vary due to the nature of their deposition and include some unmarketable “waste fines” comprised of silts and clays. Mining may not reach the design depth over the entirety of an Excavation Area if significant quantities of fines are encountered. Silts and clays can occur in thick layers that sometimes preclude accessing quality materials beneath due to the cost of removing this “overburden.” Such areas may simply be avoided. Meanwhile, if small discrete layers of fines are encountered, they may be moved and used in reclamation of the Excavation Area, rather than unnecessarily being sent to the Plant Site for processing.

Mining would proceed in a manner where an initial excavation would be developed that reaches the design or practical depth and then would proceed laterally across the Excavation Area. In this manner, the active surface working area at any given time would be compact, limited to approximately 15 to 20 acres at a time. This is different than the more common mining approach where large portions, or the entirety, of the area intended to be mined is actively disturbed and lowered in stages to the final design depth.

Under the planned operations, reclamation within the Excavation Areas would be concurrent with mining operations. Section 2.5.3, “Reclamation Phasing,” below, describes this process.

2.4.4 Plant Site Facilities

The facilities on the Plant Site would consist of:

- a screening and wash plant (i.e., processing plant),
- areas for stockpiles and truck loading,
- access road to Cortina School Road,
- scalehouse/office (consisting of a portable building brought onsite) and truck scale,
- bathroom facilities (with a septic system or portables),
- fuel storage area, and
- shop for minor equipment maintenance.

The anticipated locations of these facilities are shown in Figure 10. These locations could vary based on conditions experienced in the field, technology changes, market demands, and other factors, but all of these facilities would be located within the Plant Site. The

processing plant would be the largest structure on the site, extending across an area of approximately 4 to 6 acres and would be up to 40 feet tall.

2.4.5 Processing Operations

Processing and loadout operations would occur at the Plant Site. Mined aggregate materials brought to the Plant Site would be stockpiled temporarily or fed directly into the screening and wash plant. Aggregate material would be separated by size and washed. Due to the limited quantity of material of sufficient size to crush (less than 10 percent of materials are anticipated to be greater than 1-inch), a crusher would be used only intermittently, when enough materials of sufficient size accumulate. After moving through the screening and wash plant, the materials would be conveyed to individual stockpiles for load out and shipment.

At any given time, the processing Plant Site would contain stockpiles of both processed and unprocessed materials. The processed materials would be stockpiled until sold. The maximum height of the stockpiles of both processed and unprocessed materials stored at the Plant Site could be up to approximately 40 feet. Fines (i.e., silts and clays) from the washed materials would be transported as a slurry consisting of wash water and fines to settling ponds in the Northern Excavation Areas. Settling ponds may also be developed in the Central, Southeastern, and Eastern Excavation Areas, as indicated in Figure 7. The slurry would be transported via pipeline.

2.4.6 Equipment List

The types of mobile equipment that would be used in the site preparation, mining, and reclamation operations are summarized in Table 3, "Project Equipment List."

TABLE 3
PROJECT EQUIPMENT LIST

Phase	Equipment Type
Site Preparation	1 excavator 1 water truck 1 light duty truck 1 medium duty truck 2 scrapers
Mining (Excavation Area)	1 front end loader 1 excavator 1 Water truck

Phase	Equipment Type
Mining (Plant Site)	2 front end loaders 1 washing/screening plant (crusher, scrubber, screens, twin screws) Multiple water pumps 1 skid steer 1 telehandler 1 manlift
Reclamation	1 water truck 1 dozer 1 light duty truck 1 medium duty truck 1 crane 1 telehandler 1 manlift

Source: Westside Aggregates, Inc. 2025, *Application Package*.

2.4.7 Access and Vehicle Trips

The primary project ingress/egress is a driveway on the west side of Cortina School Road that would be used to access the Plant Site and the Western and Central Excavation Areas. This driveway would require improvements, as described in the “Preparation of Plant Site” subsection under Section 2.4.2, “Initial Site Development.” Additionally, two existing driveways on the east side of Cortina School Road would be used to access the Northern and Eastern Excavation Areas. Because the project would rely on conveyors to transport aggregate from the Excavation Areas to the Plant Site, the primary use of these driveways would be by light and medium duty worker trucks and water trucks supporting mining excavation.

Over-the-highway trucks transporting aggregate would leave the site and travel north along Cortina School Road. From Cortina School Road the trucks would access Highway 5 via either Hahn Road or Husted Road/Meyers Road. Empty trucks would arrive to the site primarily from these same access routes, but some empty trucks could also arrive from the south, via Hillgate Road. The use of Hillgate Road is purposefully limited to empty trucks travelling to the site from the south in order to limit truck trips in the community of Arbuckle and to avoid a substantial increase in truck traffic where Cortina School Road crosses Sand Creek. Trucks leaving the Plant Site would be directed to head north on Cortina School Road through the installation of signage at the Plant Site driveway indicating that trucks are only allowed to turn left.

Haul trucks and vendors would check-in at the scalehouse and/or administrative office located at the Plant Site. The road to the Plant Site would be a minimum of 25-feet wide. The speed limit at the Plant Site would be 15 miles per hour to minimize dust. Access to

the property would be controlled by gates at the entrances located along Cortina School Road and closed and locked whenever the mine is not in active operation. Fencing would be installed around the perimeter of the Plant Site adjacent to the orchards.

2.4.8 *Hours of Operation and Workforce*

Typical operating days and hours of mining and processing operations would be Monday through Friday, 4 a.m. to 6 p.m., however operations could occur 24 hours per day, 7 days per week, depending on customer demand.

The typical workforce would consist of approximately 6 employees per shift and an estimated two shifts per day. During periods of time when only export of processed aggregate material is occurring (i.e., mine excavation and processing is not occurring, but aggregate is being exported from the Plant Site) the typical workforce would consist of approximately 4 employees. Employees would be primarily skilled workers in the construction materials industry such as heavy equipment operators, maintenance personnel, and support staff.

2.4.9 *Fuels and Oils Use and Storage*

A mobile fuel and lubrication truck would service equipment. A Hazardous Material Business Plan and Spill Prevention, Control, and Countermeasure Plan would be obtained prior to permanent storage of fuels and oils onsite during the mining phase. At this time, it is anticipated fuels and oils would be stored within the Plant Site in a manner consistent with local, State, and federal regulations with appropriate secondary containment and fire prevention measures.

The anticipated chemical types that would be present on site are used oil, coolant/antifreeze, hydraulic oil, diesel, diesel exhaust fluid, grease, engine oil, motor oil, gear oil. An emergency generator powered by an approximately 500-gallon propane fuel tank would be located at the portable office building/scalehouse.

The operator would use low carbon biodiesel or renewable fuel in place of petroleum diesel for off-road diesel equipment, in compliance with the In-Use Off-Road Diesel-Fueled Fleets Regulation (Cal. Code Regs., tit. 13, §§ 2449 et seq.). This fuel type reduces the emissions of particulate matter from fuel consumption and nitrogen oxides relative to petroleum diesel (CARB 2026).

2.4.10 *Water Supply and Usage*

Mining operations require water for dust control and aggregate washing. A water truck would be used to control dust on active internal roads. Water used during washing would be recycled using the settling ponds and water supply pond. The recycled wash

water would be supplemented by water pumped from the groundwater supply well located on parcel 018-250-030, just south of the water supply pond.

The processing plant would screen and wash the mined alluvial material. Except for a small fraction of the wash water that would remain in the aggregate product, a slurry consisting of the wash water and the fines (i.e., silts and clays) washed from the alluvial material would be pumped to a series of settling ponds in the Northern Excavation Area. Within the settling ponds, the fines would settle out and the remaining water would be decanted to a 3- to 5-acre water supply pond in the southern end of the Northern Excavation Area. Only one settling pond would be in use at any given time, and the individual settling ponds would not exceed 5 acres in area.

2.4.11 *Surface Water Management*

The Western, Central, Southeastern, and Eastern Excavation Areas are located adjacent to Sand Creek but would be set back a minimum of 35 feet from the northern edge of the 100-year floodplain of Sand Creek. Additionally, the 100-year flood elevation is a minimum of 3 feet below the top of the channel adjacent to the proposed Excavation Areas. In general, mining of the Excavation Areas would create basins of internal drainage. Water from precipitation would collect ephemerally and/or seasonally on the floor and then infiltrate. A 3- to 5-acre water supply pond would be located in the Northern Excavation Area. It would be located on the southern end of the Northern Excavation Area and would encompass detention basin where stormwater runoff is currently captured for agricultural use. The remainder of the Northern Excavation Area would contain settling ponds. The water supply pond within the Northern Excavation Area would be retained throughout the mining operation. The existing agricultural drainage ditch north of the Plant Site would continue to flow into the Northern Excavation Area. Under existing conditions, the runoff from this drainage ditch would continue to be captured in the Northern Excavation Area.

Settling ponds and/or water supply ponds may also be located in the Central, Southeastern, and Eastern Excavation Areas, as needed (as indicated in Figure 7). Over time, as mining proceeds, the Northern Excavation Area settling ponds would be filled to at or near grade with unmarketable silts and clays. The grade would be relatively flat, similar to surrounding topography. When filled, the Northern Excavation Area would drain north. The remaining excavation areas would drain internally, or, if filled to grade from development of settling ponds, toward Sand Creek consistent with existing conditions. The grading and drainage during mining is shown in Figure 11.

The Plant Site would not be excavated. Rather, as described in the “Preparation of Plant Site” subsection under Section 2.4.2, above, a 6-inch to 1-foot-deep layer of engineered fill

would be placed on the Plant Site. Runoff from the Plant Site area would be directed to the south into the Central Excavation Area, potentially using ditches and berms, as necessary. The runoff directed into the Central Excavation Area would percolate into the coarse alluvial soils. Thus, there would be no offsite runoff from the Plant Site Area, including the impervious surfaces.

2.4.12 *Utilities and Solid Waste Management*

The following utilities would be necessary for the proposed project operations:

- **Power:** PG&E line power would be distributed to site facilities through connections to existing PG&E power lines along Cortina School Road. Natural gas would not be used by the project. A small propane-powered backup generator would be located by the office/scale house to allow loadout operations to continue in the event of a power outage.
- **Water:** Water would be provided to the Plant Site and mining operation from the water supply pond and the groundwater supply well located on parcel 018-250-030.
- **Potable Water:** Potable water would be brought to the site as bottled water.
- **Sewage:** The project would either install bathroom facilities with a septic system or would provide portable bathroom facilities throughout the site. Any portable bathroom facilities would be serviced weekly by a third-party provider.

It is anticipated that electrical power lines, slurry and water pipelines, and the proposed conveyor would be located above ground, with the exception of a 12-foot by 12-foot box culvert that would be constructed under Cortina School Road. These utilities would be routed through the culvert, as shown in Figure 10.

None of the existing aboveground and below ground utilities within the project site are anticipated to require relocation as part of the proposed project. Aboveground utilities (i.e. power poles and lines) are avoided through setbacks from these facilities and their existing heights exceed the height of the proposed equipment. The two underground PG&E gas pipelines would be crossed only once a driveway that meets PG&E requirements for the protection of the pipelines is installed, as described in the “Preparation of Plant Site” subsection under Section 2.4.2, above.

2.4.13 *Lighting*

Lighting would be installed within the Plant Site used for site security and safe operations. The lighting installed would meet the applicable lighting standards in Section 44-3.30 of the Colusa County Zoning Code. In particular, the lighting would be designed to confine illumination to the Plant Site by using only well-shielded fixtures and targeting

the direction of the light beam so that it points downward and so that no direct light falls outside the property line or into the public right-of-way (i.e., light trespass). Fixtures located higher than 6 feet above the ground shall have shielding that limits the angle of the cone of direct illumination to 60 degrees or less. Motion detectors and timers would be installed, where safe to do so, to dim or turn off lights when not needed.

The Excavation Areas would have portable hooded lights for use during early morning and evening operations. In addition, mobile equipment and haul trucks would utilize their headlights while onsite. The portable lights would be connected to the electricity powering the conveyors.

2.4.14 Project Duration

The project is seeking flexibility in annual exports to allow the proposed operation the ability to accommodate variability in regional construction project demand and is therefore proposing maximum annual exports of up to 2,000,000 tons per year. As shown in Table 2, at the maximum rate of production, the resources could be exhausted in as few as 5 years. At lower annual production, the project duration would be extended. The maximum proposed project duration is 30 years.

2.5 Reclamation Plan

2.5.1 Surface Mining and Reclamation Act

The Surface Mining and Reclamation Act (SMARA) (California Public Resources Code [PRC] Section 2710 et seq., Title 14 of the California Code of Regulations [CCR] Section 3500 et seq.) requires a reclamation plan to be submitted and approved for any mining in California occurring after January 1, 1976. "Reclamation" refers to the integrated procedure of land treatment designed to reduce water degradation, air pollution, harm to aquatic or wildlife habitats, flooding, erosion, and other negative impacts resulting from surface mining operations, encompassing surface effects linked to underground mines. The objective is to restore mined lands to a usable state easily adaptable for alternative land uses. (See PRC Section 2773.) The statute also provides for the encouragement of mineral production and conservation, taking into account values related to recreation, watershed, wildlife, range and forage, and aesthetic appreciation. (See PRC Section 2712.)

Pursuant to PRC Section 2772, a reclamation plan must include among other items: a description and plan for the type of surface mining operations conducted, including timing regarding completion of each segment planned to mine "so that reclamation can be initiated at the earliest possible time on those portions," and a description of the proposed use or potential uses of the mined lands after reclamation.

Overall, the reclamation plan must address backfilling and grading, erosion control, slope stability, water quality management, vegetation restoration, habitat restoration, and monitoring and reporting. (See PRC Sections 2733, 2756, 2772, and 2773; see also 14 CCR Sections 3502, 3503, 3703, 3704, 3705, 3706, 3710, and 3711.)

The Reclamation Plan for the proposed project is included as Appendix A of this Initial Study.

2.5.2 *Subsequent Property Use*

The proposed project reclamation plan and reclaimed topography for the proposed project is shown in Figure 13, “Reclamation Plan,” and in Figure 14, “Reclamation Plan Cross-Sections.”

Following the completion of mining and reclamation, the project site would be reclaimed to the following uses:

- The Plant Site would be reclaimed to prime agricultural land.
- The Western Excavation Area would be reclaimed to rangeland.
- The Central, Northern, Southeastern, and Eastern Excavation Areas would be reclaimed to open space.

The primary internal access roads would remain for post-mining land use access. Creation of wildlife habitat is not an objective of reclamation at this site. To the degree that wildlife uses the site, the reclaimed condition would be able to support similar species.

Reclamation would generally be aimed at a condition where mine slopes are stable and safe, surfaces are properly graded for stormwater runoff or detention and infiltration, and a vegetation cover is established that is effective in controlling erosion.

2.5.3 *Reclamation Phasing*

Reclamation of the Northern Excavation Area settling pond area would begin after the ponds are filled; the Northern Excavation Area water supply pond would be retained. Reclamation within the Western, Central, Southeastern, and Eastern Excavation Areas would be concurrent with mining operations. Growth of media placement and reseeding within these Excavation Areas would be able to commence once the final depth has been met and the area is no longer needed for mining operations. The areas reclaimed annually are expected to vary based on the annual rate of mining.

Upon completion of all mining activities, final reclamation would involve removal of equipment (e.g., Plant Site facilities, conveyors, water lines), final grading and

decompaction, and revegetation. Final reclamation is anticipated to occur over an approximately 6-month period.

2.5.4 *Revegetation*

Excavation Areas and General Site Revegetation Approach

The methods of preparing the Excavation Areas and other areas disturbed by mining (i.e., roads, conveyor alignments) for revegetation are described below.

- Where mining operations result in compacted soil, final grade surfaces would be decompacted by ripping on contour to 2-foot deep. Compacted final grade surfaces that are not ripped would be shallow disked on contour to 3 to 4 inches.
- Following decompaction, the mined surfaces would be covered with a minimum of 6-inches of salvaged soil and augmented by process fines and unmarketable fined-grained materials (generally silts and clays), as necessary.
- Fertilizers and soil amendments would be used if adequate revegetation cover is not observed in reclaimed surfaces.

Internal travel routes, access roads, or ramps that were specifically developed for mining and are unnecessary for postmining land uses and/or reclamation would be inspected for road-base materials and petroleum or lubricant spill residue. If present, this material would be removed before decompaction and revegetation.

Plant Site Revegetation Approach

As described in the Plant Site Soil Conservation Memorandum (Appendix C), covering and leaving the existing soils and horizonation in-place conserves soil function and productivity. The Plant Site reclamation would prepare the soils preserved in place for a return to agriculture (e.g., row crops or orchard production). First, the engineered fill would be removed. For row crops, the soils would then be ripped 30 inches in two directions to decompact the soil and to regenerate pore space after fallow while under the engineered fill. For orchards, the soils would be ripped 6 feet in two directions for decompaction. The soil would be seeded for erosion control with a goal of 70 percent cover if not immediately returned to production.

Revegetation Seed Mix

The goal for revegetation efforts is to establish a self-sustaining vegetation cover that would control erosion and prevent off-site sedimentation. Revegetation should be sufficient to stabilize the surface against the effects of long-term erosion and is designed to meet the post-mining land use goals of rangeland and open space suitable for agriculture-related uses.

The soils and vegetation on the site are not unique, and, as discussed in the Soils Field Assessment (Appendix B), the seedbank recovered from salvaged surface soils is expected to be adequate to quickly revegetate without amendment by fertilizing, irrigating or supplemental seeding. However, in areas where surface soils are supplemented with process fines and unmarketable fined-grained materials, supplemental seeding may be required. Based on the proposed open space and rangeland uses proposed for site reclamation, plants used on-site must have deep roots, tolerance to grazing, and/or annual growth habits. Therefore, disturbed areas would be revegetated with an upland-rangeland seed mix, with plants that typically occur in the northern Central Valley of California, with its Mediterranean climatic conditions of wet, cool (but highly variable) winters with extended hot and dry summers.

Irrigation

Revegetation would rely on the seedbank in salvaged soils and on the specified annual upland grazing mix consisting of annual species reliant upon rainfall. No shrub or tree plantings are specified that would potentially require irrigation.

2.5.5 *Post-Closure Site Maintenance Operations*

At the completion of mining and reclamation activities, the operator would obtain site closure. The maintenance of the property would revert back to the property owners.

2.6 Permits and Approvals

2.6.1 *Colusa County Approvals*

It is anticipated that an Initial Study/Mitigated Negative Declaration will provide environmental review for all discretionary approvals and actions necessary for this project. As lead agency for the proposed project, the County is primarily responsible for the approval of the conditional use permit and reclamation plan for the proposed project. As part of any approval action for the project, the County would be required to issue a Negative Declaration and adopt a Mitigation Monitoring and Reporting Program (MMRP). In Colusa County, the County Planning Commission is the approval authority for the Major Conditional Use Permit (CUP), the Reclamation Plan, and its associated Financial Assurance Mechanism. The Financial Assurance Mechanism is necessary to ensure that the County has adequate funds on hand so that the proposed reclamation can be completed as defined in the reclamation plan. These approvals are appealable to the County Board of Supervisors.

Development of certain equipment and infrastructure would require ministerial permits for Colusa County. The driveway to access the Plant Site would require an encroachment permit from the Colusa County Public Works Department. The aggregate processing

plant would require a building permit from the Colusa County Community Development Department. The culvert crossing underneath Cortina School Road would require both a building permit and encroachment permit. A septic system (if portable bathroom facilities are not used) would require a site evaluation review followed by a sewage disposal system permit for the Colusa County Community Development Department.

2.6.2 *Other Potential Permits and Approvals*

In addition to County approval, other permits and approvals would be required before the changes in operation at the project site could proceed. The other agencies whose approval may be required include:

- CCAPCD (Authority to Construct and Permit to Operate for new aggregate plant);
- Central Valley RWQCB (Construction General Permit and/or Industrial General Permit under NPDES program; Application/Report of Waste Discharge);
- California Department of Conservation, Division of Mine Reclamation (review of reclamation plan and Financial Assurance Estimate and Mechanism).

3. INITIAL STUDY CHECKLIST

Environmental Factors Potentially Affected

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

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

Determination (To be completed by the Lead Agency)

On the basis of this initial evaluation:

☐	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
☐	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made 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.

Signature

Date

Evaluation of Environmental Impacts

- 1) A brief explanation is required for all answers except "no impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "no impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "no impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must account for the whole action involved, including impacts that are off-site and on-site, cumulative and project level, indirect and direct, and construction and operational.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially significant impact" is appropriate if substantial evidence exists that an effect may be significant. If one or more "potentially significant impact" entries exist when the determination is made, an EIR is required.
- 4) "Negative declaration: less than significant with mitigation incorporated" applies where the incorporation of mitigation measures has reduced an effect from "potentially significant impact" to a "less than significant impact." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less-than-significant level. (Mitigation measures from "earlier analyses," as described in point 5 below, may be cross-referenced.)
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (CEQA Guidelines Section 15063[c][3][D]). In this case, a brief discussion should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are "less than significant with mitigation measures incorporated," describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

- 6) Lead agencies are encouraged to incorporate into the checklist references information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
 - a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significance.

3.1 Aesthetics

<i>Except as provided in Public Resources Code Section 21099, would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views (i.e., from a publicly accessible vantage point) of the site and its surroundings? In urbanized areas, would the project conflict with applicable zoning or other regulations governing scenic quality?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Discussion

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

No Impact. The project site is not visible from any State or locally designated scenic vistas. Therefore, the project would have no impact on scenic vistas.

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

No Impact. The California Scenic Highway Program protects state highways that provide outstanding scenic views. According to the California Department of Transportation (Caltrans 2026), State Routes 16 and 20 in southwestern Colusa County are eligible for designation as state scenic highways. The project site is not visible from these highways, which are located 11 and 10 miles (respectively) from the project site. Therefore, the project would have no impact on scenic resources visible from a state scenic highway.

- c) *In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views (i.e., from a publicly accessible vantage point) of the site and its surroundings?*

Less than Significant Impact. The Open Space and Recreation Element of the *Colusa County General Plan* (Colusa County 2012) includes goals, objectives, and policies related to protecting the scenic beauty of the County. The *Public Draft Environmental Impact Report for the 2030 Colusa County General Plan Update* (SCH# 2011062052) (General Plan DEIR) (Colusa County 2011) describes the significant scenic resources found in the County. The project site is not located in the vicinity of any of the described scenic resources, with the exception of “agricultural lands.” The General Plan DEIR states that “While not a natural condition of the land, agricultural lands are perceived by many viewers as having a relatively high level of scenic value.” (Colusa County 2011: 3.1-4).

The project site is located in an agricultural area at the base of the foothills of the northern Coast Range in Colusa County. However, public views of the site and its vicinity are limited to views from adjacent rural roadways (i.e., Cortina School Road and Sand Creek Road), with no recreational facilities or other designated public viewing areas. Cortina School Road runs through the center of the project area, with the proposed Northern and Eastern Excavation Areas to the east and the proposed Plant Site to the west. Sand Creek Road parallels Sand Creek south of the Western and Central Excavation Areas. Both roads are rural roads with relatively low traffic volumes.

Foreground views of the project site from the nearest public roadways are characterized by a relatively flat landscape dominated by orchards, cultivated fields, and associated agricultural infrastructure such as outbuildings, tanks, fencing and roads. The Sand Creek channel, which runs adjacent to the site, provides a more open visual corridor, although areas surrounding the channel have been visibly disturbed by past mining activities and past illegal offroad vehicle use, as well as current activities related to agriculture, such as a soil amendment operation on the east side of Cortina School Road and a beekeeping operation on the west side of Cortina School Road. In the broader landscape, low rolling foothills rise to the west of the project site. The foothills are used for grazing and contribute to the rural agricultural character. Overall, the visual character of the site is dominated by the foreground landscape and reflects an intensively managed agricultural landscape with some existing disturbance from past land uses.

Across the excavation areas, the proposed project would not substantially alter existing foreground views beyond temporarily introducing equipment, trucks, and

stockpiles, and processing facilities—features consistent with the visual character of the working agricultural landscape. Furthermore, equipment used within the excavation areas would be minimal because conveyors would reduce the need for haul trucks, and operations would be largely screened by the walls of the excavations themselves. The Plant Site would contain the majority of project facilities, which would consist of a screening and wash plant; areas for stockpiles and truck loading; an access road to Cortina School Road; a scalehouse with office and truck scale; bathroom facilities (with a septic system or portables); a fuel storage area; and a shop for minor equipment maintenance. The size and scale of these features (the tallest structure, the screening and wash plant, would be up to 40 feet tall) would be comparable to agricultural processing facilities found throughout the County. In addition, the Plant Site location is such that existing orchards located between the Plant Site and Cortina School Road would screen views of the Plant Site for travelers heading south on Cortina School Road. Plant site facilities would be visible briefly to travelers heading north on Cortina School Road as they cross the more open visual corridor created by Sand Creek. However, the road is a rural road, and the facilities are consistent with agricultural processing facilities that occur throughout the County. Therefore, the potential for the operation of the proposed project to substantially degrade the existing visual character or quality of public views would be less than significant.

Upon completion of mining activities, all equipment, structures, and stockpiles would be removed, and the land would be reclaimed to prime farmland, rangeland, and open space. Therefore, the impact to the visual character or quality of views would be less than significant.

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

Less than Significant Impact. The project site is located in a rural agricultural area with low levels of existing lighting or glare. Lighting occurs primarily from equipment used in agricultural operations, at agricultural processing facilities, and at scattered rural residences; there are no streetlights in the vicinity. Existing structures and equipment are not a substantial source of glare. Overall, the site and surrounding landscape experience limited artificial illumination typical of rural agricultural areas.

The Colusa County General Plan (Policy OSR 1-14) calls for reducing light and glare in open space and agricultural areas to preserve the County's rural character. In addition, Section 44.3.30 of the Colusa County Code "...establishes minimum requirements for outdoor lighting in order to reduce light trespass, reduce glare,

improve and maintain views of the night sky, and to protect the health, property and well-being of Colusa County residents and visitors.”

The structures and equipment used during project operations would be similar to those that occur on agricultural lands and processing facilities and would not be a substantial source of glare. The project would require lighting. As described in Section 2.4.13, lighting would be installed within the Plant Site used for site security and safety. The lighting installed would meet the applicable lighting standards in Section 44-3.30 of the Colusa County Zoning Code. The Excavation Areas would utilize portable hooded lights as needed during early morning and evening operations. The use of these lights would be limited to the area of active excavation at any given time. Mobile equipment and haul trucks would use headlights while onsite.

While the new lighting would increase illumination relative to existing conditions at the project site, it would not introduce nighttime lighting beyond what is typical of existing agricultural processing facilities and operations within the County. Furthermore, the nearest residences are located at least a quarter mile from the project site, and, at these distances, the lighting would be distant and largely shielded by intervening orchards and natural vegetation. For these reasons, the potential of the operation of the proposed project to create a new source of substantial light or glare that would adversely affect day or nighttime views in the area and would be less than significant.

Upon completion of mining activities, all equipment, structures, and stockpiles would be removed, and the land would be reclaimed to prime farmland, rangeland, and open space suitable for agriculture-related uses, consistent with existing land uses. Therefore, there would be no sources of light or glare on the project site beyond those existing under current conditions, and there would be no impact.

3.2 Agriculture and Forestry Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection (CAL FIRE) regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board (CARB).

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

Discussion

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

Less than Significant Impact. The California Department of Conservation Farmland Mapping and Monitoring Program indicates that the project site contains approximately 22 acres of Prime Farmland and 0.1-acre of Unique Farmland (California Department of Conservation 2025). As shown in Figure 8 and Figure 9, Prime Farmland occurs within the location of the proposed Plant Site and corresponds with the Arbuckle sandy loam and Westfan gravelly loam soil series. Unique Farmland is located in the proposed conveyor alignment that would be used to transport materials between the Plant Site and the areas east of Cortina School Road.

With regard to the 0.1 acres of Unique Farmland, the conveyor would rest on top of the soil surface and the soils would be largely undisturbed, except in a limited area where excavation would occur to facilitate development of a crossing underneath Cortina School Road. Upon completion of reclamation, the excavated area would be backfilled and reclaimed to agricultural use. With regard to the 22 acres of Prime Farmland, the proposed project would develop the Plant Site with a processing plant, access road, scale house, shop, and stockpiles. However, soils on the Plant Site would be conserved as described in the Plant Site Soil Conservation Memorandum (Appendix C), which is summarized in the “Preparation of Plant Site” subsection of Section 2.4.2, above, and the “Plant Site Revegetation Approach” subsection of Section 2.5.4, above. As specified in the project Reclamation Plan and consistent with the recommendations in the Plant Soils Conservation Memorandum, the project would implement a soil management approach in which Prime Farmland soils at the Plant Site would be preserved in place. To accomplish this, as a component of initial development of the Plant Site, a 6-inch to 1-foot-deep layer of engineered fill composed of fine-textured materials would be placed on the Plant Site to protect the underlying soil. Following completion of mining and processing operations and after removal of structures and equipment from the Plant Site, the engineered fill would be removed and the underlying soil decompacted. . This method would preserve soil horization and structure, allowing for rapid regeneration of soil biological activity and moisture retention capacity once the protective cover is removed. This approach would restore agricultural soil function and prevent permanent loss of productivity of Prime Farmland soils at the Plant Site. Therefore, the project would not permanently convert Prime Farmland to non-agricultural use, and this impact would be less than significant.

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

Less than Significant Impact. As shown in Table 1, the Colusa County General Plan designates the project site as Agricultural General (AG), and the site is zoned Exclusive Agriculture (E-A). The site includes areas historically used for orchard and dryland farming, as well as previously disturbed areas such as the Sand Creek Gravel Pit. These designations identify areas intended to support agricultural production and related uses compatible with agriculture. Under the Colusa County Zoning Code, mineral resources recovery is a conditionally permitted use within the Exclusive Agriculture (E-A) Zone. With approval of the requested Conditional Use Permit and Reclamation Plan, the project would be consistent with applicable land use designations and zoning requirements. The project site is not under a Williamson Act contract. Therefore, impacts related to agricultural zoning or Williamson Act contracts would be less than significant.

- c) Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 1104(g))?*

No Impact. As shown in Table 1, the project site is designated as Agricultural General (AG) by the Colusa County General Plan and zoned Exclusive Agriculture (E-A). These designations allow agricultural and compatible uses but do not include forest land or timberland. The project site and surrounding area are not located on or adjacent to lands zoned or managed for timber production. The site is currently used for agricultural purposes and does not contain forest resources. Because the project would not occur on or rezone land designated or managed as forest land or timberland, no impact would occur.

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

No Impact. As described under Checklist Question (c) above, the site is zoned and currently used for agricultural purposes and does not contain forest land. Therefore, no impact from the loss or conversion of forest land would occur.

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

Less than Significant Impact. The project footprint occurs on rangeland and agricultural land, and is surrounded by rangeland and agricultural lands; no forest

land or timberland is present on-site. The project would construct water lines and roads and extend electricity to the Plant Site; however, upon completion of mining operations, all infrastructure, with the exception of infrastructure that would support continued agricultural use of the site (i.e., water supply pond and some internal roads) would be removed during final reclamation and thus would not induce the development of non-agricultural land uses. Agricultural activities on surrounding lands would be able to continue concurrent with proposed project operations both during mining and after reclamation. Upon completion of mining operations, the site would be reclaimed to prime farmland, rangeland, and open space suitable for agriculture-related uses, consistent with existing land uses. For these reasons, the potential of the proposed project to involve changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use would be less than significant.

3.3 Air Quality

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Conflict with, or obstruct implementation of, the applicable air quality plan?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Discussion

The following evaluation is based on the *Air Quality, Greenhouse Gas, and Energy Analysis* (Air Quality Analysis) prepared by Baseline Environmental Consulting (Baseline 2025) and included as Appendix E of this Initial Study.

The project site is located within the Sacramento Valley Air Basin, which encompasses several counties, including Butte, Colusa, Glenn, parts of Placer and Solano, Sacramento, Shasta, Sutter, Tehama, Yolo, and Yuba. The Sacramento Valley Air Basin includes multiple air districts, and the project site lies within the jurisdiction of the CCAPCD. Air basins have characteristics that influence the ability of natural processes to dilute or transport air pollutants. The primary determinants of air pollution transport and dilution include climatic and topographic factors such as wind patterns, atmospheric stability, and terrain. In addition, solar radiation can drive chemical reactions that transform primary pollutants into secondary photochemical pollutants.

Colusa County is located in the northern portion of the Sacramento Valley (Northern Sacramento Valley), which is bordered by the Coast Range to the north and west and by the southern Cascade and northern Sierra Nevada Mountains to the east. These

surrounding mountains act as natural barriers, trapping locally generated pollution as well as pollutants transported northward into the Sacramento Valley Air Basin from the broader Sacramento area and the San Francisco Bay Area. Temperature inversions occur in the Northern Sacramento Valley during all seasons, preventing vertical dilution of and increasing pollution concentrations at or near the ground. The region experiences a relatively uniform climate, particularly across the valley floor where most of the population resides. Summers are typically dry and hot, while most of the precipitation occurs between December and March. Prevailing winds are from the south.

The CCAPCD has not adopted any guidelines or thresholds of significance for CEQA analysis. Therefore, the thresholds established by the Tehama County Air Pollution Control District (TCAPCD 2015), which is also located in the Northern Sacramento Valley, are used to evaluate the project's potential air quality impacts.

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

Less than Significant Impact. Air quality in California is regulated under the Federal and California Clean Air Acts, which establish ambient air quality standards for criteria air pollutants to protect public health and welfare. The state and Federal air quality standards are referred to as the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality standards (CAAQS), respectively. Criteria air pollutants are ozone (O₃), particulate matter (PM₁₀ and PM_{2.5}; particles with diameters less than 10 and 2.5 microns, respectively), nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂) and lead. Near the Earth's surface, ozone is a secondary pollutant formed through atmospheric reactions between reactive organic gases (ROG) and nitrogen oxides (NO_x), which are referred to as ozone precursors.

In accordance with the California Clean Air Act, air districts are required to prepare and update air quality plans that outline measures by which both stationary and mobile sources of pollutants can be controlled to achieve the NAAQS and CAAQS. The 2024 Northern Sacramento Valley Triennial Air Quality Attainment Plan (2024 Air Quality Plan) is the applicable air quality plan for the projects located in the Northern Sacramento Valley Planning Area, which includes Colusa County (Sacramento Valley Air Quality Engineering and Enforcement Professionals 2024). The 2024 Air Quality Plan evaluates progress toward achieving the NAAQS and CAAQS and outlines a range of control measures for both stationary and non-stationary sources. Colusa County is designated as a state non-attainment area for PM₁₀ and as attainment or unclassified for all other criteria pollutants. Glenn and Colusa Counties are in attainment for ozone but continue to participate in the regional effort to reduce emissions of ozone precursors (ROG and NO_x). The proposed project

would result in a significant impact if the project operation would result in emissions of PM₁₀, ROG, and NO_x at a level that would conflict with, or obstruct implementation of, the 2024 Air Quality Plan.

As noted above, TCAPCD thresholds of significance are used in this analysis to evaluate potential air quality impacts. These thresholds of significance are designed to ensure a project does not substantially contribute to an existing or future violation of the NAAQS and CAAQS. TCAPCD thresholds of significance for PM₁₀, ROG, and NO_x are 137 pounds per day for each pollutant. Based on the results of the Air Quality Analysis (Appendix E), which are presented under Checklist Question (b) below, even at the maximum production scenario of 2 million tons per year, the project's emission of PM₁₀, ROG, and NO_x would be below the applicable thresholds of significance. Furthermore, the emissions are estimated for the maximum production scenario, which is short term and would end after an approximately 5-year duration. Air quality plans are intended to achieve long-term reductions in criteria air pollutants; thus, a short-term project would not be a source of emissions that would have the potential to conflict with the long-term goals of an air quality plan. Because the maximum project emissions would be below significance thresholds and short-term, the potential of project operations to result in a considerable net increase in criteria air pollutant emissions such that the project would conflict with or obstruct implementation of the applicable air quality plan would be less than significant.

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

Less than Significant Impact. The project would generate criteria air pollutants from the operation of off-road equipment (exhaust and dust); on-road vehicle exhaust and dust; unpaved and paved road dust; aggregate dust from conveyor transport and aggregate processing; and stockpile erosion. A detailed evaluation of the estimated average daily emissions of criteria air pollutants for the proposed project under a maximum production scenario of 2,000,000 tons per year, is provided in the Air Quality Analysis (see Appendix E). A summary of the project's estimated emissions is presented below in Table 4, "Estimated Average Daily Criteria Air Pollutant and Precursor Emissions."

TABLE 4
ESTIMATED AVERAGE DAILY CRITERIA AIR POLLUTANT AND PRECURSOR EMISSIONS

Year	ROG (lbs/day)	NO _x (lbs/day)	PM ₁₀ (lbs/day)
2025	2.9	113	91
2026	2.7	110	89
2027	2.7	110	88
2028	2.7	110	88
2029	2.8	110	91
2030	2.8	110	94
TCAPCD Thresholds	137	137	137
Threshold Exceeded?	No	No	No

Source: Baseline Environmental Consulting 2025 (Appendix E – Table 3).

Notes: lbs/day = pounds per day; TCAPCD = Tehama County Air Pollution Control District

The Air Quality Analysis conservatively assumed that all off-road equipment would operate on conventional petroleum diesel fuel. Although not required as mitigation because the impact would be less than significant even with the use of conventional petroleum diesel fuel, as described in Section 2.4.9, above, the operator would use biodiesel or renewable diesel fuel for off-road diesel equipment, in compliance with the In-Use Off-Road Diesel-Fueled Fleets Regulation (Cal. Code Regs., tit. 13, §§ 2449 et seq.). Compared to conventional petroleum diesel, the renewable fuel generates lower PM₁₀ and NO_x emissions than conventional petroleum diesel fuel. Therefore, the actual project emissions would likely be lower than those presented in Table 4.

The thresholds of significance used in this analysis are based on the TCAPCD thresholds for PM₁₀ and ozone precursors (ROG and NO_x). The TCAPCD defines three levels of thresholds (A, B, and C) to determine the significance of impacts and type of environmental analysis recommended. If a project's estimated emissions exceed the Level C thresholds, then the long-term emissions from a project are considered significant and an environmental impact report (EIR) should be prepared. The Level C thresholds of 137 pounds per day for PM₁₀, ROG, and NO_x are used in this analysis.

As shown in Table 4, the net increases in emissions of PM₁₀, ROG, and NO_x from project operations would not exceed the thresholds of significance. In addition, these emissions would be short-term, as production at the maximum proposed 2 million tons per year would end after an approximately 5-year duration. After the completion of mining, the project site would be reclaimed to prime farmland, rangeland, and open space suitable for agriculture-related uses, consistent with existing land uses. Therefore, the reclaimed land uses would not increase emissions of criteria air pollutants relative to existing conditions. For these reasons, the potential of the

proposed project to result in a cumulatively considerable net increase of criteria air pollutant emissions would be less than significant.

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

Less than Significant Impact. Sensitive receptors are locations where individuals may be more susceptible to the effects of air pollution, including residences, schools, hospitals, and care facilities. The nearest sensitive receptors include three single-family residences, which are shown in Figure 15, “Sensitive Receptors Near the Project Site.” Additionally, several residences are located along the haul route, as close as approximately 60 feet from the roadway.

Potential localized air pollutants that could affect sensitive receptors include criteria air pollutants, carbon monoxide (CO), toxic air contaminants (TACs), naturally occurring asbestos, and valley fever spores. Each of these pollutants is discussed below.

Criteria Air Pollutants

Criteria air pollutants, as defined under Checklist Question (b) above, are the most prevalent air pollutants known to be harmful to human health based on extensive criteria documents, they are referred to as criteria air pollutants. Air districts typically use regional air dispersion models to estimate pollution concentrations of criteria air pollutants. However, these models are not sensitive enough to detect small changes in pollutant concentrations from individual projects. As a result, estimating site-specific health risks from project emissions is not feasible and would be speculative (South Coast Air Quality Management District Amicus Curiae 2018; San Joaquin Valley Unified Air Pollution Control District Amicus Curiae 2018). Furthermore, NAAQS and CAAQS are intended to incorporate an adequate margin of safety to protect the public health and welfare. Therefore, attainment of the ambient air quality standards is considered protective of public health.

As discussed under Checklist Questions (a) and (b), above, the project’s operations are not expected to generate concentrations of criteria pollutants that would conflict with or obstruct the implementation of the applicable air quality plan or result in a cumulatively considerable net increase in criteria air pollutant emissions. Therefore, the potential of the proposed project to expose sensitive receptors to substantial concentrations of criteria air pollutants would be less than significant.

Carbon Monoxide

Carbon monoxide is an odorless, colorless gas produced by the incomplete combustion of fossil fuels. When inhaled, CO combines with hemoglobin in the blood;

this reduces oxygen-carrying capacity and thereby limits oxygen delivery to organs and tissues. This condition is particularly hazardous for fetuses or individuals with cardiovascular or chronic lung diseases or anemia, though elevated CO levels can adversely affect anyone, causing symptoms such as headaches, dizziness, fatigue, loss of consciousness, or even death.

Localized CO “hot spots” typically occur at heavily congested intersections where traffic volumes exceed approximately 44,000 vehicles per hour. The project would generate approximately 614 truck trips and 24 worker commute trips during a 14-hour workday, resulting in an average of about 46 trips per hour. This is well below the screening criteria for potential CO hot spots. Therefore, the proposed project would not expose nearby receptors to substantial CO concentrations and this impact would be less than significant.

Toxic Air Contaminants

TACs are pollutants known or suspected of causing cancer or other serious health effects. TACs are not subject to ambient air quality standards but are regulated through state and local risk management programs.

Project operation would generate TACs as Diesel Particulate Matter (DPM) from diesel-powered equipment and on-site haul trucks. Emissions of DPM generated from the exhaust of diesel-powered engines are a complex mixture of soot, ash particulates, metallic abrasion particles, volatile organic compounds, and other components that can penetrate deeply into the lungs and contribute to a range of health problems. In 1998, CARB identified DPM from diesel-powered engines as a TAC based on its potential to cause cancer and other adverse health effects (CARB 1998). While diesel exhaust is a complex mixture that includes hundreds of individual constituents, DPM is used as a surrogate measure of exposure under California regulatory guidelines for the mixture of chemicals that make up diesel exhaust as a whole. Long-term exposure to DPM can pose cancer risks and respiratory effects, particularly for sensitive populations such as children, elderly, and individuals with pre-existing respiratory or cardiovascular conditions.

Unlike criteria air pollutants, which generally affect regional air quality, TACs are evaluated based on estimations of localized concentrations and risk assessments. Health risk assessments are used to estimate the potential for health impacts from TAC emissions. In these assessments, TACs are classified as carcinogens and non-carcinogens. Carcinogens are assumed to have no safe exposure threshold, and cancer risk is expressed as excess cancer cases per one million exposed individuals over a lifetime of exposure. Non-carcinogens are generally assumed to have a safe exposure

threshold, and potential impacts are expressed using a Chronic Hazard Index, which is the sum of expected exposure levels divided by the corresponding acceptable exposure levels.

The CCAPCD has not adopted thresholds for TAC health risks; therefore, the Air Quality Analysis applied the CARB/California Air Pollution Control Officers Association (CARB/CAPCOA) (2015) risk assessment guidance. A Chronic Hazard Index greater than 1.0 or a cancer risk of greater than 10.0 indicates that exposure exceeds health-based thresholds.

The Air Quality Analysis (Appendix E) includes a health risk assessment that estimates the incremental increase in cancer risk and Chronic Hazard Index to existing sensitive receptors (i.e., sensitive receptors indicated in Figure 15 and located along haul routes) from exposure to DPM emissions. Based on the annual average concentrations of DPM estimated using the air dispersion model, the maximally exposed individual resident in the project vicinity (Project MEIR) is located about 1,365 feet northwest of the Plant Site's western boundary (See R1 on Figure 15). The maximally exposed individual resident along the haul route (Haul Route MEIR) was conservatively assumed to be located within 50 feet of the haul route. The modeling results, presented in Table 5, "Health Risks from Exposure to Diesel Particulate Matter," indicate that cancer risk and Chronic Hazard Index values for the Project MEIR and Haul Route MEIR would be below significance thresholds. Accordingly, the potential of the proposed project to expose sensitive receptors to substantial concentrations of TACs would be less than significant.

TABLE 5
HEALTH RISKS FROM EXPOSURE TO DIESEL PARTICULATE MATTER

Exposure Scenario	Cancer Risk (per million)	Chronic Hazard Index
Project MEIR (R1 in Figure 15)	0.50	<0.01
Haul Route MEIR (50 feet away from haul route)	1.79	<0.01
CARB/CAPCOA Thresholds	10.0	1.0
Threshold Exceeded?	No	No

Source: Baseline Environmental Consulting 2025 (Appendix E – Table 4).

Notes: CARB = California Air Resources Board; CAPCOA = California Air Pollution Control Officers Association; Project MEIR = maximally exposed individual resident; Haul Route MEIR = maximally exposed individual resident along the haul route.

Receptor R1 location is shown in Figure 15.

Naturally Occurring Asbestos

Asbestos refers to a group of naturally occurring fibrous silicate minerals, with chrysotile asbestos being the most common type found in California. Chrysotile asbestos is often present in serpentine rock, which, along with its parent material ultramafic rock, occurs abundantly in the Sierra Nevada foothills, Klamath Mountains, and Coast Ranges.

The release of asbestos fibers can occur when ultramafic or serpentine rocks are broken or crushed through activities such as grading, excavation, construction, quarrying, or vehicle travel on unpaved road surfaced with these materials. Natural processes like weathering and erosion can also contribute to asbestos release. Once released, asbestos fibers can become airborne and remain suspended for extended periods, posing potential health risks when inhaled.

A *Naturally Occurring Asbestos Geologic Evaluation* was prepared for the proposed project by ENGEO (ENGEO 2025b) and is included as Appendix F of this Initial Study. The geologic evaluation did not identify any deposits of ultramafic or serpentine rock, nor any known occurrences of naturally occurring asbestos, at or near the project site. Therefore, the potential for the proposed project to expose people naturally occurring asbestos is less than significant.

Valley Fever

Disturbance of dry soils can release spores of *Coccidioides*, which cause valley fever. As discussed in the Air Quality Analysis (Appendix E), Colusa County has a low incidence rate (seven cases between 2018 and 2022). Dust suppression measures, including water application on haul roads, would minimize fugitive dust on roads. Additionally, soil moisture samples collected from the project site indicate that excavated materials would be relatively wet, with moisture content ranging from approximately 9 to 12 percent (M.T. Hall & Associates 2024). Given the low regional incidence of valley fever, dust control practices, and relatively high moisture content of the excavated materials, the potential of the proposed project to expose people to substantial concentrations of *Coccidioides* spores capable of causing valley fever would be less than significant.

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

Less than Significant Impact. The proposed mining operations would not involve the use, storage, or processing of materials known to generate odors. Equipment exhaust and fugitive dust may produce temporary, localized emissions, but exhaust from diesel-powered equipment dissipates rapidly with distance and would not create

persistent or substantial odors. Additionally, the project site is surrounded by open space and agricultural land uses with low population density, further minimizing the potential for odors to affect a substantial number of people. Therefore, the potential of the proposed project to result in odors that could adversely affect a substantial number of people would be less than significant.

3-4 Biological Resources

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

Discussion

The following evaluation is based on the *Biological Resources Technical Report for the Westside Aggregates Quarry* (Biological Resources Report) prepared by WRA Environmental Consultants (WRA 2025) and included as Appendix G of this Initial Study.

In preparing the Biological Resources Report, WRA biologists first reviewed literature resources and performed database searches to assess the potential for sensitive land cover types and special-status species within a 300-acre study area that encompasses the project site. The project site and study area are shown on Figure 16, “Land Cover and Biological Resources.” WRA biologists visited the study area on May 18, May 23, and July 13, 2023, and on April 5, May 22, and August 1, 2024, to map vegetation, aquatic features, and other land cover types; document plant and wildlife species present; evaluate on-site habitat for the potential to support special-status species as defined by CEQA; and conduct protocol-level special-status plant surveys.

Based on the results of the initial surveys, focused special-status wildlife surveys were conducted in 2025 to assess the presence of three of the nine special-status wildlife species with the potential to occur onsite: Burrowing owl (*Athene cunicularia*), Swainson’s hawk (*Buteo swainsoni*), and Crotch’s bumble bee (*Bombus crotchii*).

Detailed methodology is presented in Section 3.0 of the Biological Resources Report (Appendix G).

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

Less than Significant Impact with Mitigation Incorporated. The potential for special-status species to occur in the study area was determined by qualified biologists based on literature review, field assessment, and professional judgement. Likelihood categories (ranging from No Potential to Present) were defined consistent with standard biological assessment terminology and are presented in the Biological Resources Report (Appendix G).

Special-Status Plants

The literature review and database search identified 41 special-status plant species with the potential to occur in the study area. Of these, 10 special-status plants were determined to have a moderate to high potential to occur in the study area based on the suitability of habitat types. Protocol-level surveys of special-status plants were

conducted by WRA botanists on May 18 and 23 and July 13, 2023, and on April 5, May 22, and August 1, 2024 during the periods of time when those species would have been evident and identifiable. Two of the 10 special-status plant species with the potential to occur in the study area were identified during the surveys: Shining navarretia (*Navarretia nigelliformis* ssp. *radians*) and pappose tarplant (*Centromadia parryi* ssp. *parryi*). The locations of the observed shining navarretia and pappose tarplant are shown in Figure 17, "Special-Status Plant Species," and the species characteristics are described below.

- **Shining navarretia** is an annual herb in the phlox family (Polemoniaceae) that blooms from March to July. It typically occurs on clay substrate in cismontane woodland, valley and foothill grassland, and vernal pool habitats at elevations ranging from 215 to 3,280 feet.

Approximately 5,163 shining navarretia individuals were observed in bloom in the study area, of which 924 of these were located within the boundaries of the project site. The occurrence within the project site primarily overlaps with the Western Excavation Area, as shown in Figure 17.

- **Pappose tarplant** is an annual herb in the sunflower family (Asteraceae) that blooms from May to November. It typically occurs in vernal mesic, often alkaline areas in coastal prairie, meadow, seep, coastal salt marsh, and valley and foothill grassland habitat at elevations ranging from 5 to 1,380 feet.

Approximately 210 pappose tarplant individuals were observed in early bloom in the study area, all of which were also located within the project site on the upper fringes of the detention basin in the North Excavation Area, as shown in Figure 17.

Both species have a Rank of 1B.2, which indicates that the species are rare, threatened, or endangered in California and elsewhere, with a moderate degree of threat in California, meaning an estimated 20 to 80 percent of occurrences threatened.

The project would impact 924 shining navarretia and 210 pappose tarplant individuals through vegetation removal, grading, excavation, and other ground-disturbing activities. Avoidance of the plants is not feasible because project mining locations are driven by aggregate location and quality and significant reserves would be lost under an avoidance approach.

Mitigation Measure BIO-1 requires a mitigation plan to be developed by the operator and approved by the County prior to the commencement of activities that would replace the plants on the project site or elsewhere.

Mitigation Measure BIO-1: Special-Status Plants

The operator shall prepare a mitigation plan that specifies measures to mitigate for the loss of 924 shining navarretia individuals and 210 pappose tarplant individuals at a 1:1 ratio through revegetation or other actions in lieu of direct revegetation. The mitigation plan shall be reviewed and approved by the County prior to the commencement of activities that would impact the special-status plant species which occur within the project site. The mitigation plan shall include some combination of the following: purchase of credits from a mitigation bank approved for special-status plants; payment of in-lieu fees to a public agency or conservation organization (e.g., a local land trust); preservation and management of existing populations; salvaging and storing topsoil; and/or seed collection from perennial species prior to initiation of grading or other ground-disturbing activities. If topsoil salvage and/or seed collection are selected as mitigation, seed collected from perennial plants (pappose tarplant) and salvaged top soil with annual seedbank (shining navarretia) may be stored for future revegetation implementation or donated to an approved seed bank such as the California Botanical Garden (<https://www.calbg.org/conservation/seed-conservation>), as feasible.

The implementation of **Mitigation Measure BIO-1** would reduce potential impacts to special-status plant populations to a less-than-significant level.

Special-Status Wildlife

The literature review and database search identified 25 special-status wildlife species documented in the vicinity of the study area. Of these, 16 species were determined to have no potential or to be unlikely to occur within the study area due to absence of necessary habitat, critical resources, or location outside the species' documented range.

Nine special-status wildlife species were identified as present or as having a moderate or high potential to occur in the study area: American badger (*Taxidea taxus*); Burrowing owl (*Athene cunicularia*); Swainson's hawk (*Buteo swainsoni*); Western spadefoot (*Spea hammondi*); Crotch's bumble bee (*Bombus crotchii*); Pallid bat (*Antrozous pallidus*); Golden eagle (*Aquila chrysaetos*); White-tailed kite (*Elanus leucurus*); and Northwestern Pond Turtle (*Actinemys marmorata*).

These species, as well as nesting birds and roosting bats, are discussed in greater detail below. As discussed below, some species are candidates for or designated as threatened by the Federal Endangered Species Act (ESA), or the California Endangered Species Act (CESA). Specific protections and permitting mechanisms for these species differ under each of these acts, and a species' designation under one law does not automatically provide protection under the other.

American badger

American badger is a State Species of Special Concern and is afforded protection under CEQA. The study area contains rolling grassland with friable soils that may provide suitable foraging and denning habitat. No badgers or large characteristic burrows were observed during site visits, but there is moderate potential for the species to occur.

Ground-disturbing activities associated with the project could result in the destruction of dens or injury or mortality to individual badgers if occupied dens are present. To address these potential impacts, Mitigation Measure BIO-2 requires a qualified biologist to conduct pre-activity surveys prior to the initiation of ground disturbing activities in a new area, and the implementation of appropriate measures to avoid harm should an occupied badger den be identified.

Mitigation Measure BIO-2: American Badger

Within 48-hours prior to the initiation of ground disturbance within areas of undisturbed suitable habitat, a qualified biologist shall conduct a pre-activity survey for American badger and suitable dens. Surveys shall be conducted regardless of the time of year. The survey area shall include the footprint where ground disturbance is planned and a 200-foot surrounding buffer, to the extent access is feasible and suitable habitat is present. If occupied badger dens are found on or adjacent to the footprint of the planned work area and avoidance is not feasible, mining activities shall not proceed within 200 feet until an appropriate course of action can be determined. This may include maintaining the buffer and monitoring the burrow until the badger leaves of its own accord or could include badger relocation in accordance with CDFW-approved methodology.

Implementation of **Mitigation Measure BIO-2** would reduce potential impacts to American badger to a **less-than-significant level**.

Burrowing owl

The burrowing owl is a CESA candidate species and California Department of Fish and Wildlife (CDFW) Species of Special Concern and is afforded protection under CEQA. The study area contains open grassland and rodent burrows that may provide suitable breeding and foraging habitat. No burrowing owl individuals were observed during the habitat assessment in May 2024. Additionally, WRA performed focused surveys for burrowing owl in June and July 2025 and found no presence, or indication of presence of this species, and identified several ecological factors that may preclude burrowing owl presence (e.g., limited number of refugia sites within the study area and relatively high degree of raptor activity and presence of other predators).

While it is unlikely that burrowing owl are present at any point of the year within the study area, the focused surveys performed by WRA in 2025 do not meet the standard for the full protocol, and for the purposes of CEQA analysis, presence cannot be entirely ruled out. Therefore, project ground-disturbing activities would have the potential to impact burrowing owls, if present, through direct mortality of individuals, destruction of occupied burrows, or through noise and visual disturbance during the nesting season that could cause nest abandonment.

To address these potential impacts, Mitigation Measure BIO-3 requires a qualified biologist to conduct pre-activity surveys to the initiation of ground disturbing activities in a new area, and the implementation of appropriate measures should burrowing owls be detected.

Mitigation Measure BIO-3: Burrowing Owl

Prior to the initiation of ground disturbance within areas of undisturbed suitable habitat, a qualified biologist shall conduct a pre-activity survey for burrowing owls. Surveys shall be conducted regardless of the time of year, as burrowing owls may use burrows within the project area during the non-nesting season. The surveys shall be performed in accordance with the methods described in the CDFW 2012 Staff Report on Burrowing Owl Mitigation (CDFW 2012 Staff Report). Surveys shall encompass a sufficient buffer zone to detect owls nearby that may be impacted, which shall be a minimum of 300 feet, to the extent access is feasible and suitable habitat is present. The survey effort shall include an initial survey no less than 14 days prior to initiating ground disturbance activities and a final survey within 24 hours prior to ground disturbance and before construction equipment mobilizes to the Excavation Area, pursuant to the CDFW 2012 Staff Report guidelines for "Take Avoidance" surveys. If surveys determine burrowing owl are not present, no further actions are required.

If burrowing owls are detected, occupied burrows shall be avoided pursuant to the buffer zones recommended in the CDFW 2012 Staff Report. No ground disturbance shall occur within the buffer areas of the occupied burrows until it is determined that the owl is no longer present. If burrowing owl is formally listed and remains a candidate species under CESA, and nest/burrow sites cannot be avoided, and the project may result in take of burrowing owl, an Incidental Take Permit (ITP) pursuant to CFGS Section 2081 subdivision (b) will need to be obtained from the CDFW prior to activities that could result in take of burrowing owl, including any passive relocation. Any guidance or measures provided by CDFW during future consultation or permitting will take precedent over the measures included herein, should they differ.

Implementation of **Mitigation Measure BIO-3** would reduce potential impacts to burrowing owl to a less-than-significant level.

Swainson's hawk (*Buteo swainsoni*)

Swainson's hawk (*Buteo swainsoni*) is listed as a threatened species under CESA. The project site contains trees of suitable size for nesting as well as foraging habitat within non-native annual grasslands. A nearby active nest has been documented approximately 3 miles to the southeast, though the last confirmed nesting attempt at this location is from 2006, and is therefore not considered "recently active," defined by the CDFW as being active within the last 5 years.

WRA performed a focused survey for Swainson's hawk in 2025, consisting of six site visits between June and July following the general timing and methods in the Swainson's Hawk Technical Advisory Committee (2000). The survey found no active Swainson's hawk nests in the study area, or its immediate vicinity. Several Swainson's hawk were incidentally observed during the surveys, however none of the observed individuals had any ecological interactions with the study area itself.

While it is unlikely that Swainson's hawk are nesting within the study area, the focused surveys performed by WRA in 2025 do not meet the standard for the full protocol, and for the purposes of CEQA analysis, presence cannot be entirely ruled out. Therefore, project ground-disturbing activities would have the potential to impact Swainson's hawk, if present, through direct destruction of nests, disturbance leading to nest abandonment, and loss of foraging habitat.

To address these potential impacts, Mitigation Measure BIO-4 requires a qualified biologist to conduct pre-activity surveys prior to ground disturbing activities in a new area, and the implementation of appropriate measures should Swainson's hawk be detected.

Mitigation Measure BIO-4: Swainson's Hawk

Prior to the initiation of ground disturbance within or near areas of suitable habitat, a qualified biologist shall conduct protocol-level surveys for Swainson's hawk nest sites within 0.25 miles of the footprint where ground disturbance will occur. Surveys are not required for areas of the project that remain in continuous use, or are more than 0.25 miles from the nearest suitable nest tree.

The survey period timing and methodology shall be conducted in accordance with the Swainson's Hawk Technical Advisory Committee's Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley. To

meet the minimum level of protection for the species, six surveys should be completed during at least two survey periods prior to ground disturbance. If work is initiated during the non-nesting period, when Swainson's Hawks are on their wintering grounds, the initial survey should occur during the nesting season prior. Nesting surveys typically occur during Survey Period II (March 20 to April 5) and Survey Period III (April 5 to April 20). Surveys during Phases IV and V (April 21 to June 10 and June 10 to July 30) should be reserved only for identified nests.

If no active nests are found following the completion of the protocol-level surveys, then no further actions shall be required for the remainder of that nesting season. If an active nest is identified within 0.25 miles, if feasible, protective buffers shall be established and maintained until such time that the Swainson's hawks have completed their nesting cycle as determined by a qualified biologist. If not feasible to maintain the protective buffer, the mining operator shall obtain an Incidental Take Permit under Section 2081 subdivision (b) of CFGC and administered by the CDFW. The applicant shall comply with all Incidental Take Permit requirements.

Implementation of **Mitigation Measure BIO-4** would reduce potential impacts to Swainson's hawk to a less-than-significant level.

Western Spadefoot Toad and Northwestern Pond Turtle

Both the western spadefoot toad and northwestern pond turtle are State Species of Special Concern and proposed for listing as threatened under the Federal ESA. A petition to list spadefoot under CESA has also been submitted.

No western spadefoot toad individuals were observed during site visits; however, documented occurrences exist within 5 miles of the study area and its watershed, including observations as recent as 2017. Another occurrence was recorded 6 miles southeast in 2000. The sandy and gravel substrate surrounding the creek bed, as well as rodent burrows in the area, may provide suitable habitat. Given the presence of suitable habitat and nearby documented occurrences, western spadefoot has moderate potential to occur within the study area.

No northwestern pond turtle individuals were observed during site visits and the aquatic environs on the project site are unlikely to support suitable aquatic habitat for northwestern pond turtle. However, there are multiple perennial or near-perennial ponds, impoundments, and waterways in the region and this species is known to make long seasonal movements away from wetlands and ponds; therefore, the turtle may be present regionally and disperse through the project site while moving between aquatic habitats or dispersing to upland aestivation sites.

If present, project-related ground-disturbing activities could result in injury or mortality to western spadefoot and northwestern pond turtle individuals. To address these potential impacts to western spadefoot toads and northwestern pond turtles, Mitigation Measure BIO-5 requires a qualified biologist to conduct pre-activity surveys prior to ground disturbing activities in a new area, and the implementation of appropriate measures should western spadefoot or northwestern pond turtle be detected.

Mitigation Measure BIO-5: Western Spadefoot Toad and Northwestern Pond Turtle
Prior to the initiation of ground disturbance within areas of suitable aquatic habitat, pre-activity surveys shall be performed to determine the presence or absence of western spadefoot toad and northwestern pond turtle.

The survey for western spadefoot toad shall be conducted during the last breeding season (late winter to early spring [March 31]) prior to the commencement of the ground disturbance.

The survey for Northwestern Pond Turtle shall be conducted within 48 hours of the ground disturbance.

If surveys determine the species are not present, no further actions are required.

If western spadefoot toads or northwestern pond turtles are encountered, and the species is not formally listed under the Federal ESA or CESA, they shall be collected and relocated to an area that will not be impacted by project activities. Incidental take permits and compensatory mitigation are not required for species proposed for listing under the Federal ESA.

If western spadefoot toads or northwestern pond turtles are encountered, and the species are formally listed under Federal ESA or CESA, consultation with the USFWS or CDFW shall be conducted and the appropriate permits under FESA or CESA shall be obtained. compensatory mitigation should be expected at a minimum ratio of 1:1.

Additionally, a petition to list western spadefoot toad under CESA has been submitted. If the species is found to be present and the species becomes a candidate for listing under CESA, a permit under Section 2081 subdivision (b) of the California Fish and Game Code and administered by the CDFW would be required.

Implementation of **Mitigation Measure BIO-5** would reduce potential impacts to western spadefoot toad and northwestern pond turtle to a less-than-significant level.

Crotch's Bumble Bee

Crotch's bumble bee is a CESA candidate species. No Crotch's bumble bee sightings have been documented within the study area. The nearest documented occurrences are at Sutter Buttes, approximately 24 miles east of the project site, and McLaughlin Natural Reserve, approximately 16 miles west of the project site. While no recent occurrences of Crotch's bumble bee have been documented within or in the immediate vicinity of the project site, the site is located within the current documented range of Crotch's bumble bee. Crotch's bumble bee occurs in grassland and scrub habitats and has also been documented in agricultural areas. Nests are built in pre-existing cavities. They are commonly found underground, in abandoned rodent burrows, or above ground in grass tufts, rock piles, abandoned bird nests, or tree cavities.

WRA performed a focused habitat assessment for Crotch's bumble bee consisting of three survey dates between June and August 2025. The habitat assessment determined that the ruderal, agricultural, and disturbed land cover types that dominate the Central Excavation Area, Northern Excavation Area, Southeastern Excavation Area, Eastern Excavation Area, and Plant Site are not suitable for Crotch's bumble bee as these areas contain few high-quality foraging resources, are stocked by a high density of commercial European honey bee hives, and are surrounded by intensively managed almond orchards.

While no Crotch's bumble bee were observed in the Western Excavation Area, habitat suitability within the Western Excavation Area is possible based on the presence of flowering resources, nesting, and overwintering habitat. For these reasons, the focused habitat assessment recommends protocol-level surveys should be conducted prior to ground disturbance within the Western Excavation Area.

Ground disturbing activities within the Western Excavation Area, such as grubbing, vegetation removal and earth moving, within suitable habitat could result in direct mortality of Crotch's bumble bee, if present. To address these potential impacts, Mitigation Measure BIO-6 requires a qualified biologist to conduct pre-activity surveys prior to ground disturbing activities in the Western Excavation Area, and the implementation of appropriate measures should Crotch's bumble bee be detected.

Mitigation Measure BIO-6: Crotch's Bumble Bee

Prior to the initiation of ground disturbance within the Western Excavation Area, a protocol-level survey for Crotch's bumble bee shall be conducted. Surveys shall occur

throughout the Western Excavation Area the year prior to the initiation of ground disturbing activities. Surveys for Crotch's bumble bee shall be conducted during the peak flight season (approximately April to August). Three surveys shall be performed consisting of one-hour activities search time per three acres of suitable habitat in the footprint, where ground disturbance is planned. Each survey shall be spaced 2 to 4 weeks apart, to account for variability in resource utilization and host plant bloom times throughout suitable habitat. If no Crotch's bumble bee are encountered during these surveys, or the habitat is considered unsuitable, it can be assumed that project activity is unlikely to impact this species, and no further measures shall be required. These survey results would be considered valid for five years.

If Crotch's bumble bee are detected the feasibility of implementing avoidance measures shall be considered. Typical avoidance measures include seasonal restrictions, management to reduce pollen sources, and monitoring. If take cannot be avoided, a 2081 ITP from the CDFW shall be obtained by the operator. Compensatory mitigation for loss of occupied Crotch's bumble bee habitat shall be required at a minimum ratio of 1:1.

Implementation of **Mitigation Measure BIO-6** would reduce potential impacts to crotch's bumble bee to a less-than-significant level.

Pallid Bat and Other Roosting Bats

Pallid bat is a State Species of Special Concern and a Western Bat Working Group High Priority Species. For bat species, the Western Bat Working Group designates conservation status for species of bats, and those with a high or medium-high priority are typically given special consideration under CEQA. Roosting bats are protected by California Fish and Game Code (Sections 86; 2000; 2014; 3007; 4150) and are given special consideration under CEQA.

The study area supports trees that are large enough to potentially support maternity roosts for pallid bats and other native bat species. While other, higher quality habitats are available near-by and in closer proximity to water, the presence of roosting bats cannot be ruled out. Tree removal and other vegetation clearance associated with the proposed project activities may result in the loss of active roosts or the direct mortality of roosting individuals.

To address these potential impacts, Mitigation Measure BIO-7 recommends avoiding tree removal during the bat maternity season, if feasible, and specifies surveys requirements should tree removal be required during bat maternity season.

Mitigation Measure BIO-7: Roosting Bats

To avoid substantial adverse effects to active bat roosts, tree removal shall occur outside the bat maternity season (defined as April 1 through August 31), if feasible. If tree removal must occur between April 1 and August 31 within areas that support trees greater than or equal to 24 inches in diameter at breast height (DBH), a bat habitat assessment shall be performed by a qualified biologist for potential maternity roost sites prior to the initiation of ground disturbance in previously undisturbed areas. The assessment shall occur prior to March 15 and no more than 60 days from the anticipated start of tree removal. If trees scheduled for removal are determined to have no potential to support roosting bats (e.g., no sufficient interstitial spaces, large basal cavities, exfoliating bark, interstitial spaces, or suitable foliage), tree removal may proceed with no further measures required to protect roosting bats. If potential roosting sites are identified, the qualified biologist shall determine if the roost is active either through direct observation (e.g., using a bore scope to investigate the spaces in a tree) or through an emergence survey. If the potential roost is confirmed inactive, the tree may be removed with no further avoidance. If the roost is active and work is occurring outside of the maternity season, the qualified biologist shall make recommendations for bat exclusion or other actions that will make the site(s) unsuitable for roosting. A typical method is the implementation of cutting in two phases.

Regardless of time of year, any trees felled should be allowed to remain on the ground for at least 24 hours prior to chipping, off-site removal, or other processing to allow any bats to escape.

Implementation of **Mitigation Measure BIO-7** would reduce potential impacts to roosting bat species to a less-than-significant level.

Native Nesting Birds and Other Special-Status Birds

Native nesting birds and active nests (containing either eggs or young) are protected by the federal Migratory Bird Treaty-Act, the California Migratory Bird Protection Act, and the California Fish and Game Code. The study area provides suitable nesting and foraging habitat for a variety of native nesting bird species including the two special-status species with the potential to occur onsite, White-tailed kite and golden eagle, as well as many common species such as ash-throated flycatcher (*Tyrannus verticalis*), acorn woodpecker (*Melanerpes formicivorus*), western meadowlark (*Sturnella neglecta*), and horned lark (*Eremophila alpestris*).

Both white-tailed kite and golden eagle are designated as Fully Protected species under the CFGC, and the golden eagle is further protected by the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d). Open woodland and grassland habitat

within the study area provide suitable nesting and foraging habitat for these species. While no active golden eagle nests have been documented within 5 miles of the study area (California Natural Diversity Database), historical nesting activity has occurred in the surrounding hills to the southwest. Multiple eBird records between 2015 and 2022 report sightings along Sand Creek Road, and a golden eagle was observed by WRA biologists flying approximately 0.3 miles north of the study area during the May 2024 site visit. Given the presence of suitable habitat and nearby observations, both white-tailed kite and golden eagle have moderate potential to nest or forage within the study area. Common nesting bird species may also occur in trees, shrubs, and ground-level vegetation throughout the site and adjacent areas.

Grading and vegetation removal proposed within the project site may directly remove active nests or indirectly result in nest abandonment through visual and auditory disturbance. To address these potential impacts, Mitigation Measure BIO-8 recommends avoiding the initiation of ground disturbance in new areas during the nesting season, if feasible, specifies requirements for surveys should ground disturbance be initiated during the nesting season, and provides for mitigation if an active nest is encountered.

Mitigation Measure BIO-8: Golden Eagle, White-Tailed Kite, and Other Native Nesting Birds

To avoid substantial adverse effects to golden eagle, white-tailed kite, and other nesting birds, the initiation of ground disturbance within areas of suitable habitat shall occur outside of the nesting season, if feasible. If ground disturbance must be initiated during the nesting season (February 1 through August 31), a pre-activity survey of the expansion area for avian nests shall be conducted. If active nests (containing eggs, chicks or young) are discovered during the surveys, a qualified biologist shall establish a species-specific no-work buffer around the active nest. The no-work buffer size shall follow PG&E's 2015 guidelines: Nesting Birds: Species-Specific Buffers. Project activities shall be postponed within the no-work buffer until the conclusion of the nesting season, or until the biologist performs follow-up checks to determine whether the nest is still active.

Implementation of **Mitigation Measure BIO-8** would reduce potential impacts to special-status birds and native nesting birds to a less-than-significant level.

The proposed project has the potential to adversely affect multiple special-status species both directly and indirectly. However, as demonstrated in the preceding discussion, implementation of Mitigation Measures BIO-1 through BIO-8 would

reduce these impacts to less-than-significant levels by requiring pre-activity surveys, implementation of avoidance measures, and, if necessary, acquisition of ITPs and other mitigation.

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

Less than Significant Impact with Mitigation Incorporated. The Biological Resources Report (Appendix G) indicates that there are nine land cover types within the study area: interior live oak woodland, intermittent stream, seasonal wetland, deerweed-silver lupine-yerba santa scrub, annual grassland, ruderal, manmade detention basin, agriculture, and developed. These land cover types are shown in Figure 16 and summarized below in Table 6, “Land Cover Types within the Study Area and Project Site.”

TABLE 6
LAND COVER TYPES WITHIN THE STUDY AREA AND PROJECT SITE

Community / Land Covers	Sensitive Status	CDFW Rarity Ranking	Acres within Study Area	Acres within Project Site
Interior live oak woodland	Sensitive	G4, S4	14.52	7.90
Intermittent stream	Sensitive	None	21.92	0
Seasonal wetland	Sensitive	None	0.50	0.33
Deerweed-silver lupine-yerba santa scrub	None	G5, S5	10.56	7.29
Annual grassland	None	None	83.15	54.10
Ruderal	None	None	102.59	89.50
Manmade detention basin	None	None	1.96	1.96
Agriculture	None	None	38.03	22.19
Developed	None	None	27.98	15.96
Total			301.22	301.22

Source: WRA Environmental Consultants 2025 (Appendix G – Table 2).

Notes: CDFW = California Department of Fish and Wildlife.

The California Department of Fish and Wildlife (CDFW) assigns rarity rankings to vegetation communities using a global (G) and statewide (S) scale ranging from 1 to 5, where 1 indicates a community is critically imperiled and 5 indicates it is secure.

* G4 S4 (Apparently Secure — At fairly low risk of extinction or collapse due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of recent local declines, threats, or other factors.)

* G5 S5 (Secure — At very low risk of extinction or collapse due to a very extensive range, abundant populations or occurrences, and little to no concern from declines or threats.)

Interior live oak woodland, intermittent stream, and seasonal wetland are considered sensitive communities. The remaining land cover types (deerweed-silver lupine- yerba santa scrub, annual grassland, ruderal, manmade detention basin, agriculture, and developed) are not sensitive and not considered further in this impact analysis.

Potential impacts to interior live oak woodland, intermittent stream habitat, and seasonal wetlands are analyzed below.

Interior Live Oak Woodland

Interior live oak woodland (*Quercus wislizeni* – *Quercus parvula* Forest and Woodland Alliance) has a widespread distribution in California, with populations in the Coast Ranges, Sierra Nevada, Klamath Mountains, Peninsular and Transverse Ranges, Central Valley, and Mojave Desert. Within the study area, interior live oak woodland occurs primarily on flat, historically mined terraces and adjacent slopes. The canopy is open and dominated by interior live oak (*Quercus wislizeni*), with occasional blue oak (*Q. douglasii*) and foothill pine (*Pinus sabiniana*). The shrub layer ranges from open to dense and includes buckbrush (*Ceanothus cuneatus*), common manzanita (*Arctostaphylos manzanita* spp. *Manzanita*), silver bush lupine (*Lupinus albifrons*), chamise (*Adenostoma fasciculatum*), and common wooly sunflower (*Eriophyllum lanatum*). The herbaceous layer is typically dominated by non-native annual grasses and forbs, with native species present at low cover, including pink spineflower (*Chorizanthe membranacea*), Spanish lotus (*Acmispon americanus*), rigid fiddleneck (*Amsinckia retrorsa*), and California poppy (*Eschscholzia californica*).

Although interior live oak woodland is not a CDFW-designated sensitive natural community, it is considered a sensitive land cover type under CEQA due to the provisions of the Oak Woodlands Conservation Act (Fish and Game Code Section 21083.4), which requires a local agency to determine whether a project within its jurisdiction may result in a conversion of oak woodlands that will have a significant effect on the environment. In response to this act, the *Colusa County Voluntary Oak Woodlands Management Plan* (Oak Woodlands Management Plan) was created (Colusa County 2008). The Oak Woodlands Management Plan does not contain an explicit definition of “significant impact,” and it does not contain specific provisions to address impacts to oak woodlands, but it acknowledges possible mitigation options from the Oak Woodlands Conservation Act, including but not limited to the protection of existing oak woodlands and the planting of trees. Additionally, the Conservation Element of the General Plan includes Policy CON 1-9, which requires avoidance of oak tree removal within oak woodland habitat to the greatest extent feasible through appropriate project design and building siting (Colusa County 2012).

If full avoidance is not possible, projects are encouraged to prioritize planting replacement trees at on-site versus off-site locations (Colusa County 2012).

Figure 18, “Oak Tree Distribution,” shows the location of oak woodlands mapped within the study area and project site. As indicated in Table 6, approximately 7.9 acres of oak woodland and 192 individual oak trees would be impacted by project mining operations. This is a potentially significant adverse impact to a sensitive natural community.

The Excavation Areas where the oak woodlands are located would be reclaimed to rangeland and open space. To address potential impacts to interior live oak woodland, Mitigation Measure BIO-9 requires the replanting of interior live oaks within the project site after the completion of mining operations, with a goal of achieving 1:1 replacement of oak trees removed during mining.

Mitigation Measure BIO-9: Oak Woodlands

The operator shall prepare a revegetation plan that specifies measures to replant oak trees upon completion of mining operations. The revegetation plan shall be reviewed and approved by the County within one year of the start of mining operations on the project site. The revegetation plan shall require replanting at a minimum 1:1 replacement ratio for the approximately 192 individual oak trees to be removed. The success and productivity of the replanting efforts shall be monitored for a minimum of five years to ensure that reclamation goals are achieved. Regular follow-up inspections shall be conducted to evaluate the progress of replanting efforts so that any necessary remedial measures can be identified and implemented in a timely manner. If survival rates fall below required levels within two years following the initial seeding and planting, the revegetated areas shall be reevaluated to determine the necessary measures to improve revegetation success.

Implementation of **Mitigation Measure BIO-9** would reduce impacts to oak woodlands to less-than-significant levels.

Intermittent Stream

Intermittent streams are channelized drainage features that convey flowing water for part of the year, typically during and after precipitation events, but are dry for extended periods in most years. A single intermittent stream, Sand Creek, is present along the southern boundary of the study area and flows from west to east, continuing beyond the project site (shown in Figure 16). The Sand Creek channel is incised with steep banks, such that the ordinary high-water mark and top-of-bank widths are generally equivalent. Typical channel widths at the ordinary high-water mark range from 30 to 50 feet, with one wider reach measuring approximately 330 feet. The channel bed is composed of gravel and cobbles, with occasional boulders and fine-

textured substrate. The banks are typically earthen, but bank protection features, including rock armoring and concrete barriers, are present in two areas to protect adjacent roads and orchards.

Vegetation within the Sand Creek channel is sparse and primarily consists of non-native herbaceous species such as perennial pepperweed (*Lepidium latifolium*), snouted monkeyflower (*Mimetanthe pilosa*), European heliotrope (*Heliotropium europaeum*), and cocklebur (*Xanthium orientale*). Woody vegetation is limited to occasional small Freemont cottonwoods (*Populus fremontii*) and Oregon golden aster (*Heterotheca oregona*). Banks are mostly bare due to steep slopes, though some small slumps support denser vegetation. Evidence of off-highway vehicle activity was noted throughout the channel.

Based on field indicators including scour, flow patterns, sediment sorting, sediment ramps, and destruction of vegetation, Sand Creek is classified as an aquatic feature. Aquatic resources receive consideration under CEQA, and intermittent streams may be jurisdictional under the Army Corps of Engineers (Clean Water Act Section 404), RWQCB (Section 401), and CDFW (Fish and Game Code Section 1600 et seq.).

As described under Section 3.10, “Hydrology and Water Quality,” a *Hydrologic and Hydraulic Evaluation of Sand Creek* (Hydrologic and Hydraulic Evaluation) was prepared by ENGEO (ENGEO 2024), and is included as Appendix H of this Initial Study. This evaluation estimated the 10-, 25-, 50-, 100-, 200-, and 500-year return period peak flowrates and water surface elevations for the 10-, 25-, and 100-year event in Sand Creek adjacent to the project site. The 100-year water surface elevation is shown on Figure 19, “Sand Creek 100-Year Water Surface Elevation,” relative to the proposed excavation areas. Based on these results, and as described in Section 2.4.11, above, the Western, Central, Southeastern, and Eastern Excavation Areas are located adjacent to Sand Creek but have been designed to be set back a minimum of 35 feet from the northern edge of the 100-year floodplain of Sand Creek for purposes of separating the operation from potential bank erosion. Additionally, the 100-year flood elevation is a minimum of three feet below the top of the channel adjacent to the proposed excavation areas. Therefore, the proposed project mining and reclamation activities would not directly affect Sand Creek, and the potential for direct impacts would be less than significant.

Indirect impacts to Sand Creek could occur if changes in runoff patterns on the project site result in erosion or sedimentation offsite; if the mining excavations were to draw flows from Sand Creek, especially during low flow periods; or if scour along the creek were to result in the erosion of material between the creek and Excavation Areas such that the creek flows would enter the excavation areas.

As described in detail under Checklist Question (c), below, with regard to the potential for changes in runoff patterns to result in erosion and sedimentation offsite, the project would create basins of internal drainage such that runoff from the project site would not flow to Sand Creek during mining operations. Upon completion of mining, any Excavation Area not filled to grade would continue to drain internally. The project site would be reclaimed to rangeland, open space, and farmland, consistent with existing land uses and existing drainage patterns would largely be restored. Therefore, the potential of the proposed mining and reclamation activities to alter drainage patterns on site in a manner that could adversely affect Sand Creek would be less than significant.

With regard to the potential for the mining excavations to draw Sand Creek flows, this potential impact is evaluated in the *Hydrology and Water Quality Analysis Report for the Westside Aggregates Project* (Hydrology Report), prepared by EMKO Environmental, Inc. (EMKO 2025) and included as Appendix I of this Initial Study. The Hydrology Report (Appendix I) found that vertical gradients to the groundwater surface are 10 to 20 times steeper than the lateral gradients toward the floors of the Excavation Areas. Thus, there is little to no potential that water within the Sand Creek channel would be drawn to the quarry excavation; instead, the water would continue to percolate vertically downward to the underlying groundwater table, similar to existing conditions. Therefore, the potential of the proposed project to draw flows from within the Sand Creek channel would be less than significant.

Lastly, with regard to the potential of scour along the creek to result in the erosion of material between the creek and Excavation Areas such that the creek flows would enter the excavation areas, the Hydrologic and Hydraulic Evaluation (Appendix H) evaluated scour potential along the creek. A review of the geomorphic history of the area found that, with the exception of one area adjacent to the Western Excavation Area, the creek banks along the project site do not appear to have significant scour and retreat. The scour bend adjacent to the Western Excavation Area is shown in Figure 20, "Western Excavation Area Scour Bend." Based on approximations from aerial photography of this area, it appears that the majority of the creek bank retreat occurred between 1983 and 1998. Based on current topography, the low point in the channel in this area of the creek is currently near the south bank (opposite of the project site) suggesting that the flow velocities have become less erosive to the outer north bank. This is also supported by the modeled velocities, which found that velocities are less than 4 feet per second (fps) near the northern bank in the modelled 100-year design storm. Based on research published by the United States Army Corps of Engineers (USACE 1994; cited in ENGEO 2024), which provides erosion threshold guidance for flood control channels, the allowable mean velocity for an

unlined/unvegetated channel comprised of fine gravel is approximately 6.0 fps, and for competent rock is approximately 20 fps. Thus, velocities along the scour bend are now below the erosion threshold of 6.0 fps. Similarly, sheer stresses at the scour bend approach zero pounds per square foot (lb/ft²). The Hydraulic and Hydrologic Evaluation notes that some areas of Sand Creek could be susceptible to erosion during storm events based on modelled velocities and sheer stress. However, the historical performance of the banks in these areas shows little erosion/regression since 1983, and the excavation areas are set back a minimum of 35 feet from the 100-year flows. Thus, the potential for scour along the creek to result in erosion that would allow creek flows to enter the excavation areas is less than significant.

Seasonal Wetlands

Seasonal wetlands are small depressional areas that retain surface water or saturated soil for part of the year but are typically dry during the remainder of the year. Six seasonal wetlands totaling approximately 0.50 acres were mapped within the study area. These wetlands are shown in Figure 21, "Seasonal Wetlands." Hydric soil indicators observed in seasonal wetlands included Depleted Matrix, Redox Depressions, and Redox Dark Surface. Wetland hydrology indicators observed included surface water, high water table, saturation, and biotic crust.

One seasonal wetland (SW-6 in Figure 21) is a linear swale located south of Sand Creek, opposite the project site. Due to its distance from the project site and separation from the project site by Sand Creek, the project would have no impact on this wetland and it is not considered further.

Four of the five seasonal wetlands considered in this analysis are located in small, shallow depressions in the ruderal eastern portion of parcel 018-250-009 (SW-1 through SW-4 in Figure 21). These wetlands are contained in man-made depressions created by past mining activities and thus meet the definition of artificial wetlands, which are defined by the State Water Resources Control Board's (SWRCB) *State Policy for Water Quality Control: State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* as wetlands that result from human activity (SWRCB 2012: 2). Vegetation varies from dense Italian ryegrass and perennial pepperweed to a sparser mix of stalked popcornflower, annual hairgrass, Mediterranean barley (*Hordeum marinum*), hyssop loosestrife (*Lythrum hyssopifolia*), ditch beard grass (*Polypogon interruptus*), smooth boisduvalia (*Epilobium campestre*), and red ammannia (*Ammannia coccinea*). Three of these wetlands are located within the proposed Central Excavation Area (SW-1 through SW-3 in Figure 21) and have a total area of approximately 0.3 acres. As shown in Figure 21, one of these wetlands (SW-4 in Figure 21) is located just outside of the project site boundary and has an area

of 0.13 acres. It is located in a highly disturbed area between an internal unpaved road and Cortina School Road.

The remaining seasonal wetland (SW-5 in Figure 21) is located just east of the Western Excavation Area and has an area of approximately 0.04 acres; as shown in Figure 21, the feature is only partially located within the project site. This seasonal wetland is located within a vegetated swale. Vegetation includes sparse narrowleaf milkweed (*Asclepias fascicularis*), curly dock (*Rumex crispus*), and Fremont cottonwood.

The proposed mining and excavation would impact the three artificial seasonal wetlands within the Central Excavation Area (SW-1 through SW-3 in Figure 21). Although SW-4 and SW-5 are located outside of the Central and Western Excavation Areas, respectively, due to their proximity to the Excavation Areas, these seasonal wetlands could be impacted by inadvertent equipment operations outside of the planned excavation areas. While already avoided by design, the implementation of Mitigation Measure BIO-10 would enhance the avoidance of these wetlands, by signage and fencing.

Mitigation Measure BIO-10: Seasonal Wetlands

The project shall avoid the seasonal wetland located east of the Western Excavation Area and the seasonal wetland located east of the Central Excavation Area. Avoidance can be accomplished by installing silt fencing at the perimeter of the seasonal wetlands along the areas adjacent to the Excavation Areas and by installing fencing/signage prohibiting the encroachment of mining equipment in the areas.

Avoidance of seasonal wetlands SW-1 through SW-3 is not feasible due to their central location within the Central Excavation Area. However, these are artificial seasonal wetlands formed within a ruderal area and do not provide habitat for special-status plant or animal species on the project site. With implementation of **Mitigation Measure BIO-10**, seasonal wetlands on the project site would be preserved to the maximum extent feasible, and the removal of 0.3 acres of artificial seasonal wetlands containing no special-status species located within a ruderal area would not be a substantial adverse effect on a sensitive community. Upon completion of mining, the mined areas would be reclaimed to open space and no potential impacts to seasonal wetlands would occur.

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

Less than Significant Impact with Mitigation Incorporated. Seasonal wetlands may be jurisdictional under the Army Corps of Engineers (Clean Water Act Section 404), RWQCB (Section 401), and CDFW (Fish and Game Code Section 1600 et seq.). The five seasonal wetlands within and near the project site are described under Checklist Question (b), above.

The four seasonal wetlands within and near the Central Excavation Area (SW-1 through SW-4 in Figure 21) do not have a continuous surface connection with any navigable features; thus, they are not considered Waters of the United States and are not jurisdictional under the Army Corps of Engineers. In addition, the seasonal wetlands are artificial wetlands resulting from depressions formed by historic mining activities. The SWRCB Wetland Rule provides that “artificial wetlands that are less than an acre in size ... are not waters of the state” except for three exception categories: (a) created by modifying a surface water of the state; (b) approved by an agency as compensatory mitigation for impacts to other waters of the state; or (c) identified in a water quality control plan as a wetland or other water of the state). These three exception categories are not applicable to the seasonal wetlands on and near the Central Excavation Area; thus, they are not considered Waters of the State. Therefore, project activities on and near the Central Excavation Area would not have the potential to impact state or federally protected wetlands.

The seasonal wetland located east of the Western Excavation Area (SW-5 in Figure 21) does not have a continuous surface connection with any navigable features; thus, it is not considered a Water of the United States and is not jurisdictional under the Army Corps of Engineers. The wetland may not be artificial and thus may be a Water of the State. Mitigation Measure BIO-10 requires the implementation of measures to avoid disturbance of this wetland during project mining activities. Upon completion of mining, the areas would be reclaimed to rangeland consistent with existing conditions and there would be no potential impact. With implementation of Mitigation Measure BIO-10, the potential of the proposed project to result in significant impacts to state or federally protected wetlands would be less than significant.

- d) *Would the project interfere 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 a native wildlife nursery site?*

Less than Significant Impact. Wildlife movement between suitable habitat areas can occur via open space areas lacking substantial barriers. Such areas, referred to as

wildlife corridors, connect two core habitat areas and should not direct wildlife toward developed or otherwise unsuitable lands (Beier and Loe 1992; Soulé and Terbough 1999; cited in WRA 2025).

The study area is not located within a designated regional wildlife movement corridor, as identified in the Essential Habitat Connectivity Project mapping (Caltrans 2010, CDFW 2024c; cited in WRA 2025). Although the central portion of the study area lies within the limits of a large Natural Landscape Block extending from Mendocino County to the vicinity of the City of Vacaville, the study area represents a small peripheral area and does not provide meaningful connectivity between large core habitats.

At the local scale, the eastern portion of the study area is surrounded by active agriculture and associated development, providing no meaningful corridor function. The western portion may facilitate limited movement of common wildlife species. However, the areas surrounding the western portion of the project site are undeveloped and would remain available to facilitate wildlife movement. The Sand Creek channel likely supports localized movement and provides connectivity to adjacent undeveloped lands to the east; however, the limited flow regime and lack of substantial riparian vegetation reduce its value as a wildlife corridor. Furthermore, the project would avoid direct impacts to Sand Creek, maintaining opportunities for local wildlife movement along the stream course. Upon completion of reclamation, the project site would be restored to prime farmland, rangeland, and open space, similar to existing conditions, and would not have an effect on wildlife movement through the area.

For the reasons discussed above, the potential of the project to interfere with wildlife movement or corridors would be less than significant.

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

Less than Significant Impact with Mitigation Incorporated. Colusa County General Plan contains multiple policies intended to protect biological resources that are applicable to the project. Relevant policies are listed below.

- **Policy CON 1-8** requires new development to integrate existing native vegetation if appropriate.
- **Policy CON 1-9** requires avoidance of oak tree removal within oak woodland habitat to the greatest extent feasible through appropriate project design and

- building siting. If full avoidance is not possible, prioritize planting replacement trees on-site over off-site locations.
- **Policy CON 1-10** encourages owners of property containing oak woodland habitat to implement policies and measures contained in the Colusa County Voluntary Oak Woodlands Management Plan.
 - **Policy CON 1-11** requires the protection of wetlands and riparian habitat areas from encroachment by development to the greatest extent feasible.
 - **Policy CON 1-12** requires new development to include maintained and managed setbacks and buffers along riparian corridors and adjacent to sensitive habitat.
 - **Action CON 1-B** require large-scale new development and planning projects to inventory unique ecosystems and sensitive biological habitat areas. Integrate maps of sensitive areas into the County Geographical Information System.
 - **Policy CON 1-14** requires any proposed project that may affect special-status species, their habitat, or other sensitive habitat to submit a biological resources evaluation as part of the development review process.
 - **Policy CON 1-17** requires all projects identify special-status species or sensitive habitats in a biological resources evaluation to avoid impacts to special-status species and their habitat to the maximum extent feasible. Where impacts cannot be avoided, Policy CON 1-17 requires that projects include the implementation of effective mitigation strategies developed by a qualified professional in consultation with state or federal resource agencies.
 - **Policy CON 1-18** includes requirements that must be implemented during construction in areas that contain sensitive natural habitat to reduce or avoid potential impacts.
 - **Action CON 1-C** requires the County to review all subsequent development, infrastructure, long range planning, and any other project that may potentially impact special-status species and/or sensitive habitat areas, and to include mitigation measures that reduce these impacts. This requirement must occur prior to ground disturbance or any other phase of a project that may potentially result in adverse impacts to these resources.

Consistent with Policy CON 1-17, a Biological Resources Report (Appendix G) has been prepared for the proposed project that identify special-status species or sensitive habitats. The implementation of Mitigation Measures BIO-1 through BIO-10, which include avoidance, minimization, and restoration measures for sensitive habitats, special-status species, and protected trees identified in the Biological Resources Report that ensure consistency with County policies protecting biological resources.

Therefore, the project would not conflict with any local policies or ordinances protecting biological resources or with the policies of the Colusa County General Plan as they relate to biological resources protection. The impact would be less than significant with mitigation.

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

No Impact. The study area is not located within the plan area of any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved regional or state habitat conservation plan. Therefore, the proposed project would not conflict with any applicable conservation plan and would have no impact.

3.5 Cultural Resources

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

The following evaluation is based on the *Archaeological Survey Report for Westside Aggregates Project Near Arbuckle, Colusa County, California* (Archaeological Survey Report) prepared by ALTA Archaeological Consulting (ALTA 2025), and included as Appendix J to this Initial Study. The area of potential effects for this assessment is shown in Figure 22, “Archaeological Resources Survey Area of Potential Effects,” and encompasses the entirety of the project site.

ALTA archaeologists performed a records search, reviewed historic maps and ethnographic literature, conducted Native American outreach, and performed a field survey for the proposed project to assess the potential for significant historic and archaeological resources in the study area. On July 15 and 16, 2024, ALTA archaeologists conducted a field survey of the project area, using project design drawings, maps, and aerial imagery to identify the site boundaries. Ground surface visibility was poor, approximately 20 percent, due to dense grass cover. The survey encompassed a total area of 263 acres, which included the 200-acre project site and some surrounding areas. The survey was conducted using intensive survey coverage with transects spaced no more than 20-meters apart.

Discussion

a-b) Would the project cause a substantial adverse change in the significance of a historical or archeological resource pursuant to Section 15064.5?

Less than Significant Impact with Mitigation Incorporated. According to the records search conducted by ALTA (ALTA 2025), no properties listed in or eligible for the National Register of Historic Places, California Historical Landmarks, or Points of Interest were identified within the study area. Additionally, no cultural resources were identified through the records search, literature review, Native American

outreach, or archaeological field survey. Two historic-era cultural resources (P-06-000183 and P-06-000689) are documented within a half-mile of the project area (summarized in Table 7, “Recorded Cultural Resources within One-half Mile of Project Area”); however, neither of these resources are listed in a national, state, or local registry, and the proposed project activities would not disturb any areas off-site.

TABLE 7
RECORDED CULTURAL RESOURCES WITHIN ONE-HALF MILE OF PROJECT SITE

Primary No.	Age	Description
P-06-000183	Historic	PEP 10-15; Arbuckle Dump
P-06-000689	Historic	Barn near Rich Creek

Source: ALTA Archeological Consulting 2025 (Appendix J – Table 2).

As designed, the project would not cause a substantial adverse change in the significance of a known historical or archaeological resource pursuant to Section 15064.5. However, as discussed under the “Ethnographic Background” subsection of Section 3.18, “Tribal Cultural Resources,” the project site lies within Patwin territory and historic records indicate that the village of Yukat was located one to two miles southwest of the project area along Sand Creek. Therefore, it is possible that ground surface disturbance could inadvertently encounter buried historic and pre-historic cultural resources or human remains. Mitigation Measures CUL-1 and CUL-2 are provided to avoid adverse impacts to cultural resources under the proposed project through cultural resource training along with reporting and evaluation of inadvertent discoveries. These mitigation measures are consistent with Colusa County General Plan Policy CON 3-2 for the treatment of the inadvertent discovery of cultural resources or human remains.

Mitigation Measure CUL-1: Cultural Resources Awareness Training

The quarry operator shall retain a qualified archaeologist or tribal cultural representative to conduct a Cultural Resources Awareness Training for all personnel who may be involved in ground-disturbing activities within the project site. The training shall focus on the recognition of the types of cultural resources that could be encountered during ground-disturbing activities to facilitate worker recognition and avoidance of these resources. The training will also specify procedures for the immediate notification of the County and a qualified archaeologist for further evaluation and action should a cultural resource be encountered. The training shall outline penalties for unauthorized artifact collecting or intentional disturbance of archaeological resources. The archaeologist or tribal cultural representative shall conduct the Cultural Resources Awareness Training prior to the start of ground-disturbing activities of undisturbed land for all personnel that may

become involved in these activities. Documentation of the training shall be kept on-site and shall be made available to the County upon request.

Mitigation Measure CUL-2: Inadvertent Discovery of Archaeological and Tribal Cultural Resources

If prehistoric or historic-era cultural resources are encountered during project activities, all ground-disturbing activities within 100 feet of the find shall cease and the County shall be notified within 24-hours. A qualified archaeologist shall evaluate the significance of the resources and recommend appropriate treatment measures. If the cultural resources are prehistoric or Native American in nature, the County shall consult with appropriate Native American representatives in determining appropriate treatment for unearthed cultural resources. The qualified archaeologist shall develop treatment measures in consultation with the County and the Native American representative, which may include data recovery or other measures. These additional treatment measures should be determined within 60 days of the resource being discovered. Archaeological or tribal cultural materials recovered during any investigation shall be curated at an accredited curational facility or as recommended by the Native American representative. The qualified archaeologist shall prepare a report documenting evaluation and/or additional treatment of the resource. A copy of the report shall be provided to Amador County, the Native American representatives, and the North Central Information Center. Mining and reclamation activities can recommence within 30 days of the archaeologist's report based on direction of the qualified archaeologist and with concurrence from the County.

Implementation of **Mitigation Measures CUL-1** and **CUL-2** would reduce the potential of the proposed project to cause a substantial adverse change in the significance of a historical resource to less than significant.

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

Less than Significant Impact with Mitigation Incorporated. As discussed previously, no cemeteries, human remains, or other cultural resources were identified within the study area through the records search, literature review, Native American outreach, or archaeological field survey. However, ground-disturbing activities associated with the project could potentially encounter previously unidentified human remains that may be historically or culturally significant. Mitigation Measure CUL-3 is provided to avoid disturbance of human remains. This mitigation measure is consistent with Colusa County General Plan Policy CON 3-2 for the treatment of the inadvertent discovery of cultural resources or human remains.

Mitigation Measure CUL-3: Inadvertent Discovery of Unmarked Burials

As defined in California Health and Safety Code Section 7050.5, if human remains are encountered, all work must stop in the immediate vicinity of the discovered remains, and the County Coroner and County Community Development Department must be notified immediately so that an evaluation can be performed. If the remains are deemed to be Native American and prehistoric, per Cal. PRC 5097.98, the Native American Heritage Commission must be contacted by the County Coroner so that a "Most Likely Descendant" can be designated and further recommendations regarding treatment of the remains can be provided. Pursuant to Cal. PRC Section 5097.98(b)(1), the descendants' preferences for treatment of the human remains may include the following:

- The nondestructive removal and analysis of human remains and items associated with Native American human remains.*
- Preservation of Native American human remains and associated items in place.*
- Relinquishment of Native American human remains and associated items to the descendants for treatment.*
- Other culturally appropriate treatment.*

Implementation of **Mitigation Measure CUL-3** would reduce the project's potential to disturb previously unidentified human remains within the project site to a less-than-significant level.

3.6 Energy

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	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?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

Discussion

The following evaluation is based on the Air Quality Analysis for the proposed project (Appendix E).

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

Less than Significant Impact. Construction and operation of the proposed project would consume energy in the form of diesel, gasoline, and electricity for mining, processing, and reclamation. The activities requiring energy include operation of equipment that uses gasoline and diesel fuel, such as off-road heavy equipment, on-site service trucks, and on-highway trucks travelling to and from the project site; and operation of equipment that uses electricity, such as the screening and wash plant, conveyors for the transport of mined material, lighting, and electricity for the office/scale house and shop for minor equipment maintenance.

The Air Quality Analysis (Appendix E) estimated the project's annual energy demand under the maximum proposed production of 2 million tons per year using the California Emissions Estimator Model (CalEEMod), which quantifies electricity and fuel consumption for typical construction and operational activities. The results are presented in Table 8, "Annual Project Energy Consumption Under Maximum Production." Under the maximum proposed production of 2 million tons per year, the project would consume up to approximately 822,059 gallons of diesel fuel, 2,728 gallons of gasoline, and 6,333 megawatt hours (MWh) of electricity annually.

TABLE 8
ANNUAL PROJECT ENERGY CONSUMPTION UNDER MAXIMUM PRODUCTION

Year of Operation	Diesel (gallons/year)	Gasoline (gallons/year)	Electricity (MWh/year)
1	822,059	2,728	6,333
2	806,160	2,728	6,333
3	806,758	2,728	6,333
4	806,653	2,728	6,333
5	806,755	2,728	6,333
6	808,065	2,728	6,333

Source: Baseline Environmental Consulting 2025 (Appendix E – Table 6)

Notes: The model input parameters, assumptions, and results are summarized in Appendices C-1 through C-3 of the Air Quality Analysis (Appendix E of this Initial Study).

The project's fuel consumption would be subject to state and federal regulations regarding fuel efficiency standards for off-road equipment and on-road vehicles. Accordingly, operational energy demand would decrease in the future as off-road equipment and on-road vehicles are upgraded to meet increasingly stringent emissions standards. The modeling performed for this study has not taken credit for these future reductions beyond the year 2025.

Although the project would increase overall energy consumption relative to existing conditions, this increase would not constitute wasteful, inefficient, or unnecessary energy use. The project does not propose energy consumption beyond what is typical for this type of operation. Furthermore, the project includes several features that promote efficiency relative to typical mining operations. In particular, the project would utilize conveyors instead of onsite diesel haul trucks to move materials from the Excavation Areas to the Plant Site. In general, electricity would be relied on for the stationary Plant Site equipment and facilities, including the screening and wash plant. Furthermore, because energy use represents a direct operational cost, the operator would have an inherent financial incentive to minimize consumption through efficient design and operation.

For these reasons, the project would not result in the wasteful, inefficient, or unnecessary consumption of energy resources, and this impact would be less-than-significant.

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

Less than Significant Impact. As discussed under the responses in Section 3.8, "Greenhouse Gas Emissions," no local climate action plans have been adopted in the project area. The project would not be subject to energy efficiency requirements under the Title 24 Building Efficiency Standards and CALGreen Code, because no residential

buildings or high-rise non-residential buildings are being proposed. Project operations would not affect renewable energy sources within the State and therefore would not interfere with the Renewable Portfolio Standard, which requires the State to increase energy procurement from eligible renewable energy resources. Therefore, the project would not conflict with or obstruct any state or local plans for renewable energy or energy efficiency, and the impact would be less than significant.

3.7 Geology and Soils

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<i>Would the project:</i>				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zone Map issued by the State Geologist for the area, or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☒	☐	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☒	☐	☐
iv) Landslides?	☐	☒	☐	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geological unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☒	☐	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☒	☐
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

Discussion

Unless otherwise indicated, the following evaluation is based on the Slope Stability Report (Appendix D) for the proposed project.

Regional and Local Geology

The project site is situated within the Sacramento Valley, at the western margin of the Great Valley geomorphic province of California. The Great Valley consists of an elongated structural trough that has been filled with a sequence of sedimentary deposits ranging from Jurassic to recent in age. The Coast Range geomorphic province bounds the Great Valley to the west. The Coast Range Geomorphic Province consists of a complex series of mountain ranges and alluvial-filled basins that lie approximately parallel to the California coast and the San Andreas Fault System.

Based on the regional geologic mapping and the site reconnaissance conducted as part of the Slope Stability Report (Appendix D), the Excavation Areas are primarily underlain by Pleistocene age alluvium. This Pleistocene age alluvium includes the Modesto and Riverbank Formations (Qmu, Qml, and Qru) and generally consists of variably cemented interbedded gravel, sand, silt, and clay.

The hills to the north and east of the proposed quarry are made up of Pliocene age Tehama Formation (Tte), described as light colored sandstone and siltstone with interbedded conglomerate lenses. Holocene age stream deposits (Qsc) appear to be confined to the present day course of Sand Creek outside the proposed excavations. Fine-grained, Holocene age basin deposits (Qb) are mapped in the northeast portion of the proposed quarry and are typically a thin veneer over the Pleistocene deposits.

Seismicity

An active fault is defined by the California Geologic Survey as one that has had surface displacement within Holocene time (about the last 11,700 years) (California Geological Survey 2025a). There are numerous active earthquake faults in the region surrounding the project site. Numerous small earthquakes occur every year in northern California, and larger earthquakes have been recorded and can be expected to occur in the future. Figure 23, "Regional Faulting and Seismicity Map," shows the approximate locations of these faults and significant historic earthquakes recorded within the region.

The Uniform California Earthquake Rupture Forecast (UCERF 3) (Field et al 2013) estimates the 30-year probability of a magnitude 6.7 or greater earthquake in northern California at approximately 95 percent, considering the known active seismic sources in the region. The Slope Stability Report indicates that four nearby active faults are capable

of generating strong seismic ground shaking at the project site including three segments of the Great Valley Fault and the Hunting Creek-Bartlett Springs Fault.

Landslide Susceptibility

The Colusa County General Plan DEIR indicates that landslide susceptibility is low in Colusa County, with the exception of areas of moderate susceptibility in the north-south trending valleys at the Coast Range/Central Valley boundary and high susceptibility in the northwestern portion of the county located almost entirely within the boundaries of the Mendocino National Forest (Colusa County 2011: 3.6-8). The project site is located outside of the north-south trending valleys of the Coast Range and outside of the Mendocino National Forest and therefore outside of the areas of moderate and high landslide susceptibility in Colusa County. The topography on the project site consists of the level terrain to the east and the beginning of hilly terrain as the site extends into the foothills of the Coast Range to the west.

Liquefaction

Soil liquefaction is a phenomenon primarily associated with saturated soil clean, loose, uniformly graded layers of fine-grained soil close to the ground surface. These soils lose strength during ground shaking. Due to the loss of strength, the soil may move both horizontally and vertically. In areas where sloping ground or open slope faces are present, this mobility can result in lateral spreading. As described in Section 2.2.3, above, soils on the project site consist primarily of riverwash, gravelly loam, and sandy loam. The Slope Stability Report notes the variability of fines content in the materials tested on the site and also indicates the materials are variably cemented. The depth to groundwater ranges from approximately 250 ft to 375 ft beneath the current ground surface, depending on the location across the site, thus the soils are not saturated (Appendix I). Due to the lack of loose, uniform fine-grained soils and lack of saturated conditions on the site, the potential for liquefaction is low.

a.i) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zone Map issued by the State Geologist for the area, or based on other substantial evidence of a known fault?

Less than Significant Impact. The project site is not within an Alquist-Priolo Earthquake Fault Zone and there is no known surface expression of an active fault within the site (California Geological Survey 2025b). Therefore, the potential of the proposed project to cause substantial adverse effects involving the rupture of an earthquake fault would be less than significant.

a.ii-v) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking or seismic-related ground failure, including liquefaction, or landslides?

Less than Significant Impact with Mitigation Incorporated. The proposed project would not develop housing, and the limited structures proposed to be developed would consist primarily of portable facilities (e.g., portable office building, conveyer alignments). Structures requiring a building permit from the County would be required to meet the seismic safety and soil testing requirements of the Colusa County Building Code (Chapter 5 of the Colusa County Code).

Although the proposed project would require limited development of structures, as detailed in Section 2.4.3, above, the proposed mining of the Excavation Areas would occur to a depth of 35 to 45 feet with final slopes ranging from 2:1 to 2.5:1. Mining excavation would alter the topography on the site and could result in unstable slopes in certain areas, which in turn has the potential to increase the risks of landslides and risk of seismic-related ground failure on the site. In order to evaluate this potential impact, the Slope Stability Report (Appendix D) evaluated the stability of the proposed slopes in four locations within the project site:

1. Within the western end of the Western Excavation area, which is located furthest into the Coast Range foothills and adjacent to Sand Creek.
2. Within the Central Excavation Area, which is within the flat terrain of the Central Valley and adjacent to Sand creek.
3. Within the Northern Excavation Area, which is within the flat terrain of the Central Valley and surrounded by agricultural land.
4. Within the Central Excavation Area, adjacent to the PG&E gas pipeline alignment.

These locations are shown in Figure 24, "Slope Stability Analysis Cross Section Locations."

For the majority of the site, which consists of private open space and has an end use of private open space, the acceptable factor of safety was 1.0 for temporarily over-excavated slopes, 1.1 for static conditions, and 1.0 for seismic conditions. Where the Central Excavation Area is located in the vicinity of the Pacific Gas and Electric Company (PG&E) gas transmission pipelines (setback 100 feet from the approximate PG&E gas transmission pipeline easement), the minimum allowable factor of safety with respect to slope stability was 1.5 for static conditions and 1.0 for seismic conditions. These factors of safety align with local geotechnical practice and guidelines prescribed in Special Publication 117A by the State of California (California

Geological Survey 2008) for pseudostatic slope stability analyses for critical infrastructure.

The results of the slopes stability analysis are presented in Table 9, “Summary of Slope Stability Analysis.”

TABLE 9
SUMMARY OF SLOPE STABILITY ANALYSIS

Cross-Section Location ^a	Factors of Safety (Estimated / Acceptable)		
	Temporary ^b	Static	Pseudostatic
A-A'	1.0 / 1.0	1.3 / 1.1	1.0 / 1.0
B-B'	1.0 / 1.0	1.4 / 1.1	1.0 / 1.0
C-C'	1.1 / 1.0	1.7 / 1.1	1.2 / 1.0
D-D'	Not Applicable ^c	2.1 / 1.5	1.5 / 1.0

Source: ENGEO 2025a (Appendix D – Table 2.8.5-1)

Notes:

a= Cross-section locations are shown in Figure 24.

b = For slopes with a gradient no steeper than 0.75:1.

c = Slopes near the PG&E gas pipeline shall not be over excavated.

Based on the results of the Slope Stability Analysis, mining and excavation under the proposed project would meet the acceptable factors of safety under both static and seismic conditions, provided that the recommendations of the Slope Stability Analysis are met. Mitigation Measure GEO-1 requires the implementation of the mitigation measures of the slope stability analysis, including the observation of soil conditions and collection of soil samples during excavation operations by a qualified professional; prompt backfill of over-excavated slopes; proper selection and placement of fill in the development of final slopes; and avoidance of over excavation in the areas adjacent to the PG&E gas pipeline. Implementation of Mitigation Measure GEO-1 would minimize potential risks of seismic-related slope failure and landslide risk at the project site to a less-than-significant level.

Mitigation Measure GEO-1: Slope Stability Evaluation Report Recommendations

The operator shall implement all recommendations of the Westside Aggregate Quarry Slope Stability Evaluation Report (Slope Stability Report) prepared by ENGEO, dated November 5, 2024, and revised November 21, 2025. These recommendations are:

- *ENGEO, or another licensed professional geotechnical engineer approved by the County shall be retained to:*
 - *Observe soil conditions and collect soil samples during excavation operations to confirm the assumptions made in the Slope Stability Report.*
 - *Perform laboratory testing on the soil samples to confirm soil strength.*

- *Observe fill operations and perform compaction testing.*
- *Temporary slopes constructed to an average gradient no steeper than 0.75:1 should be considered marginally stable and be backfilled as soon as practical to avoid increased risk of slope failures.*
- *Temporary slopes should not be excavated beyond the planned permanent slopes in the Central Excavation Area adjacent to the PG&E gas transmission pipelines, as indicated in Figures 2 and 2B of the Slope Stability Report.*
- *Final slopes created from engineered fill should be constructed with soil that meets our strength parameters used in the Slope Stability Report for “fill,” as indicated in Table 2.8.3-1. Additionally, the fill should be free of organic material, debris, and particles greater than 8 inches in maximum dimension. Fill should be founded on relatively level ground with a gradient less than 6:1 and placed in horizontal loose lifts no thicker than 8 inches. Fill should be moisture conditioned to at least 1 percentage point above the optimum moisture content and compacted to at least 90 percent relative compaction (ASTM D1557). Loose material on the slope face to be filled should be removed during the fill operation.*

The operator shall require the geotechnical engineer to provide documentation of site visits, observations, and testing. These records should be made available to the County at their request.

Implementation of **Mitigation Measure GEO-1** would reduce the potential of the proposed project to directly or indirectly cause potential substantial adverse effects involving strong seismic ground shaking, seismic-related ground failure, or landslides to a less-than-significant level.

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

Less than Significant Impact. As discussed under Section 3.10, Checklist Question (c.i), the project would create basins of internal drainage such that runoff from the project site would not flow to Sand Creek during mining operations. Upon completion of mining, any Excavation Area not filled to grade would continue to drain internally. The project site would be reclaimed to rangeland, open space, and farmland, consistent with existing land uses and existing drainage patterns would largely be restored. Therefore, the potential of the proposed mining and reclamation activities to result in substantial soil erosion would be less than significant.

As discussed under Section 3.2, Checklist Question (a), Prime Farmland soils at the Plant Site would remain in place and be covered with a protective layer of fine-textured material rather than being excavated and stored. This approach would maintain agricultural soil function and prevent permanent loss of productivity of soils

at the Plant Site. Therefore, the project would not result in the loss of topsoil at the Plant Site.

As described in Section 2.2.3, above, and indicated in Figure 8, soils in the eastern one-third of the Central Excavation Area and across the Northern, Southeastern, and Eastern Excavation Areas have been subject to extensive disturbance such that the original soil materials are no longer in place. The Western Excavation Area includes three soil mapping units (River wash, Arand very gravelly sandy loam, and Hillgate Loam) and has not been subject to substantial disturbance beyond cattle grazing. The western two-thirds of the Central Excavation Area primarily contains soil mapped as Arand very gravelly sandy loam; the topsoil in this area is disturbed but the soil horizon materials are expected to still be in place. All soil material within the excavation areas would be removed as part of mining operation. The Reclamation Plan (Appendix A) requires the salvage of the top eight inches of the soil surface, where present. The salvaged soils would be used in reclamation and revegetation of the Excavation Areas after the completion of mining.

With preservation of the Prime Farmland soils at the Plant Site and the salvage and reuse of the surface soils present with the Excavation Areas, the potential of the proposed project to result in the substantial loss of topsoil would be less than significant.

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

Less than Significant Impact with Mitigation. See Checklist Question (a.ii-iv), above. The Slope Stability Report (Appendix D) indicates that, with implementation of Mitigation Measure GEO-1, the slope stability factors of safety for the proposed excavation slopes would be adequate. Thus, the potential of the proposed project to create unstable slopes that could result in landslide, lateral spreading, subsidence, or collapse would be less than significant with mitigation.

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

Less than Significant Impact. Soils with high clay content can be highly expansive. Expansive soils are typically very fine grained, with a high to very high percentage of clay. Such soils have a greater potential to shrink when dry and swell when wet. The associated changes in the soil due to these shrink-swell characteristics can affect the structural integrity of overlying buildings and facilities and cause damage to roads,

pipelines, and utilities. The shrink-swell potential of the Arbuckle Sandy Loam soil underlying the Plant Site is moderate.

The development of structures for the proposed project would primarily occur on the Plant Site. As described in Section 2.4.4, above, the project would develop the following facilities on the Plant Site: a screening and wash plant (i.e., processing plant), scalehouse/office (consisting of a portable building brought onsite) and truck scale, bathroom facilities (with a septic system or portables), fuel storage area, and shop for minor equipment maintenance. The project would not develop housing, and the structures proposed primarily consist of portable facilities. Structures requiring a building permit from the County would be required to meet the requirements of the Colusa County Building Code (Chapter 5 of the Colusa County Code) which generally includes a soils report detailing the composition and characteristics of the underlying soils. Regardless of the expansive potential of project site soils, the project does not propose any housing and would develop limited structures on the site, and thus would not create substantial risks to life or property. This impact would be less than significant.

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

Less than Significant Impact. The project may install bathroom facilities with a septic system on the site. Prior to installation, the Applicant would be required to obtain a permit from Colusa County Environmental Health and provide a plan developed to meet the requirements of Chapter 36, "On-Site Wastewater Treatment Systems," of the Colusa County Code. This process would include review of a soils report to ensure that site soils are capable of supporting the proposed system(s). If site soils are found not to be capable of supporting a septic system, portable bathroom facilities would be used. Therefore, the potential of the proposed project to develop a septic system in soils incapable of adequately supporting such would be less than significant.

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

Less than Significant Impact with Mitigation. The project site is located at the western margin of the Sacramento Valley with topography and land uses similar to those occurring throughout the region. There are no unique topographic, geologic, or physical features. Thus, the project would not directly or indirectly destroy a unique geologic feature.

As described in the Slope Stability Evaluation (Appendix D), the excavation sites are within the Sand Creek channel which consists primarily of Pleistocene-age deposits of the Riverbank and Modesto formations. The University of California Museum of Paleontology (UCMP) database contains 214 records within Colusa County (UCMP 2025). One locality within Sand Creek consisted of invertebrate specimens from the Cretaceous Period. None of the localities within the County were dated to the Pleistocene epoch and none were found within the Riverbank or Modesto formations. Similarly, a review of the Paleobiology Database (PBDB) Navigator identified 127 records in the project vicinity, with 16 fossil occurrences at Sand Creek (PBDB 2025). All 16 occurrences were within shale from the Cretaceous Period. However, fossils have been uncovered in Pleistocene-age deposits in the Sacramento Valley, and the possibility remains that previously undiscovered paleontological resources could be encountered during mining excavations. Implementation of Mitigation Measure GEO-2 requires the following if a paleontological resource is encountered: work to be halted in the immediate vicinity, notification of the County, and evaluation of the resource by a qualified paleontologist. This measure is consistent with Colusa County General Plan Policy CON 3-2.

Mitigation Measure GEO-2: Paleontological Resource Management

If a suspected paleontological resource is encountered during earthmoving activities, the Operator shall notify the County and all activity within 100 feet of the find shall halt until it can be evaluated by a qualified paleontologist. The paleontologist shall evaluate the resource. If unique, the paleontologist shall notify the County and the Operator and make recommendations for appropriate protections and preservation measures detailing fossil collection, analysis, and preparation for permanent curation at an approved repository within California. Work may only resume in the area when appropriate protections are in place and have been approved by the County.

Implementation of **Mitigation Measures GEO-2** would reduce the potential of the proposed project to cause a substantial adverse impact to paleontological resources to a less-than-significant level.

3.8 Greenhouse Gas Emissions

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Discussion

The following evaluation is based on the Air Quality Analysis (Appendix E) for the proposed project.

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

Less than Significant Impact. Greenhouse gases (GHGs) trap heat in the atmosphere and contribute to global climate change. The primary GHGs associated with human activity are carbon dioxide (CO₂), methane (CH₄), Nitrous Oxide (N₂O), perfluorocarbons (PFCs), hydrofluorocarbons, Sulfur hexafluoride (SF₆), and Sulfur Dioxide (SO₂). For reporting purposes, GHG emissions are typically expressed as carbon dioxide equivalents (CO₂e) to account for the varying global warming potentials of each gas.

The State of California has adopted comprehensive climate change policies, including AB 32 (Global Warming Solutions Act of 2006) and Senate Bill 32 (which requires a 40 percent reduction in GHGs below 1990 levels by 2030). The CCAPCD and Colusa County have not adopted thresholds of significance or a climate action plan for GHG emissions. Therefore, the project's GHG impacts were evaluated for consistency with CARB's 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan).

The 2022 Scoping Plan outlines California's strategy to achieve carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045 (CARB 2022). As documented in the 2022 Scoping Plan, in order to achieve statewide reduction targets, emissions reductions need to be obtained through a broad range of sources throughout the California economy. As described above, California's Cap-and-Trade Program is a key strategy to reduce GHG emissions from

covered entities that are responsible for about 85 percent of California's GHG emissions. The program's covered entities include electric power plants, fuel distributors (natural gas and petroleum), and large industrial facilities that emit more than 25,000 MTCO₂e per year.

For industrial facilities not subject to the Cap-and-Trade Program, multiple air districts have recommended a threshold of 10,000 MTCO₂e per year for industrial stationary sources. As discussed in detail in the Air Quality Analysis (Appendix E), this recommendation is based on studies completed by the Bay Area Air Quality Management District (BAAD), South Coast Air Quality Management District (SCAQMD), and the Sacramento Metropolitan Air Quality Management District (SMAQMD) that estimated GHG emissions from combustion sources at permitted facilities within the air district's jurisdictions and determined that the majority of GHG emissions from new permit applications were from stationary sources that would generate more than 10,000 MTCO₂e per year. In particular, the nearest air district to the CCAPCD to perform this type of evaluation, the SMAQMD, reviewed direct GHG emissions from permitted facilities within their jurisdiction and found that only about 2 percent of the permitted stationary sources generated GHG emissions over 10,000 MTCO₂e per year. In other words, the presence of heavy industrial facilities within SMAQMD's jurisdictional area is far lower than the BAAD and SCAQMD jurisdictional areas. However, because it is important economically to have a consistent threshold for stationary sources throughout California, SMAQMD has also recommended the use of the 10,000 MTCO₂e per year threshold for industrial stationary sources (SMAQMD 2014). Based on the recommendations and justifications provided by the BAAD, SCAQMD, and SMAQMD, the industrial stationary source GHG threshold of 10,000 MTCO₂e per year is used to evaluate the project's consistency with the 2022 Scoping Plan and potential to result in GHG emissions that may have a significant impact on the environment.

GHG emissions from the proposed project were estimated using CalEEMod, a statewide model recommended by CARB for quantifying construction and operational emissions. A detailed summary of the estimated annual emissions of CO₂e generated by the proposed project under a maximum production scenario of 2,000,000 tons per year is provided in Appendix A-10 of the Air Quality Analysis (Appendix E). The estimated annual CO₂e emissions from project operations are presented in Table 10, "Estimated Greenhouse Gas Emissions—Maximum Production," below.

TABLE 10
ESTIMATED GREENHOUSE GAS EMISSIONS—MAXIMUM PRODUCTION

Year of Operation	CO ₂ e (MT/year)
1	9,719
2	9,554
3	9,560
4	9,554
5	9,563
6	9,577

Source: Baseline Environmental Consulting 2025, Appendix E – Table 5

Notes: Estimates are based on the maximum annual production of 2 million tons per year.

Although electrified off-road equipment and haul trucks are not readily available or economically feasible for this project, off-road mobile equipment would use biodiesel or renewable diesel produced in place of conventional petroleum diesel for off-road diesel equipment, in compliance with the In-Use Off-Road Diesel-Fueled Fleets Regulation (Cal. Code Regs., tit. 13, §§ 2449 et seq.). Use of this renewable fuel would reduce GHG emissions relative to the use of conventional petroleum diesel (CARB 2026). Therefore, the actual project emissions of GHG would likely be lower than those presented in Table 10.

As shown in Table 10, at the maximum annual production of 2 million tons per year, project operations would generate a maximum of 9,719 metric tons (MT) of CO₂e per year, which is below the 10,000 MTCO₂e threshold of significance for industrial stationary sources. Emissions would be lower at lower rates of production. The estimated emissions include off-road equipment and other mobile sources (i.e., on-road vehicles used onsite and on-highway trucks), which are not typically subject to the GHG emissions threshold for industrial stationary sources. Therefore, this methodology is conservative in accounting for non-stationary sources. Additionally, the thresholds of significance are generally applied to long-term industrial uses. At the maximum annual production, the project would operate for a duration of five years, after which time the site would be reclaimed to land uses similar to the existing land uses of agriculture and open space, and GHG emissions would return to conditions similar to the existing condition. Furthermore, the project includes several features that promote efficiency relative to typical mining operations. In particular, the project would utilize conveyors instead of onsite diesel haul trucks to move materials from the Excavation Areas to the Plant Site. Electricity instead of fuel combustion would be relied on for the stationary Plant Site equipment and facilities, including the screening and wash plant.

In summary, even at maximum annual production and accounting for off-road equipment and mobile sources emissions sources, the estimated project GHG emissions are below the 10,000 MTCO₂e threshold of significance for industrial stationary sources. Additionally, project emissions of GHG would end at the completion of mining and reclamation. For these reasons, the potential of the proposed project to generate greenhouse gas emissions that may have a significant impact on the environment would be less than significant.

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

Less than Significant Impact. As discussed under Checklist Question (a) above, the CCAPCD and Colusa County have not adopted thresholds of significance or a climate action plan for GHG emissions, so the project's GHG impacts were evaluated for consistency with CARB's 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan). The 2022 Scoping Plan identifies actions and outcomes to achieve carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045 such as rapidly moving to zero-emission transportation; electrifying cars, buses, trains, and trucks; phasing out the use of fossil fuel gas used for heating homes and buildings; clamping down on chemicals and refrigerants; providing communities with sustainable options for walking, biking, and public transit; building out clean, renewable energy resources (such as solar arrays and wind turbine capacity) to displace fossil-fuel fired electrical generation; and scaling up new options such as renewable hydrogen and biomethane. These actions do not directly apply to the project's proposed mining and processing operations.

Electrified off-road equipment and haul trucks are either not readily available or economically feasible for the proposed project operations. The project would use renewable diesel instead of petroleum diesel, which would reduce the project's GHG emissions. Furthermore, the project would use conveyors instead of diesel-powered haul trucks to transport material from the Excavation Areas to the Plant Site; the use of conveyors is more energy efficient, and therefore results in fewer greenhouse gas emissions, than using diesel-powered trucks to move materials.

The project would result in a net increase in daily on-highway truck trips. For medium and heavy-duty trucks, California has the following regulations, strategies, and plans to reduce GHG emissions: Advanced Clean Cars II Program, Tractor-Trailer Greenhouse Gas Regulation, and Truck and Bus Regulation. The trucks visiting the project site would be subject to these regulations, strategies, and plans; therefore, the project would comply with the state GHG emissions reduction strategies for trucks. In addition, if the project is not implemented, it is reasonable to assume that the

demand for aggregate materials in the region would be met by other quarries, which would also generate GHG emissions from on-highway trucks. As summarized in Table 10, the project would generate less than 10,000 MTCO₂e per year; therefore, the project would be considered a relatively small industrial stationary source for GHG emissions that would not substantially contribute to climate change impacts or hinder the ability for California to achieve statewide GHG emission reduction targets under the 2022 Scoping Plan. For these reasons, the project would not conflict with the 2022 Scoping Plan and this impact would be less than significant.

3.9 Hazards and Hazardous Materials

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

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

Less than Significant Impact. Colusa County Environmental Health Public Works is the Certified Unified Program Agency (CUPA). The CUPA is the primary agency responsible for local enforcement of State and federal laws pertaining to hazardous materials and hazardous waste management, and is responsible for coordination of the following programs: Hazardous Materials Business Plan Program, Hazardous Waste Management Program, Underground Storage Tank Program, Aboveground Storage Tank Program, California Accidental Release Program (Cal ARP), Tiered Permitting Program. The role of a CUPA is to consolidate, coordinate, and make consistent the administrative requirements, permits, inspections, and enforcement activities associated with the regulation of hazardous materials and hazardous wastes (Colusa County 2025).

Chapter 6.95 of the Health and Safety Code establishes minimum statewide standards for Hazardous Materials Business Plans, including basic information on the location, type, quantity, and health risks of hazardous materials and/or waste. Each business must prepare a Hazardous Materials Business Plan if that business uses, handles, or stores a hazardous material and/or waste or an extremely hazardous substance in quantities greater than or equal to the following:

- 55 gallons for a liquid
- 500 pounds of a solid
- 200 cubic feet for any compressed gas
- Threshold planning quantities of an extremely hazardous substance

The proposed project would require the routine storage and use of hazardous materials typical of mining sites that use earthmoving equipment. Such hazardous materials include diesel fuel, coolant/antifreeze, hydraulic oil, diesel, diesel exhaust fluid, grease, engine oil, motor oil, and gear oil. The project proposes to store these materials within the Plant Site within a fuel storage area or a shop for minor equipment maintenance. A mobile fuel and lubrication truck would service equipment. The use and storage of hazardous materials at the project site would be subject to existing hazardous materials regulations enforced by the Colusa County CUPA. The operator would be required to prepare a Hazardous Materials Business Plan and a Spill Prevention, Control, and Countermeasure Plan. A Hazardous Materials Business Plan must include a hazardous materials inventory, a site map identifying the location of hazardous materials storage, an emergency response and

spill prevention plan, and a training program. A Spill Prevention, Control, and Countermeasure Plan must describe the locations of all aboveground petroleum storage tanks and information on the type of oil in each container and its storage capacity; the appropriate procedures for the routine handling of products; the discharge or drainage controls in place, such as secondary containment; countermeasures for discharge discovery, response, and cleanup; and methods of disposal of recovered material in accordance with applicable legal requirements. The Operator would be required to update the Hazardous Materials Business Plan annually and the Spill Prevention, Control, and Countermeasure Plan every five years in accordance with hazardous material regulations. Petroleum products would be stored in ASTs with appropriate secondary containment. In addition, any other oil products or hazardous materials in containers of 55 gallons or greater would be stored with appropriate secondary containment. No hazardous waste would be disposed of on the project site. All waste would be transported to a permitted/approved waste disposal facility.

Compliance with existing regulations and permit requirements would ensure that the proposed project does not create a significant hazard to the public or the environment related to hazardous materials.

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

Less than Significant Impact. As discussed previously, the proposed project would use and store hazardous materials consistent with an approved Hazardous Materials Business Plan and Spill Prevention, Control, and Countermeasure Plan to minimize the potential for spills and contamination and to guide response in the event of accident or emergency conditions. Compliance with these existing regulations, as overseen by the Colusa County Environmental Health Division, would ensure that the proposed project does not create a significant hazard to the public or the environment related to hazardous materials.

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

No Impact. The project site is in a rural, agricultural portion of the county and is not within one quarter mile of a school. Schools nearest to the project site are over four miles to the east, in the community of Arbuckle.

- d) Would the project 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?*

No Impact. The provisions of California Government Code Section 65962.5 require the SWRCB, DTSC, California Department of Health Services, and California Department of Resources Recycling and Recovery to submit information to the CalEPA pertaining to sites that were associated with solid waste disposal, hazardous waste disposal, and/or hazardous materials releases. The compilation of hazardous materials release sites that meet criteria specified in Section 65962.5 of the California Government Code is known as the “Cortese List” (CalEPA 2025).

Benchmark Resources conducted a review of hazardous materials release sites that meet criteria specified in Section 65962.5. The DTSC EnviroStor database and the SWRCB GeoTracker database were also reviewed (DTSC 2025; SWRCB 2025). There are no hazardous materials release sites identified on or near the project site. Therefore, the project is not located on a site which is included on a list of hazardous materials sites and would not create a significant hazard to the public or environment from the disturbance of such a site.

- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?*

No Impact. There are no airports within two miles of the project site (Colusa County Transportation Commission 2025). The nearest public airport for which an airport land use plan has been prepared is the Colusa County Airport approximately 12 miles northeast of the project site. The project site is not within the planning area for the *Colusa County Airport Land Use Compatibility Plan* (Colusa County 2014).

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

Less than Significant Impact. The *Colusa County Local Hazard Mitigation Plan Update* (Colusa County 2024b) documents the 2024 hazard mitigation planning process and identifies relevant hazards, community risk and vulnerabilities, and mitigation strategies that the participating jurisdictions will use to decrease vulnerability and increase resiliency and sustainability in the Colusa County Planning Area.

The project site is in a rural area of the County and is not located near any of the critical facilities identified in the *Colusa County Local Hazard Mitigation Plan Update* (Colusa

County 2024b) or along major roadways. The project does not propose any activities that would block or alter Cortina School Road. Furthermore, the project proposes to develop a box culvert under Cortina School Road to accommodate the movement of mined materials, process fines, and water between the Plant Site (on the west side of Cortina School Road) and the Northern, Eastern, and Southeastern Excavation Areas (on the east side of Cortina School Road). This design minimizes the need for internal truck traffic and equipment to cross Cortina School Road. Therefore, the potential of the proposed project to substantially impair the implementation of the *Colusa County Local Hazard Mitigation Plan Update* (Colusa County 2024b) would be less than significant.

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

Less than Significant Impact with Mitigation. As described under Section 3.20, Figure 25, “Fire Hazard Severity Zones,” shows the location of the project site in relation to State and local Fire Hazard Severity Zones. The project site west of Cortina School Road (i.e., those areas containing the Plant Site and Central and Western Excavation Areas) is located within a State Responsibility Area classified as a “High” Fire Hazard Severity Zone. The project site east of Cortina School Road is located in part in a Local Responsibility Area, with portions of the Northern and Southeastern Excavation Areas classified as “High” to “Moderate” Fire Hazard Severity Zones; the Eastern Excavation Area is not located in an area with a Fire Hazards Severity Zone designation (CAL FIRE 2024).

The project proposes temporary use of the site for a mineral extraction operation with minimal structures and would not introduce housing or businesses or otherwise attract significant numbers of people to the area. As described under Section 3.20, Checklist Question (b), the majority of the site consists of ruderal land that is sparsely vegetated and irrigated agricultural land, both of which provided limited fuels. The Western Excavation Area contains the majority of vegetation, which consists of grassland that is grazed by cattle.

For initial Plant Site development, existing orchards would be removed entirely from the Plant Site. During mining operations existing vegetation in ruderal lands and grasslands would be removed incrementally from Excavation Areas where the mining equipment would operate. During initial movement of heavy equipment into a vegetated area, there would be a risk of fire ignition from heated equipment exhaust or sparks contacting with vegetation, particularly during hot, dry periods and/or windy conditions. The use of other small-gas powered tools in vegetated areas of the site would also create risk of potential vegetation ignition from contact with heated

equipment, sparks, or other potential ignition sources. After removal of vegetation, mining would involve equipment operation and excavating in the areas where vegetation will have been removed, and the potential exposure of vegetation to ignition sources would be low, although some ignition risk would still be present when equipment is operated adjacent to areas where vegetation has not been cleared. Therefore, although the overall risk of fire ignition is low for the majority of the duration of mining operations, the project would introduce new potential ignition sources to the site. For these reasons, the potential for increased fire risk associated with the project is considered a potentially significant impact for the purposes of this Initial Study.

The potential risk of wildfire ignition and spread associated with project activities can be managed so that the potential for vegetation ignition is substantially reduced. Advance fire prevention and response planning and personnel fire awareness, reporting, and suppression training can lower the probability of ignition, and increase the probability that fire can be controlled and extinguished in its early stages. The implementation of Mitigation Measure FIRE-1 would require the operator to implement procedures to minimize wildland fire ignition risks during vegetation clearing and mining operations and to have measures in place for effective response should ignition occur.

Mitigation Measure FIRE-1: Wildfire Risk Reduction

During project activities within or adjacent to areas with potential fuel sources, the operator shall implement procedures to minimize wildland fire ignition risk. Measures shall be documented by the operator and shall include, but not be limited to, vegetation clearing sequencing and establishment of fire breaks where appropriate, vehicle and equipment parking and staging management to minimize the potential for vehicles and equipment to be parked or staged in or near areas of potential fire ignition sources, vehicle and equipment idling restrictions, use of spark arrestors and other equipment operations safety measures, worker smoking area establishment and restrictions, and water source availability for onsite emergency fire responses. The operator shall train all site workers in fire risk reduction measures and the appropriate response procedures.

Implementation of **Mitigation Measure FIRE-1** would reduce the potential of the proposed project to expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires to a less-than-significant level.

Upon completion of mining, the entire project site would be reclaimed to land cover types similar to existing conditions and therefore would not substantially increase plant cover or create other conditions that could exacerbate wildfire risks.

3.10 Hydrology and Water Quality

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

Discussion

The following evaluation is based on the following technical studies prepared for the proposed project:

- Hydrologic and Hydraulic Evaluation prepared by ENGEO (ENGEO 2024) and included as Appendix H.
- Hydrology Report prepared by EMKO (EMKO 2025) and included as Appendix I.

- *Water Supply Assessment for the Westside Aggregates Project* (Water Supply Assessment) prepared by EMKO (EMKO 2024a) and included as Appendix K.
- *Technical Memorandum: SMARA Runoff Analysis Westside Aggregates Reclamation Plan* (Runoff Analysis) prepared by EMKO (EMKO 2024b) and included as Appendix L.

Conditions that are currently present at the project site are part of the existing environmental setting. The existing environmental setting defines the baseline conditions against which potential environmental impacts are evaluated in this analysis.

Existing Meteorological Conditions

Rainfall data are available from the Western Regional Climate Center (WRCC 2024 cited in EMKO 2025) for the Colusa 2 SSW meteorological station (Colusa 2 SSW station). The Colusa 2 SSW station is the closest site to the Project with a sufficient historical record, especially data covering the past decade because that period includes some of the driest and wettest years recorded in the region. The average annual rainfall from 1949 through 2024 is 15.98 inches. The wettest year was 1995, with 32.78 inches of rainfall, while the driest year was 2021, with 5.31 inches of rainfall. The rainfall patterns in the region typically consist of several years of below-normal rainfall (i.e. drought periods) that are interrupted by one or two years with rainfall that is appreciably above normal.

Existing Watershed

The project site is on the western margin of the Sacramento Valley. Runoff from the east side of the Coast Ranges drains to the east toward the Sacramento River. Sand Creek runs along the southern boundary of the project site. Sand Creek is an ephemeral stream, typically flowing during and after major storm events but dry at other times. The channel is incised below the adjacent project site. The watershed area upstream of the project site is approximately 12,000 acres and reaches a maximum elevation of approximately 1,700 feet above mean sea level (msl). The project site elevation averages approximately 300 feet msl.

Existing Surface Water Quality

Water quality data for surface water bodies are available from the U.S. Geological Survey National Water Information System (NWIS) web interface (USGS 2024a cited in EMKO 2025). A single sample, collected on April 18, 1979, is reported for Sand Creek from a location approximately 5.75 miles upstream of the project site (i.e., in the Coast Range foothills), which is the only publicly available water quality data for this reach of Sand Creek. The sample results indicate that the water within Sand Creek is a sodium chloride water type with relatively elevated total dissolved solids and specific conductance levels. These elevated parameters, along with the sodium chloride water type, are interpreted to

be a result of the leaching of salts from the Cretaceous formations that form the upper Sand Creek watershed west of the project site and were deposited in a marine environment. They are part of the existing baseline condition.

The Central Valley Regional Water Quality Control Board (RWQCB) has established water quality goals to protect beneficial uses of surface water and groundwater within the Central Valley. These goals are presented in the *Water Quality Control Plan for the California Regional Water Quality Control Board Central Valley Region* (Basin Plan) (RWQCB 2019). Sand Creek is on the SWRCB Clean Water Act Section 303(d) list of impaired water bodies. Impairment is attributed to nutrients resulting in low dissolved oxygen levels (SWRCB 2024). Within the Central Valley of California, this type of impairment is generally associated with agricultural activities. Thus, the impairment generally occurs downstream of the project site, as there is little or no agriculture upstream of the project site.

Existing Groundwater Basin

The project site is located in the southwest part of the Colusa Subbasin, which is a subbasin of the larger Sacramento Valley Groundwater Basin. The Colusa Subbasin is designated as groundwater basin number 5-012.52 as defined in Bulletin 118 (Department of Water Resources 2006). The Colusa Subbasin is a high priority subbasin under the Sustainable Groundwater Management Act of 2014. The Colusa Groundwater Authority Groundwater Sustainability Agency and the Glenn Groundwater Authority Groundwater Sustainability Agency (jointly referenced as the “Groundwater Sustainability Agencies”) are to prepare the *Groundwater Sustainability Plan for the Colusa Subbasin* (Groundwater Sustainability Plan) (Groundwater Sustainability Agencies 2024). The Groundwater Sustainability Plan describes subbasin groundwater conditions, establishes Sustainable Management Criteria, and outlines measures intended to maintain groundwater sustainability and prevent long-term declines in water levels.

Groundwater in the project vicinity occurs under predominantly confined conditions within discontinuous sand and gravel lenses in the Tehama Formation. The Tehama Formation crops out in the hills to the west of the project site and dips below the ground surface to the east within the Colusa Subbasin. This is illustrated on the geologic cross section shown in Figure 26, “Geologic Cross Section of the Colusa Subbasin in Project Vicinity.” This geologic cross section extends from the foothills west of the project site to the Sacramento River. East of the project site, the Tehama Formation is over 1,500 feet thick. However, between Cortina Creek and the project site, the underlying Cretaceous rocks that form the bottom of the groundwater basin are much shallower than in the rest of the Colusa Subbasin, with maximum depths not exceeding 500 feet, as can be seen on

Figure 26. A small ridge in the basin bottom to the east of the project area isolates this shallower bedrock area from the rest of the subbasin.

Throughout most of the Colusa Subbasin, groundwater levels have been declining for several decades. This is illustrated in Figure 27, “Changes in Groundwater Elevation in the Colusa Subbasin.” As shown in Figure 27, overdraft and lowering of groundwater levels has been especially prominent in areas to the north, south, and east of Arbuckle, with reported declines ranging from 20 feet to 60 feet from 2006 to 2017. However, in the vicinity of the project site, groundwater levels have been stable to slightly increasing during that same period. This area of stable to slightly increasing groundwater levels corresponds to the area of shallower bedrock, described above and shown in Figure 27.

Existing Groundwater Quality

Groundwater quality data are available from the NWIS web interface for wells near the Project site. The two nearest wells are designated as Well 13N3W1G1 and 14N2W29J1 (USGS 2024b and 2024c, respectively; cited in EMKO 2025). Well 13N3W1G1 is located approximately one mile south of the project site at the Arbuckle Golf Club. Water samples for well 13N3W1G1 were collected and analyzed in 2006, 2016, and 2021 (USGS 2024b; cited in EMKO 2025). Well 14N2W29J1 is located approximately 2.65 miles east of the northern edge of the project site. Water samples for well 14N2W29J1 were collected and analyzed 16 times between July 1958 and May 1977 (USGS 2024c; cited in EMKO 2025).

Drinking water maximum contaminant levels (MCLs) are typically used to assess groundwater quality for groundwater that is not pumped and discharged to surface water. Primary MCLs are based on health-based criteria whereas secondary MCLs are based on aesthetic criteria, such as taste or scaling potential. For Well 13N3W1G1, the primary MCL for arsenic is exceeded and the secondary MCL (equal to the Basin Plan standard) for manganese is exceeded, in some but not all the samples collected. For Well 14N2W29J1, the secondary MCLs for aluminum, iron, and manganese are exceeded in some but not all samples.

In one or both wells, some of the samples exceed the Basin Plan standards for specific conductance, total dissolved solids, and copper but do not exceed the secondary MCLs for any of these parameters. The RWQCB (2019) Basin Plan water quality standards would generally only apply to groundwater if the wells were pumped and discharged to surface water that might reach the Sacramento River.

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

As described under Checklist Question (c), below, the Excavation Areas would drain internally and runoff from the Plant Site would be directed towards the Central Excavation Area. Thus, the site would be graded such that all stormwater is retained within the project site and would not enter federal or state waters. Therefore, the project would qualify for a notice of non-applicability (NONA) with respect to industrial stormwater regulations. The NONA, along with supporting technical documentation, would be submitted to the SWRCB through the Stormwater Multiple Application and Report Tracking System (SMARTS). Prior to the qualification for a NONA, initial construction of the project features (e.g., initial grading, topsoil removal and stockpiling, and construction of the Plant Site Area) would be conducted in compliance with the Construction General Stormwater Permit. Compliance would include preparation of a Stormwater Pollution Prevention Plan (SWPPP) and implementation of best management practices (BMPs) to prevent the release of pollutants during construction activities. The Construction General Permit SWPPP would identify BMPs that protect stormwater runoff, prevent unauthorized discharges, and ensure the avoidance of substantial degradation of water quality during final reclamation. Typical BMPs that are incorporated into construction SWPPPs to protect water quality may include the following:

- Covering stockpiled soil at the end of each workday.
- Vegetating landscaped/vegetated swale areas as soon as feasible following grading activities.
- Placing perimeter straw wattles to prevent off-site transport of sediment.
- Using drop inlet protection (filters and sandbags or straw wattles), with sandbag check dams within paved areas.
- Regular watering of exposed soils to control dust during demolition and construction.
- Implementing specifications for demolition/construction waste handling and disposal.
- Using contained equipment wash-out and vehicle maintenance areas.
- Maintaining erosion and sedimentation control measures throughout the construction period.
- Training, including for subcontractors, on general project site housekeeping.

During mining and processing operations, water for dust control and aggregate processing would be obtained from the 3-to-5-acre water supply pond within the

Northern Excavation Area. The pond would source water from local surface runoff, groundwater produced from onsite irrigation supply well, and water decanted from the settling ponds. While water from the irrigation supply well may exceed certain water quality standards, as discussed above in the “Existing Groundwater Quality” subsection (i.e., specific conductance, total dissolved solids, aluminum, arsenic, copper, iron, and manganese), water used for dust control and aggregate processing would not be released from the site and, therefore, would not affect the quality of offsite water bodies. Discharge of process water to settling ponds on the project site may be subject to a Waste Discharge Requirements (WDR) permit, which would be issued by the Central Valley RWQCB. The operator would be required submit a Report of Waste Discharge (RoWD) to the RWQCB defining the specific nature of the discharge to the settling ponds and the potential for this discharge to affect groundwater quality. However, given that the settling ponds would quickly seal themselves from percolation and that the depth to groundwater is over 300 feet below ground surface (ft bgs), it is likely that the RoWD would demonstrate that there would be no impact to groundwater quality and, thus, a WDR permit would not be required. If a WDR permit is issued, the protective measures and monitoring specified in that permit, such as verification of the silt seal on the bottom of the settling ponds, would protect groundwater quality and prevent any project-related violations of water quality standards related to aggregate processing.

Various hazardous materials, including petroleum products and maintenance chemicals (e.g., fuels, oil, cleaners, and solvents), would be used on the project site, primarily within the Plant Site, though a mobile fuel and lubrication truck would service equipment in other areas of the project site. Improper handling of such materials could result in impacts to water quality. However, as described under Section 3.9, Checklist Question (a), the proposed mining, aggregate processing, and reclamation activities would be subject to all applicable local, state, and federal hazardous materials management regulations as enforced by the Colusa County CUPA. The Construction General Stormwater Permit would require specific measures for the proper management of hazardous materials during site preparation. During mining operations, the operator would be required to prepare an HMPB and SPCC Plan, which would ensure such materials are safely stored and handled and that emergency response measures are in place in the event of contamination.

By complying with the requirements of the Construction General Permit, through implementation of a SWPPP and the specified BMPs, retaining stormwater runoff onsite during operations through a NONA, preventing impacts to groundwater from the settling ponds, and complying with the HMBP and SPCC Plan, the project would not cause any violations of water quality standards or waste discharge requirements

and would not otherwise substantially degrade surface water or groundwater quality. Therefore, this impact would be less than significant.

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

The proposed project would require water for various components of the operation. During processing operations, water consumption would occur through the application of water to control dust, the retention of water in the product after it leaves the wash plant (i.e., in stockpiles of marketable material and slurry consisting of wash water and fines that would be sent to settling ponds, as described in Section 2.4.5), and through evaporation from settling ponds and the proposed water supply pond. The application of water to control dust would be conducted throughout the Plant Site, on access roads between the Plant Site and the active mining areas, and in the active mining areas. Dust control within the Plant Site would include using water trucks to spray the roadways, using spray bars on the processing equipment, and potentially using a wheel wash system for gravel trucks leaving the facility. A detailed estimate of project water use was prepared as part of the Water Supply Assessment (Appendix K) and is provided below in Table 11, "Annual Water Use Estimates." The gross and net annual project use are estimated for maximum proposed annual production of 2 million tons per year with an approximately five-year project duration, and the average annual production of 350,000 tons per year with an approximately 30-year project duration.

TABLE 11
ANNUAL WATER USE ESTIMATES

Project Area	Acreage	Rate (af/acre)	Total (af)
DUST CONTROL			
Plant Site	23	1.05	24.2
Active Mining Area	5	1.05	5.25
Access Roads	4.5	1.05	4.7
Total	32.5	--	34
AGGREGATE PROCESSING			
<i>Moisture in Product</i>			
Annual Production	350,000	2,000,000	tons
Weigh Fraction Water	3.5	3.5	percent
Weight of Water	12,250	70,000	tons
Total Volume of Water	9	52	Acre-feet
POND EVAPORATION			
Water Supply Pond	5	2.40	12
Settling Ponds	5	2.4	12.0

Project Area	Acreage	Rate (af/acre)	Total (af)
Total	10	--	24
GROSS PROJECT DEMAND			
At 350,000 tons per year annual production	67	Acre-feet	--
At 2,000,000 tons per year annual production	110	Acre-feet	--
CURRENT ALMOND DEMAND			
Orchards to be Removed	23	2.4	55
Total	23	--	55
NET DEMAND			
At 350,000 tons per year annual production	12	Acre-feet	--
At 2,000,000 tons per year annual production	55	Acre-feet	--

Source: EMKO Environmental, Inc. 2024a (Appendix K – Table 2).

Notes: af = acre-feet; af/acre = acre-feet per acre; -- = not applicable to the parameter.

As shown in Table 11, the gross annual project water demand is estimated to be from 67 acre-feet/year for 350,000 tons per year annual production to 110 acre-feet/year for the 2 million tons per year annual production. However, the project would displace approximately 23 acres of almond trees. The net irrigation demand for those 23 acres is approximately 55 acre-feet/year. Since the almonds are irrigated with both imported surface water and groundwater from the supply well that would be used for the project, removal of the 23 acres of almonds for the project would allow the imported surface water to be used in other parts of the property owner's orchards, thus reducing groundwater demand for the almonds. As a result, the net groundwater demand for the project would range from 12 acre-feet/year for 350,000 tons per year annual production to 55 acre-feet/year for the 2 million tons per year annual production.

Water for the project would be supplied by the existing irrigation well located along the west side of APN 018-250-030, just south of the Northern Excavation Area. The borehole for the well was drilled in September 2015 and completed to a depth of 1,030 ft bgs. The ground surface elevation at the well location is approximately 280 feet above mean sea level (ft msl). Gravel was encountered down to 20 ft bgs. Alternating layers of sand and clay are present below that depth to the total depth of the well. Groundwater is produced from multiple zones between 340 ft bgs and 1,000 ft bgs. On September 30, 2015, after the well was completed, the static depth to groundwater was reported at 337.3 ft bgs (approximately -57 ft msl). An 8-hour constant rate pumping test was conducted at that time, at a rate of 825 gallons per minute (gpm), with a total drawdown of 65.2 feet. Based on these values, the specific capacity of the well is 12.65 gpm/ft.

The Groundwater Sustainability Plan has established a representative groundwater level monitoring network consisting of approximately 48 wells. The two wells within

the monitoring network that are nearest the project supply well and are also located in the shallower part of the subbasin west of the small ridge in the Cretaceous bedrock (as discussed in the “Existing Groundwater Basin” subsection) are:

- 14N03W14Q003M (referred to herein as “Well 14Q”) – located approximately 2.25 miles northwest of the project supply well); and
- 13N02W20H002M (referred to herein as “Well 20H”) – located approximately 4.95 miles southeast of the project supply well.

These wells are shown in Figure 28, “Groundwater Sustainability Plan Monitoring Well Network.”

Analytical simulations were conducted as part of the Water Supply Assessment (Appendix K) to evaluate the potential drawdown at five locations relative to the project site and the effect such drawdowns would have on groundwater supplies relative to the Sustainable Management Criteria defined in the Groundwater Sustainability Plan (Groundwater Sustainability Agencies 2024). The five specific locations evaluated, and their respective distances from the project supply well, are:

- Eastern project boundary: 1,000 ft
- Nearest existing irrigation supply well: 2,155 ft
- Nearest potential domestic well: 2,600 ft
- GSP Monitoring Well 14Q: 2.25 miles (11,880 ft)
- GSP Monitoring Well 20H: 4.95 miles (26,135 ft)

A conservative (i.e., protective of the aquifer) approach to the analytical simulations to assess conditions was used so as to produce maximum drawdowns under two different operating scenarios:

- 1) In the first scenario, pumping from the project supply well would occur continuously at 825 gpm until the volume of groundwater needed on an annual basis is produced. This was done for both 350,000 tons per year and 2 million tons per year annual production. While this scenario is not realistic from an operations perspective, it illustrates the maximum potential drawdown at the target locations identified.
- 2) In the second scenario, pumping occurs continuously at the beginning of each week until the weekly groundwater demand is produced. To address seasonal variability in water demand, the average weekly demand was doubled under this scenario to address conditions during the driest part of the year, consistent with the conservative approach described above.

Table 12, “Simulated Drawdowns at Target Locations,” shows the simulated drawdowns under both scenarios at the target locations listed above.

TABLE 12
SIMULATED DRAWDOWNS AT TARGET LOCATIONS

Target Location	Distance from Project Well (feet)	Scenario 1 Drawdown ^a (feet)		Scenario 2 Drawdown ^b (feet)	
		12 af/yr ^c	55 af/yr ^d	12 af/yr ^c	55 af/yr ^d
Eastern Project Boundary	1,000	4.1	19.9	0.13	0.61
Nearest Irrigation Well	2,155	2.7	13.3	0.09	0.4
Nearest Domestic Well	2,600	2.4	11.7	0.08	0.3
GSP Well 14Q	11,880	0.3	1.4	0.01	0.01
GSP Well 20H	26,135	0.2	0.3	<0.01	<0.01

Source: EMKO Environmental, Inc. 2024a (Appendix K – Table 3).

Notes:

- Under Scenario 1, pumping would occur continuously at 825 gpm until the volume of groundwater needed on an annual basis is produced. While this scenario is not realistic from an operations perspective, it illustrates the maximum potential drawdown at the target locations identified.
- Under Scenario 2, pumping occurs continuously at the beginning of each week until the weekly groundwater demand is produced. This is a more realistic pumping scenario.
- Annual water use under 350,000 tons per year annual production.
- annual water use under 2 million tons per year annual production.

Table 12 indicates that operations at 2 million tons per year annual production would result in the largest drawdown. However, mining under this production level would occur for only five years. For comparison, the Groundwater Sustainability Plan defines interim management criteria for 2027, 2032, and 2037, and final criteria for 2042 (Groundwater Sustainability Agencies 2024). The groundwater elevations at Groundwater Sustainability Plan Monitoring Wells 14Q and 20H already meet the 2027, 2032, and 2037 interim criteria. Thus, potential production of 55 acre-feet per year for a period of about five years would not conflict with the longer-term goals and objectives of the Groundwater Sustainability Plan and would, therefore, not impede sustainable management of the Colusa Subbasin.

Furthermore, under Scenario 1, the drawdowns shown in Table 12 would occur for no more than 3 to 15 days each year (to produce 12 acre-feet and 55 acre-feet, respectively) and then the groundwater levels would fully recover for the rest of the year. Under Scenario 2, the drawdowns shown in Table 12 would occur for no more than 3 to 14 hours each week (to produce 12 acre-feet and 55 acre-feet, respectively) and then the groundwater levels would fully recover for the rest of the week. The relatively small, temporary drawdowns, compared to the depth and thickness of the aquifer (about 500 feet in the vicinity of the project site), would not substantially

deplete groundwater supplies in the vicinity of the project. In addition, the relatively small, temporary drawdowns that would occur at the two Groundwater Sustainability Plan monitoring wells (Well 14Q and Well 20H, shown in Figure 28) would not contribute any consistent or persistent lowering of groundwater levels or the ability to achieve and maintain the Sustainable Management Criteria identified in the Groundwater Sustainability Plan. After completion of mining, groundwater use would cease and there would be no further impact on groundwater. Therefore, the potential of the proposed project to substantially decrease groundwater supplies in a manner that would impede sustainable groundwater management of the basin would be less than significant.

The development of impervious surfaces under the proposed project would be minimal. Impervious surfaces would be limited to minor paved roads and the footprints of several structures that would be located at Plant Site. As discussed below in Section 2.4.11, above, any runoff generated from the Plant Site Area would be conveyed to the Central Excavation Area, where it would percolate through the coarse alluvial soils. Thus, the potential of the proposed project to interfere substantially with groundwater recharge would be less than significant.

c.i) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would result in substantial erosion or siltation on- or off-site?

As described in Section 2.2.2, above, and shown in Figure 3, runoff from the majority of the project site, including the Western, Central, Southeastern, and Eastern Excavation Areas, sheet flows towards Sand Creek. An approximately 1.25-acre pond is present in the southwest corner of the proposed Northern Excavation Area. Runoff from a 66-acre watershed to the west of the project site is currently routed east towards the pond by a series of swales and ditches and through a culvert under Cortina School Road. The proposed Plant Site area currently drains northeast towards an agricultural ditch that flows to this pond. The Northern Excavation Area, which was previously mined, drains internally. The existing drainage patterns on the project site are shown on Figure 3.

Mining Period Drainage

Section 2.4.11, above, describes stormwater drainage during proposed mining operations. Drainage patterns are indicated in Figure 11.

As described under Checklist Question (a) above, initial construction of the project features (e.g., initial grading, topsoil removal and stockpiling, and construction of the Plant Site Area) would be conducted in compliance with the Construction General Stormwater Permit. Compliance would include preparation of a SWPPP and implementation of BMPs to prevent the release of pollutants during construction activities would prevent erosion and siltation on- and off-site.

Mining of the Excavation Areas would create basins of internal drainage and surface runoff would be retained within those basins. Therefore, mining operations within the Excavation Areas would not have the potential to result in substantial erosion or siltation on- or off-site.

As described under Checklist Question (b), above, limited impervious surfaces would be added during the operating period in the Plant Site. As part of the project, runoff from the Plant Site area would be directed to the south into the Central Excavation Area, potentially using ditches and berms, as necessary. The runoff directed into the Central Excavation Area would percolate into the coarse alluvial soils. Thus, there would be no offsite increase in runoff from the Plant Site, and the potential for substantial erosion or siltation on- or off-site due to the development and operation of the Plant Site would be less than significant.

Reclamation Period Drainage

Stormwater drainage patterns after site reclamation is complete are indicated in Figure 13.

Once mining is completed and the site is reclaimed, the Western Excavation Area would remain as an open basin and continue to retain any runoff from upslope areas. The Excavation Areas would be revegetated to achieve the biomass standards specified in the Reclamation Plan (Appendix A) and would be reclaimed to rangeland. The Central, Eastern, and Southeastern Excavation Areas would receive the same treatment, if left as open basins. However, it is possible that sediment ponds would be developed within these Excavation Areas, in which case the area of the sediment pond may be filled to surrounding grade. Regardless of whether or not fill is located within all or some of the Excavation Areas, the basins would also be revegetated to achieve 70 percent cover for erosion control as specified in the Reclamation Plan (Appendix A). Areas not filled to grade would drain internally, similarly to the Western Excavation Area. Areas filled to grade would sheet flow towards Sand Creek. The Runoff Analysis (Appendix L) for the proposed project shows that the sheet flow velocities would be less than one foot per second and would not have the potential to result in erosion or sedimentation. Therefore, with revegetation as required in the

Reclamation Plan, the drainage patterns of the reclaimed Western, Central, Eastern, and Southeastern Excavation Areas would not result in erosion or sedimentation on- or off-site.

With regard to the Northern Excavation Area, the majority of the area would be filled to the surrounding grade and graded to flow toward the northeast towards adjacent agricultural land. The area would be revegetated to achieve 70 percent cover for erosion control as specified in the Reclamation Plan (Appendix A). The relatively flat, revegetated surface would result in sheet flow of less than one foot per second and would not have the potential to result in erosion or sedimentation.

Once mining is completed, the impervious surfaces on the Plant Site would be removed, and the Plant Site area would be graded with a gentle slope to the northeast, similar to existing conditions. Under these conditions, runoff would return to existing drainage patterns, with sheet flow of less than one foot per second moving northeast towards the agricultural ditch.

Therefore, the potential for the proposed reclaimed conditions to alter drainage patterns in a manner which would erosion or sedimentation on- or off-site would be less than significant.

c.ii and iii) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site or would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

The project's potential to result in polluted runoff is evaluated under Checklist Question (a) and (c.i), above.

The proposed project would not alter the course of a stream or river. The project would add limited impervious surfaces to the Plant Site during mining operations and runoff from the Plant Site during mining would be directed towards the Central Excavation Area and would percolate into the coarse alluvial soils. Upon completion of mining, impervious surfaces would be removed from the Plant Site. The mining of the Excavation Areas would create basins of internal drainage. The reclaimed Northern Excavation Area, which currently drains internally, would be graded to sheet flow northeast towards adjacent agricultural lands. There are no existing or planned stormwater drainage systems in the adjacent downslope agricultural lands,

thus their capacity could not be exceeded. The existing 1.25-acre pond within the Northern Excavation Area would be expanded to a 3- to 5-acre pond during mining and would remain after site reclamation. Therefore, the potential of the proposed project to alter drainage patterns in a manner that would result in flooding on- or off-site or exceed the capacity of existing or planned stormwater drainage systems would be less than significant.

c.iv) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would impede or redirect flood flows?

The Hydrologic and Hydraulic Evaluation (Appendix H) prepared for the proposed project estimates the 10-, 25-, 50-, 100-, 200-, and 500-year return period peak flowrates and water surface elevations for the 10-, 25-, and 100-year event in Sand Creek. The 100-year water surface elevation is shown on Figure 19 relative to the proposed excavation areas. Based on these results, and as described in Section 2.4.11, above, the Western, Central, Southeastern, and Eastern Excavation Areas are located adjacent to Sand Creek but have been designed to be set back a minimum of 35 feet from the northern edge of the 100-year floodplain of Sand Creek for purposes of separating the operation from potential bank erosion. Additionally, the 100-year flood elevation is a minimum of three feet below the top of the channel adjacent to the proposed excavation areas. Therefore, the potential of the proposed project to alter existing drainage patterns in a manner which would impede or redirect flood flows would be less than significant.

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

As documented in the Hydrologic and Hydraulic Evaluation (Appendix H) and discussed under Checklist Question (c.iv), above, the project site is not within a flood hazard zone.

The project site is more than 60 miles from the Pacific Ocean and at elevations higher than 250 feet above sea level. Thus, the project site is not subject to inundation by a tsunami.

A seiche is an oscillating standing wave that forms in an enclosed water body due to atmospheric conditions or seismic waves (Bates and Jackson 1980; cited in EMKO 2025). The height of seiche waves is generally proportional to the size of the water body. The relatively small water bodies that would be part of the project, including the water supply pond and the settling ponds, are generally too small to generate

seiche waves with a height that would overtop the freeboard of the ponds. In addition, the settling ponds would typically be within mining excavations such that any overtopping would not result in any flows or release of pollutants outside of those enclosed areas.

Therefore, the potential of the proposed project to release pollutants due to inundation by flood water, tsunami, or seiche would be less than significant.

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

The Basin Plan is the master policy document that establishes the water quality objectives and strategies needed to protect designated beneficial water uses in the Central Valley region (RWQCB 2019). The SWRCB and RWQCB enforce compliance with the water quality objectives of the Basin Plan through the issuance of NPDES permits. As discussed under Checklist Question (a), above, initial project activities would be subject to the requirements of a Construction General Permit, which would require implementation of a SWPPP and the specified BMPs; stormwater runoff would be retained onsite during operations through a NONA; the operator would prepare a RoWD and, if necessary, obtain a WDR for the discharge of process water to settling ponds; and the operator would prepare and implement an HMBP and SPCC Plan to prevent and control the release of hazardous materials used and stored onsite. Therefore, compliance with existing regulations would ensure that the proposed project would not conflict with or obstruct the water quality objectives of the Basin Plan.

The project site is located in the southwest part of the Colusa Subbasin for which a Groundwater Sustainability Plan has been prepared (Groundwater Sustainability Agencies 2024). As discussed under Checklist Question (b), above, the Water Supply Assessment (Appendix K) evaluated drawdowns that would occur from pumping of the water supply well for the proposed project. The drawdowns estimated were small relative to the depth and thickness of the aquifer (about 500 feet in the vicinity of the project site), and would not substantially deplete groundwater supplies in the vicinity of the project. In addition, the relatively minor and temporary drawdowns that would occur at the two Groundwater Sustainability Plan monitoring wells (Well 14Q and Well 20H, shown in Figure 28) would not contribute to chronic lowering of groundwater levels or the ability to achieve and maintain the Sustainable Management Criteria identified in the Groundwater Sustainability Plan. Lastly, the quarry operation would be temporary, and upon completion of mining, no further groundwater usage would occur. Therefore, the potential of the proposed project to

conflict with or obstruct implementation of the Groundwater Sustainability Plan would be less than significant.

3.11 Land Use and Planning

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

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

No Impact. The project site is within a rural area more than 4 miles west of the nearest community, the town of Arbuckle. The project would not physically divide an established community.

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

Less than Significant Impact. The project site is designated by the Colusa County General Plan (2012) as Agricultural General (see Table 1) which is intended to preserve agricultural lands. Resource production, including mining, is an allowable use in each of the agricultural land use designations. The project site is zoned by the Colusa County Municipal Code as Exclusive Agriculture. Mining is an allowable use in this zone with issuance of a use permit. The project includes a request for a use permit; thus, project approval would ensure consistency with the County's land use designations for the site.

3.12 Mineral Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<i>Would the project:</i>				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

Discussion

a-b) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state or result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No Impact. The project proposes to fully develop the available mineral resources on the project site and would not result in the loss of availability of any valuable mineral resources.

3.13 Noise

<i>Would the project result in:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	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 ordinances, or applicable standards of other agencies?	☐	☒	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Discussion

This evaluation is based on the *Environmental Noise and Vibration Analysis* (Noise Report) prepared by Bollard Acoustical Consultants, Inc. (BAC 2025) and included as Appendix M to this Initial Study. The Noise Report discusses the fundamentals and terminology of noise and vibration, provides information regarding regulations and conditions pertaining to noise and vibration, and provides an analysis of potential noise and vibration impacts of the project.

Noise-Sensitive Receptors

Noise-sensitive receptors are locations where people reside or where noise could adversely affect land use, including residences, schools, hospitals, and recreational facilities. In the vicinity of the project site and proposed haul routes, sensitive receptors are rural residences on lands zoned for agricultural use, as well as residences within the town or Arbuckle, east of the project site.

Ten representative sensitive receptor locations were selected for evaluation based on their proximity to the proposed mining and processing areas, project haul roads, or both. Other receptors in the project vicinity are either represented by these ten locations or are at greater distances from project noise sources and therefore would have reduced noise

exposure relative to the representative locations. The locations of the receptors are shown in Figure 15 and indicates as R1 through R10.

An area immediately south of the project site includes two parcels zoned Rural Residential but which currently contains orchards and does not include any residences or other noise-sensitive land uses. Given that this area is in active agricultural production and not developed with residences or other noise-sensitive land uses, this area is not considered noise-sensitive for the purposes of the project CEQA review.

Baseline Ambient Noise Conditions

The existing ambient noise environment at sensitive receptors in the project vicinity is primarily influenced by local and regional traffic and by periodic agricultural activities including the operation of tractors, harvesting equipment, haul trucks, crop dusters, and other similar activities. To quantify existing conditions, a long-term (144-hour) continuous noise level survey was conducted at eight locations over a six-day period from August 13 through August 18, 2024. Noise-survey locations are shown on Figure 15 as Noise Measurement Sites A through H. The full methodology and results are provided in the Noise Report (Appendix M).

Baseline ambient noise levels at the nearest sensitive receptors to the project site and along local roads that would be used by project haul trucks were determined using the long-term survey data, with adjustments for distance from roadway noise sources. The baseline ambient noise levels for each sensitive receptor are summarized in Table 13, “Baseline Ambient Noise Conditions at Nearest Sensitive Receptors.”

The sensitive receptors nearest to the project site and truck routes are currently exposed to day/night noise level (DNL) values ranging from 44 to 60 dBA, with daytime hourly average noise levels (L_{eq}) ranging from 41 to 57 dBA L_{eq} . Maximum daytime noise levels (L_{max}) at these receptors ranged from 69 to 85 dBA L_{max} . Nighttime ambient conditions were lower than daytime conditions, as expected in rural locations affected primarily by local traffic noise.

TABLE 13
BASLINE AMBIENT NOISE CONDITIONS AT NEAREST SENSITIVE RECEPTORS¹

Receptor ^{1,2}	DNL ³	Daytime (7 am – 10 pm)		Nighttime (10 pm – 7 am)	
		L_{eq}	L_{max}	L_{eq}	L_{max}
1	48	46	72	39	61
2	44	41	69	35	60
3	48	46	72	39	61
4	48	46	72	39	61
5	48	46	72	39	61

Receptor ^{1,2}	DNL ³	Daytime (7 am – 10 pm)		Nighttime (10 pm – 7 am)	
		L _{eq}	L _{max}	L _{eq}	L _{max}
6	56	55	85	47	76
7	58	54	78	51	76
8	51	45	74	43	70
9	60	57	76	51	71
10	59	54	85	52	80

Source: Bollard Acoustical Consultants, Inc. 2025 (Appendix M – Table 2)

Notes:

- 1) Receptors 1 and 2 were monitored directly. Receptors 3 and 4 are represented by monitoring Site A. Ambient noise levels at Receptors 5 through 10 were computed using the relative distances between the noise survey sites and sensitive receptor sites with the standard sound attenuation algorithm (4.5 dBA decrease per doubling of distance from the noise source for a moving point source), to develop offsets to the Table 1 measurement data based on receptor distances from public roadways.
- 2) Receptor locations are shown in Figure 15.
- 3) DNL = Day/Night Average Noise Level. L_{eq} = hourly average noise level. L_{max} = maximum noise level. Additional explanation and definitions of acoustic terminology are provided in the Noise Report (Appendix M).

Thresholds of Significance

The Colusa County General Plan Noise Element, adopted July 31, 2012, contains the County's goals, objectives, policies, and action items that seek to reduce community exposure to excessive noise levels through the establishment of noise level standards for a variety of land uses. Additionally, Chapter 13 of the Colusa County Code, "Noise Regulations," contains provisions pertaining to quantitative and qualitative noise levels and exposures. These regulations are presented in the Noise Report (Appendix M). Based on these regulations, the thresholds described below were applied in the analysis of noise and vibration impacts for this project.

Thresholds for On-Site Project Noise and Vibration Sources

On-site project noise sources would include excavation operations, transporting aggregate materials to the processing plant, processing operations, and loading of aggregate materials into trucks for delivery to market. Typical hours of mine operations would be Monday through Friday, from 4 a.m. to 6 p.m. However, depending on customer demand for aggregate products, operations could occur 24-hours per day. Both daytime (7 a.m. to 10 p.m.) and nighttime (10 p.m. to 7 a.m.) standards are relevant for the project evaluation and are described below.

The County General Plan contains noise standards applicable to non-transportation noise sources on private lands, such as those associated with the project. Noise standards applicable to assessing the project's onsite noise impacts are as follows:

- 55 dBA L_{eq} (hourly average), at noise-sensitive exterior areas during daytime hours (7 am – 10 pm).
- 45 dBA L_{eq} (hourly average), at noise-sensitive exterior areas during nighttime hours (10-pm – 7 am).

- 45 dBA $L_{\max}$ (maximum), at sleeping areas within any residence any time of the day or night.

The noise standards in the Colusa County Code are detailed in the Noise Report (Appendix M) and are similar to the noise standards in the County General Plan, though less restrictive in terms of nighttime noise. The County General Plan exterior noise standards are applied in this analysis as they provide the greatest protection to existing noise-sensitive uses (i.e., residences) in the project vicinity. Satisfaction of the Colusa County General Plan standards for exterior noise would also ensure satisfaction of the standard for interior noise of 45 dBA $L_{\max}$ within the sleeping areas of residences.

In addition to the specific noise level standards above, General Plan Policy N 1-16 states, “In making a determination of impact under CEQA, a significant impact will occur if the project results in an exceedance of the noise level standards contained in this Noise Element, or the project will result in an increase in ambient noise levels by more than 3 dB.” An increase of 3 decibels (dB) is considered to be a “barely perceptible” increase, as described in the section “Effects of Noise on People”.

The County General Plan references the application of the exterior noise standards to the property plane or to the outdoor activity area of sensitive land uses. Because the noise-sensitive land uses evaluated for the project are existing residences in lands zoned for agricultural uses, this analysis considers the outdoor activity areas of the noise sensitive land uses for the purposes of assessing potential impacts.

Thresholds for Off-Site Project Noise Sources

Off-site project noise sources associated with the project will consist entirely of project-generated traffic; primarily over-the-highway truck traffic. The County General Plan provides maximum allowable noise exposure to transportation noise sources for various land use types, and specifies that exterior noise levels at residential land uses resulting from transportation noise sources shall not exceed 65 A-weighted decibels (dBA) within the I-5 corridor and 60 dBA DNL outside of the I-5 corridor.

In addition, the County General Plan Policy N 1-5 states that the following criteria shall be used to determine the significance of impacts for projects that increase roadway noise:

- Where existing traffic noise levels are less than 60 dB DNL at the outdoor activity areas of noise-sensitive uses, a +5 dB DNL increase in roadway noise levels will be considered significant;

- Where existing traffic noise levels range between 60 and 65 dB DNL at the outdoor activity areas of noise-sensitive uses, a +3 dB DNL increase in roadway noise levels will be considered significant; and
- Where existing traffic noise levels are greater than 65 dB DNL at the outdoor activity areas of noise-sensitive uses, a +1.5 dB DNL increase in roadway noise levels will be considered significant.

Vibration Standards

Policy N 1-15 of the Colusa County General Plan Noise Element states, “As part of the review of new development projects, consider vibration impacts and require mitigation to reduce any significant adverse impacts to the maximum extent feasible and practical.” Further, Action N 1-K of Policy N 1-17 of the Noise Element states, “As part of the project review and approval process, require construction projects and new development anticipated to generate a significant amount of ground borne vibration to ensure acceptable interior vibration levels at nearby noise-sensitive uses based on Federal Transit Administration criteria.” Therefore, the vibration thresholds of significance used for evaluation of the project are based on the Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual* (2018). Based on the FTA guidance, the criteria used in this analysis for assessing vibration damage to structures conservatively uses a vibration level of 90 vibration decibels (VdB) which is the minimum level at which the onset of damage to extremely susceptible buildings would be anticipated to occur and to assess potential vibration annoyance uses 75 VdB for continuous vibration sources and 85 VdB for transient vibration sources.

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

Less than Significant with Mitigation Incorporated. Project implementation would increase ambient noise levels in the vicinity of the project site and along routes used by project haul trucks as a result of construction of the Plant Site facilities, on-site mining and process operations, and off-site haul truck traffic.

Construction Noise

Construction of the project processing plant would generate temporary noise primarily associated with grading and paving of the Plant Site and erection of processing plant equipment. Predicted construction-related noise levels at the nearest sensitive receptors would be approximately 49 dBA L_{eq} or less, as summarized in

Table 14, “Predicted Construction Noise Levels at Nearest Receptors.” Construction activities would occur primarily during daytime hours and noise levels would not exceed the exterior noise thresholds for both daytime and nighttime periods, and would not exceed 3 dB of existing ambient conditions at nearby sensitive receptors. Therefore, the potential of project construction to result in a substantial increase in ambient noise levels or exceed applicable standards would be less than significant.

TABLE 14
PREDICTED CONSTRUCTION NOISE LEVELS AT NEAREST RECEPTORS

Receptor ¹	Distance (feet)	Predicted Median Noise Level (Leq dBA)
1	1,400	49
2	8,800	22
3	4,600	34
4	4,900	33
5	4,900	33

Source: BAC 2025 (Appendix M – Table 12).

Notes:

1) See Figure 15 for receptor locations.

On-Site Operational Noise

On-site noise generated by mining and processing operations could generate substantial noise at the nearest sensitive receptors to the project site. The nearest sensitive receptors are shown as Receptors 1 through 5 in Figure 15. Predicted daytime and nighttime noise levels associated with project onsite operations are presented in Table 15, “Predicted Daytime Noise Levels at Nearest Residential Receptors,” and in Table 16, “Predicted Nighttime Noise Levels at Nearest Residential Receptors,” respectively, based on the Noise Report (Appendix M).

TABLE 15
PREDICTED DAYTIME NOISE LEVELS AT NEAREST RESIDENTIAL RECEPTORS

Receptor ¹	Combined/Maximum Noise Level, dBA ²									
	Existing		On-Site Project Noise Sources		Existing + On-Site Project Noise		Increase Due to On-Site Noise Sources		3 dB Significance Criteria Exceeded?	
	Average (L _{eq})	Maximum (L _{max})	Average (L _{eq})	Maximum (L _{max})	Average (L _{eq})	Maximum (L _{max})	Average (L _{eq})	Maximum (L _{max})	Average (L _{eq})	Maximum (L _{max})
1	46	72	45	52	49	72	3	0	No	No
2	41	69	37	60	42	69	1	0	No	No
3	46	72	39	48	47	72	1	0	No	No
4	46	72	38	46	47	72	1	0	No	No
5	46	72	36	42	46	72	0	0	No	No

Source: BAC 2025 (Appendix M – Table 8).

Notes:

- 1) Receptor locations are identified in Figure 15. Because the next nearest residences are located over 8,000 feet from the project site, it was only necessary to model the 5 nearest residences (R1-R5) shown in this table. Due to the agricultural zoning of these residences the analysis location is at the outdoor activity area of the nearest residence itself, not the property line of the agricultural parcels containing the residences.
- 2) Data presented here represents combined predicted noise levels for all onsite noise sources; see Table 8 of the Noise Report (Appendix M) for detail of predicted noise levels by individual on-site noise sources.

TABLE 16
PREDICTED NIGHTTIME NOISE LEVELS AT NEAREST RESIDENTIAL RECEPTORS

Receptor ¹	Noise Level, dBA ²									
	Existing		On-Site Project Noise Sources		Existing + On-Site Project Noise		Increase Due to On-Site Noise Sources		3 dB Significance Criteria Exceeded?	
	Average (L _{eq})	Maximum (L _{max})	Average (L _{eq})	Maximum (L _{max})	Average (L _{eq})	Maximum (L _{max})	Average (L _{eq})	Maximum (L _{max})	Average (L _{eq})	Maximum (L _{max})
1	39	61	45	52	46	61	7 ³	0	Yes ³	No
2	35	60	37	60	39	60	4 ⁴	0	Yes	No
3	39	61	39	48	42	61	3	0	No	No

Receptor ¹	Noise Level, dBA ²									
	Existing		On-Site Project Noise Sources		Existing + On-Site Project Noise		Increase Due to On-Site Noise Sources		3 dB Significance Criteria Exceeded?	
	Average (L _{eq})	Maximum (L _{max})	Average (L _{eq})	Maximum (L _{max})	Average (L _{eq})	Maximum (L _{max})	Average (L _{eq})	Maximum (L _{max})	Average (L _{eq})	Maximum (L _{max})
4	39	61	38	46	42	61	3	0	No	No
5	39	61	36	42	41	61	2	0	No	No

Source: BAC 2025 (Appendix M – Table 9).

Notes:

- 1) Receptor locations are identified in Figure 15. Because the next nearest residences are located over 8,000 feet from the project site, it was only necessary to model the 5 nearest residences (R1-R5) shown in this table. Due to the agricultural zoning of these residences the analysis location is at the outdoor activity area of the nearest residence itself, not the property line of the agricultural parcels containing the residences.
- 2) Data presented here represents combined predicted noise levels for all onsite noise sources; see Table 8 of the Noise Report (Appendix M) for detail of predicted noise levels by individual on-site noise sources.
- 3) Receptor 1 predicted nighttime increase is specifically associated with processing plant operations.
- 4) Receptor 2 predicted nighttime increase is specifically associated with excavation (mining) within the westernmost portion of the Western Excavation Area.

As shown in Table 15, mining and processing operations are predicted to generate average daytime noise levels of 55 dBA Leq or less at the exterior areas of the nearest residences to the project site, and the project would not result in increases in either average (L_{eq}) or maximum (L_{max}) daytime ambient noise levels of more than 3 dB. Therefore, operations would not exceed the thresholds for daytime noise.

As shown in Table 16, nighttime noise could exceed the 45 dBA Leq threshold only at Receptor R1. In addition, *nighttime* noise increases would have the potential to exceed the 3 dB significance threshold at Receptor R1 during processing plant operation and at Receptor R2 during excavation activities within the westernmost portion of the proposed Western Excavation Area.

With regard to the nighttime exceedance at Receptor R1, Receptor R1 is the residence of the owner of several project parcels, including Parcel 018-250-009, where the proposed Plant Site would be located. Noise is subjective, and the owner of the residence has indicated that the estimated nighttime noise level of 46 dBA L_{eq} and nighttime noise level increase of 7 dBA is acceptable (Doherty, pers. Comm., 2026). This noise level is only 1 dBA greater than the 45 dBA L_{eq} threshold. Furthermore, typical attenuation for exterior noise inside of a building with windows closed is 25 dBA and with windows open is 15 dBA (U.S. Environmental Protection Agency 1974). Therefore, nighttime noise levels in the interior of the residence would be well below 45 dBA L_{eq} . For these reasons, the potential noise levels generated at Receptor R1 from operation of the Plant Site would be less than significant.

With regard to Receptor R2, Mitigation Measure NS-1 would prohibit nighttime excavation or other heavy equipment operation within 1,600 feet of Receptor R2, which would avoid the potentially significant increase of nighttime noise levels at this receptor.

Mitigation Measure NS-1: Maintain Buffer During Nighttime Hours

Excavation or other activities involving heavy equipment operation within 1,600 feet of the residence represented by Receptor R2 shall be prohibited between the hours of 10 p.m. and 7 a.m.

Implementation of Mitigation Measures NS-1 would reduce the potential impact of nighttime noise to a less than significant level.

Off-Site Truck Traffic Noise

Project operations would generate noise from over-the-highway haul truck traffic along local roadways. Figure 15 shows the truck routes (Project Truck Routes) and the

nearest sensitive receptors to the project site and to the routes (Receptors R1 through R10). The Noise Report (Appendix M) estimated project truck-generated noise levels at the nearest sensitive receptors under the maximum proposed annual production level of 2 million tons per year. The truck-generated noise levels were added to the existing measured noise levels to determine the project-generated increase that could occur at the residences located along project haul routes. The results are summarized in Table 17, “Maximum Predicted Noise Levels at Receptors Along Haul Routes in the Project Vicinity.”

TABLE 17
MAXIMUM PREDICTED NOISE LEVELS AT RECEPTORS ALONG HAUL ROUTES IN THE PROJECT VICINITY

Receptor ¹	Day/Night Average Noise Level (DNL), dBA					
	Existing	Project	Existing + Project	Increase	Impact Threshold ²	Threshold Exceeded?
1	48	32	48	0	5	No
2	44	24	44	0	5	No
3	42	39	43	1	5	No
4	45	43	47	2	5	No
5	48	37	48	0	5	No
6	56	57	60	4	5	No
7	56	56	59	3	5	No
8	51	53	55	4	5	No
9	60	53	60	0	3	No
10	59	48	60	1	5	No

Source: BAC 2025 (Appendix M – Table 10).

Notes:

- 1) Receptor locations are shown on Figure 15.
- 2) Thresholds are based on Colusa County General Plan Policy N 1-5

As shown in Table 17, project-generated traffic noise levels are not anticipated to exceed 60 dBA DNL at the exterior areas of existing residences located along the truck routes. Combined existing and project-related traffic noise levels would not exceed the 60-65 dBA dBA NDL exterior noise standard established by the County. In addition, the estimated increases in ambient noise associated with project truck traffic would be below the County’s thresholds for a significant noise increase. These increases are estimated for the truck trips generated under the maximum proposed annual production of 2 million tons per year and would be lower for lower annual production rates.

Because project-generated haul truck noise would comply with applicable County standards and would not result in substantial temporary or permanent increase in off-site noise levels, the potential of project truck traffic to generate a substantial increase in noise levels would be less than significant.

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

Less than Significant. Field observations documented in the Noise Report (Appendix M) indicate that ambient vibration levels in the project vicinity are negligible. As a result, the baseline ground vibration environment at nearby sensitive receptors and along proposed haul routes is minimal.

Project-related truck trips on public roadways would produce vibration levels similar to those from existing vehicles and trucks, and therefore would not increase vibration relative to existing conditions. During construction and operation of the project, groundborne vibration would be generated on the project site by heavy earthmoving equipment used for grading, paving, mining, and materials processing. The nearest vibration-sensitive receptor (Receptor R2 shown in Figure 15) is approximately 1,000 feet from the proposed western excavation area, which is the nearest potential onsite vibration source. At this distance, vibration levels would attenuate to approximately 39 VdB and would be well below thresholds associated with structural damage or human perception.

For these reasons, the potential of the proposed project to generate excessive groundborne vibration or groundborne noise would be less than significant.

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

No Impact. There are no airports within two miles of the project site (Colusa County Transportation Commission 2025: Figure 2-6). The nearest public airport is the Colusa County Airport located approximately 12 miles to the northeast of the project site. Implementation of the proposed project would not expose people in the project area to excessive noise levels related to airport operations.

3.14 Population and Housing

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	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)?	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Discussion

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

Less than Significant Impact. The project would employ approximately 12 workers on the project site during the life of the mining operation. It is anticipated that these jobs would be filled by people currently residing in or near the County and new housing for project workers would not be needed. Once mining is completed, the site would be reclaimed for agricultural and open space uses with no permanent onsite workers. As discussed under Section 3.19, "Utilities and Service Systems," Checklist Question (a), the project would not extend any permanent roads, utilities, or other infrastructure to undeveloped properties in the area and would not directly or indirectly induce unplanned population growth.

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

No Impact. There is no housing or other development currently on the project site. The project would not displace any people or housing.

3.15 Public Services

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

Discussion

a.i) 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 fire protection?

Less than Significant Impact. The portion of the project site generally west of Cortina School Road is designated by CAL FIRE (2024) as a high fire hazard severity zone within the State Responsibility Area (SRA). The eastern portion of the project site is designated as a moderate fire hazard severity zone within the Local Responsibility Area (LRA). The predominant vegetation type within the proposed Western Excavation Area is annual grassland, with areas of interior live oak woodland, while the majority of the site consists of ruderal land that is sparsely vegetated and irrigated agricultural land, both of which provide limited fuels. During mining operations, vegetation would be removed entirely from the Plant Site and incrementally from excavation areas where the mining equipment would operate. Because equipment would operate predominantly in areas where vegetation would be removed, there would be limited exposure of dry fuels onsite to ignition sources during project operations. Upon completion of mining, the entire project site would be reclaimed to land cover types similar to existing conditions and therefore would not substantially increase vegetative cover or create other conditions that could exacerbate wildfire risks. The project would add processing equipment and ancillary facilities at the site that would not be expected to pose an increased fire risk or require additional public fire protection facilities. The site would continue to be served by existing public fire protection services. This impact would be less than significant.

a.ii-a.v) 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 police protection, parks, schools, or other services?

Less than Significant Impact. As discussed in Section 3.14, above, Checklist Question (a), the project would employ approximately 12 workers on the project site during the life of the mining operation. It is anticipated that these jobs would be filled by people currently residing in or near the County. Once mining is completed, the site would be reclaimed for agricultural and open space uses with no permanent onsite workers. Therefore, the project would not bring a substantial number of new people to the area such that new law enforcement facilities, schools, parks, or other public facilities would be required to serve the area. This impact would be less than significant.

3.16 Recreation

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	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?	☐	☐	☒	☐
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?	☐	☐	☐	☒

Discussion

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

Less than Significant Impact. As discussed in Sections 3.14 and 3.15, the project would employ approximately 12 workers on the project site during the life of the mining operation. It is anticipated that these jobs would be filled by people currently residing in or near the County. Once mining is completed, the site would be reclaimed for agricultural and open space uses with no permanent onsite workers. Therefore, the project would not bring a substantial number of people to the region and would not have the potential to increase the use of existing neighborhood parks, regional parks, or other recreational facilities in a manner that could result in their substantial physical deterioration.

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?

No Impact. The project does not include recreational facilities nor would the project require the construction or expansion of recreational facilities. Therefore, the project would have no potential for adverse physical effects on the environment associated with such facilities.

3.17 Transportation

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	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?	☐	☒	☐	☐
b) Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☐	☒	☐

Discussion

To support the transportation impact analysis in this Initial Study, a *Transportation Impact Study for the West Side Aggregates Project* (TIS) was prepared by W-Trans (W-Trans 2026) and is included as Appendix N of this Initial Study. The TIS evaluates potential transportation impacts and operational effects associated with the project and was prepared in accordance with the criteria established by the County of Colusa and standard traffic engineering techniques. Additionally, this transportation impact analysis is supported by a *Pavement Analyses - Proposed Westside Aggregates Mine* (Pavement Analysis) prepared by Peters Engineering Group (Peters 2026) and included as Appendix O of this Initial Study.

The sections below describe the study areas and project trip generation and distribution developed for the analysis of the transportation impacts evaluated in this section. Additional details are available in the TIS and Pavement Analysis.

Transportation Study Areas

The study areas for transportation impacts evaluated in this section vary among topics. For pedestrian trips, the study area consists of all streets within a half mile of the project site that would lie along primary routes of pedestrian travel; for bicycle trips the study area consists of all streets within one mile of the project site that would lie along primary routes of bicycle travel; and for the safety and operational analyses the study area consists

of the project frontage and the following intersections as shown in Figure 29, “Study Intersections and Existing Lane Configurations”:

1. **Husted Road/I-5 North Ramps** is a two-way stop-controlled intersection located in the City of Williams. The northbound I-5 off-ramp is the only controlled approach. Note that due to the orientation of the interchange, the northbound off-ramp forms the east leg of the intersection.
2. **Husted Road/I-5 South Ramps** is a four-leg intersection in the City of Williams with stop controls on the southbound I-5 South off-ramp. All other legs are uncontrolled. As indicated for the northbound ramp intersection, the off-ramp is such that it forms the west leg of the intersection.
3. **Hahn Road/I-5 South Ramps** is a two-way stop-controlled intersection located in unincorporated Colusa County where only the southbound I-5 off-ramp approach is controlled by a stop sign.
4. **Hahn Road/I-5 North Ramps** is a two-way stop-controlled intersection in unincorporated Colusa County. The northbound I-5 off-ramp is the only stop-controlled approach.
5. **Hillgate Road/Putnam Way** is an all-way stop-controlled intersection located in the census-designated place of Arbuckle. Both the north leg of Putnam Way and the south leg of Wildwood Road are stop-controlled.
6. **Hillgate Road/I-5 North Ramps** is a four-legged intersection in the census-designated place of Arbuckle with two-way stop control. The northbound approach of the I-5 off-ramp and the southbound approach of 5th Street are stop-controlled.

Study area roadway segments considered in the Pavement Analysis (Appendix O) are:

- Husted Road between the Interstate 5 (I-5) northbound (NB) ramps and Meyers Road
- Meyers Road between Cortina School Road and Husted Road
- Cortina School Road between Meyers Road and Hillgate Road
- Hahn Road between Cortina School Road and the I-5 NB ramps
- Hillgate Road between Cortina School Road and the I-5 NB ramps

As shown in Figure 3 and described in Section 2.4.7, above, the project would be accessed via three driveways, one to the Plant Site on the west side of Cortina School Road and two to the Excavation Area on the east side of Cortina School Road. Cortina School Road is a two-lane undivided road classified as a major collector. The road has no posted speed limit, and pursuant to California Vehicle Code (CVC) Section 22439 the prima facie speed

limit for this segment of two-lane undivided roadway is 55 mph. The width of travel lanes varies in width between 15 and 20 feet.

Trip Generation

Based on the maximum proposed annual export of 2,000,000 tons of aggregate, the project would result in an average of 308 truckloads (616 one-way trips) per day, assuming use of trucks with an average carrying capacity of 25 tons and 260 operating days per year. This translates to an estimate of approximately 19 truckloads per hour (38 one-way trips) based on the proposed 16 operating hours per day. Two daily shifts of six employees each are anticipated for a total of 12 employees. For the TIS, each employee was assumed to generate an average of three automobile (i.e., car or light truck) trips per day, which includes commute trips as well as those trips that may be generated in the middle of a shift to obtain materials or supplies. Though most employees would arrive and depart outside the peak commute periods given the 16-hour work schedule, for the purposes of estimating the peak hour trip generation associated with employee travel, it was conservatively assumed that one peak hour trip would be made per employee per shift with two thirds of the trips inbound during the a.m. peak hour and outbound during the p.m. peak hour.

As shown in Table 18, “Project Trip Generation Summary—Average Trips at Maximum Annual Production,” the project would be expected to generate a total of 652 daily vehicle trips, with 44 of these occurring during each peak hour. Because trucks require more time to enter a roadway and accelerate to the free-flow travel speed, an equivalency factor of 3.0 passenger vehicles per truck was applied, which is consistent with standard traffic engineering practice. After applying the passenger car equivalency (PCE) factor of 3.0, and including both truck and employee trips, the project would be expected to generate 1,884 equivalent daily PCE trips with 120 of these occurring during each peak hour.

TABLE 18
PROJECT TRIP GENERATION SUMMARY—AVERAGE TRIPS AT MAXIMUM ANNUAL PRODUCTION

Type	Units	Daily Trips	AM Peak Hour			PM Peak Hour		
			Trips	In	Out	Trips	In	Out
Employees	12	36	6	4	2	6	2	4
Haul Trucks	308	616	38	19	19	38	19	19
<i>Haul Truck PCE Trips</i>	3.0	1,848	114	57	57	114	57	57
Total Vehicle Trips		652	44	23	21	44	21	23
Total PCE Vehicle Trips		1,884	120	61	59	120	59	61

Source: W-Trans 2026 (Appendix N – Table 3)

Notes: PCE = passenger car equivalent.

Trip Distribution

All haul trucks carrying aggregate from the site to delivery locations would travel on Cortina School Road to the north to Hahn Road, or to Husted Road via Meyers Road, from which the trucks could access I-5. Only empty trucks arriving at the site would use the Hillgate Road corridor. The anticipated trip distribution assuming moderate distribution among these various roads was developed for the TIS and Pavement Analysis in coordination with the applicant team based on anticipated routing and delivery locations. The inbound and outbound percentages are shown in Table 19, “Project Trip Distribution.”

TABLE 19
PROJECT TRIP DISTRIBUTION

Road Segment	Trips Inbound to Project Site (%)	Trips Outbound from Project Site (%)
I-5 north of Husted Road	58	18
Husted Road north of I-5	2	2
I-5 north of Hahn Road	16	60
Hahn Road east of I-5	2	2
I-5 south of Hahn Road	2	18
Grimes-Arbuckle Road east of I-5	2	0
I-5 south of Hillgate Road	18	0
Total (Percent)	100	100

Source: W-Trans 2026 (Appendix N – Table 5).

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

Less than Significant with Mitigation Incorporated. The Colusa County General Plan Circulation Element (2012) and the Colusa County Transportation Commission’s 2025 Colusa County Regional Transportation Plan adopted in November 2025 (2025 RTP) contain various goals, policies, action items, and objectives pertaining to Colusa County’s transportation and circulation system. Information in these policy documents was reviewed in preparing this impact discussion and assessment of the project’s potential to conflict with programs, plans, ordinances, and policies addressing the circulation system.

Relevant County General Plan Objectives and Policies identified for consideration in this analysis include the following:

Circulation Element (CIRC) Objective CIRC-1A: Maintain Safe and Efficient Operating Conditions on All County Roadways

Policy CIRC 1-5: Maintain LOS C or better for County roadways and intersections in the unincorporated County.

Policy CIRC 1-11: Require new development to: 1) finance and construct all off-site circulation improvements (including safety improvements) necessary to mitigate a project's transportation impacts to local roads, consistent with the policies of the General Plan; and 2) to analyze traffic impacts on the regional transportation system and require a fair-share contribution necessary to mitigate significant impacts to regional transportation improvements where a financing plan or other mechanism has been adopted to ensure the full funding and construction of improvements. Right-of-way dedication should be requested as a condition of a proposed new or widened major or minor collector.

Policy CIRC 1-12: Require new development and other projects with transportation impacts to pay their fair share cost of all feasible transportation improvements, including bicycle/pedestrian, transit, and safety, necessary to reduce the severity of cumulative transportation impacts.

Policy CIRC 1-13: Require specific plans, commercial and industrial projects, subdivisions, and other large-scale projects to implement appropriate transportation control measures to reduce vehicle miles traveled and traffic congestion.

Transit

The Colusa County Transit Agency provides dial-a-ride transit in the County of Colusa with fixed timed routes to various areas in the County. However, this does not include the rural project site area, and there are no transit routes within a half-mile walking distance of the project site. As there are no transit stops within a reasonable walking distance of the project site, the project would not have an impact on any transit facilities.

Bicycle Facilities

In the project area, the 6.2-mile segment of Cortina School Road between Hillgate Road and Meyers Road and the 4.7-mile segment of Hillgate Road between Cortina School Road and the I-5 overpass are identified as Class III bike routes in the County General Plan. A Class III bike route is a road that contains signing for shared use by bicyclists and motor vehicles within the same travel lane. Bicyclists may ride in the roadway along all other roads within the project study area although the other roads

lack a Class III designation. The County General Plan does not provide details on planned bicycle facilities; however, the 2025 RTP identifies goals and objectives that promote active transportation including bicycle and pedestrian transportation. The 2025 RTP identifies two short-term and long-term bicycle and pedestrian projects in the City of Williams, and does not identify any bicycle or pedestrian projects in unincorporated Colusa County.

Given the type of project and rural location, the project is not expected to generate any bicycle trips, nor would the project potentially impact any existing or planned facilities. The project site plan does not identify the provision of bicycle parking or storage facilities, as none are anticipated to be needed. Thus, the project would not conflict with applicable policies regarding bicycle facilities in the County's General Plan or the 2025 RTP.

Pedestrian Facilities

Due to its rural location, there are no pedestrian facilities such as sidewalks or crosswalks in the project vicinity. Cortina School Road is a rural road that provides access to orchards and farms. Sidewalks and streetlights are not provided, which is consistent with the rural character of the roadway. There are no plans for pedestrian facilities on Cortina School Road, and the lack of such facilities at the project site is consistent with the County's plans and code. As discussed above, the 2025 RTP identifies two short-term and long-term bicycle and pedestrian projects in the City of Williams and does not identify any bicycle or pedestrian projects in unincorporated Colusa County.

Given the type of project and the project site's rural location, it is anticipated that no project employees would walk to reach the project site. Thus, although the project would not construct any pedestrian facilities, the project is not considered to conflict with any Colusa County General Plan or 2025 RTP policies related to pedestrian facilities.

Traffic Operations

The project's contribution of trips on roads within the County and resulting effects on delay as measured by levels of service (LOS) is not an impact under CEQA. However, Colusa County General Plan Circulation Element Policy CIRC 1-5 states the County's policy to "maintain LOS C or better for County roadways and intersections in the unincorporated County." Although not directly relevant to this CEQA review of transportation *impacts* under CEQA, the TIS evaluates anticipated changes in intersection operations associated with project vehicle trips at study area intersections

and the analysis here is presented for informational purposes and assessment of the project for potential conflicts with General Plan Circulation Element policies.

As described in the “Trip Generation” subsection above, at peak annual production, the project is expected to generate an average of 652 daily trips with 44 occurring during the a.m. peak hour and 44 during the p.m. peak hour. However, due to the nature of the construction industry, haul truck activities can vary over the course of a year and fluctuations during peak haul periods may temporarily exceed the hourly average values shown in Table 18, above. It is anticipated that the project would have the potential to accommodate up to 30 trucks within a single hour during peak production. Table 20, “Project Trip Generation Summary—Peak Hourly Trips at Maximum Annual Production,” shows the estimated project trip generation based on the assumption of 30 trucks leaving the site per hour. The TIS performed a capacity analysis evaluating movement times and associated LOS based on the values in Table 20.

TABLE 20
PROJECT TRIP GENERATION SUMMARY—PEAK HOURLY TRIPS AT MAXIMUM ANNUAL PRODUCTION

Type	Units	AM Peak Hour			PM Peak Hour		
		Trips	In	Out	Trips	In	Out
Employees	12	6	4	2	6	2	4
Haul Trucks	308	60	30	30	60	30	30
<i>Haul Truck PCE Trips</i>	<i>3.0</i>	<i>180</i>	<i>90</i>	<i>90</i>	<i>180</i>	<i>90</i>	<i>90</i>
Total Vehicle Trips		66	34	32	66	32	34
Total PCE Vehicle Trips		186	94	92	186	92	94

Source: W-Trans 2026 (Appendix N – Table 4).

Notes: PCE = Passenger car equivalent.

For the capacity analysis, study intersections were analyzed using methodologies published in the Highway Capacity Manual (HCM), Transportation Research Board, 7th Edition, which complies with Colusa County General Plan Policy CIRC 1-4. This source contains methodologies for various types of intersection control, all of which are related to a measurement of delay in the average number of seconds per vehicle. Details of the analysis are provided in the TIS included as Appendix N of this Initial Study.

The capacity analysis considers existing and future (2045) traffic operations as measure by delay (time in seconds) and LOS (a letter grade of A – F based on delay) for conditions without the project and with the project. The results of the analysis are presented in Table 21, “Existing and Existing with Project Peak Hour Intersection Levels of Service,” and Table 22, “Future and Future with Project Peak Hour Intersection Levels of Service.” As shown in the tables, under existing conditions and

projected future conditions without the project, all intersections and stop-controlled approaches are predicted to operate at LOS C or better. With the addition of project trips using the trip distribution and generation assumptions in Tables 21 and 22 below, study area intersections are predicted to continue to operate at LOS C or better under existing conditions with the project and under future conditions with the project. Therefore, the project is not expected to cause or contribute to an LOS of D or worse and the project would not conflict with General Plan Circulation Element Policy CIRC 1-5 which seeks to maintain LOS C or better on County roads and intersections.

TABLE 21
EXISTING AND EXISTING WITH PROJECT PEAK HOUR INTERSECTION LEVELS OF SERVICE

Study Intersection Approach	Existing Conditions				Existing with Project Conditions			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Husted Rd/I-5 N Ramps	2.7	A	4.1	A	3.0	A	4.3	A
<i>WB (I-5 North Ramps)</i>	9.1	A	9.1	A	9.2	A	9.1	A
2. Husted Rd/I-5 S Ramps	7.3	A	6.2	A	7.1	A	6.3	A
<i>EB (I-5 South Ramps)</i>	10.3	B	9.7	A	9.7	A	9.3	A
3. Hahn Rd/I-5 S Ramps	5.3	A	6.3	A	4.2	A	4.8	A
<i>SB (I-5 South Ramps)</i>	10.5	B	11.0	B	9.8	A	10.2	B
4. Hahn Rd/I-5 N Ramps	3.5	A	3.4	A	4.2	A	4.0	A
<i>NB (I-5 North Ramps)</i>	9.1	A	8.9	A	9.2	A	9.0	A
5. Hillgate Rd/Putnam Way	11.6	B	10.9	B	11.8	B	11.2	B
6. Hillgate Rd/I-5 N Ramps	5.7	A	7.8	A	5.9	A	8.1	A
<i>NB (I-5 North Ramps)</i>	14.5	B	15.5	C	15.1	C	16.0	C
<i>SB (5th Street)</i>	12.6	B	11.0	B	12.6	B	11.0	B

Source: W-Trans 2026 (Appendix N – Table 10).

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in italics.

TABLE 22
FUTURE AND FUTURE WITH PROJECT PEAK HOUR INTERSECTION LEVELS OF SERVICE

Study Intersection Approach	Existing Conditions				Existing with Project Conditions			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Husted Rd/I-5 N Ramps	2.7	A	4.1	A	3.0	A	4.3	A
<i>WB (I-5 North Ramps)</i>	9.2	A	9.1	A	9.2	A	9.1	A
2. Husted Rd/I-5 S Ramps	7.3	A	6.3	A	7.2	A	6.3	A
<i>EB (I-5 South Ramps)</i>	10.5	B	9.8	A	9.9	A	9.3	A
3. Hahn Rd/I-5 S Ramps	5.3	A	6.3	A	4.3	A	4.8	A
<i>SB (I-5 South Ramps)</i>	10.7	B	11.3	B	10.0	B	10.2	B
4. Hahn Rd/I-5 N Ramps	3.5	A	3.4	A	4.1	A	4.0	A
<i>NB (I-5 North Ramps)</i>	9.2	A	9.0	A	9.3	A	9.0	A
5. Hillgate Rd/Putnam Way	12.2	B	11.4	B	12.4	B	11.2	B

Study Intersection <i>Approach</i>	Existing Conditions				Existing with Project Conditions			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
6. Hillgate Rd/I-5 N Ramps	5.8	A	8.8	A	6.1	A	9.1	A
<i>NB (I-5 North Ramps)</i>	<i>15.2</i>	<i>C</i>	<i>18.4</i>	<i>C</i>	<i>15.8</i>	<i>C</i>	<i>19.1</i>	<i>C</i>
<i>SB (5th Street)</i>	<i>13.0</i>	<i>B</i>	<i>11.7</i>	<i>B</i>	<i>13.1</i>	<i>B</i>	<i>11.7</i>	<i>B</i>

Source: W-Trans 2026 (Appendix N - Table 11)

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in italics.

Pavement Conditions and Maintenance

Consistent with General Plan Policies Circ 1-11 and 1-12, the Pavement Analysis (Appendix O) assesses the condition of existing pavement, existing truck traffic conditions, and the anticipated effect on the pavement of truck traffic resulting from the project. Pavement conditions and accelerated deterioration that would be anticipated as a result of the project's increase in both loaded and unloaded heavy-duty haul truck operation could contribute to roadway deterioration.

The pavement condition index (PCI) is a numerical rating of the pavement condition that rates the surface condition of the pavement. The PCI provides a measure of the present condition of the pavement based on the distress observed on the surface of the pavement, which also indicates the structural integrity and surface operational condition (localized roughness and safety). The PCI is used as a rational basis for determining maintenance and repair needs and priorities. PCI numerical ratings range from 0 to 100, with 0 being the worst possible condition and 100 being the best possible condition.

The study road segments were observed on June 25 and 26, 2025, and assessed for their PCI rating and general pavement conditions as listed in Table 23, "Summary of Roadway Pavement Conditions." Study road segments and their assessed general pavement condition are illustrated on Figure 30, "Study Road Segments Pavement Conditions."

TABLE 23
SUMMARY OF ROADWAY PAVEMENT CONDITIONS

Road	Segment	General Pavement Condition
Husted Road	I-5 to Meyers Rd	Fair
Meyers Road	Cortina School Rd to Husted Rd	Fair
Cortina School Road	Meyers Rd to Hahn Rd	Fair
Cortina School Road	Hahn Rd to Project	Very Poor
Cortina School Road	Project to Hillgate Rd	Failed ¹
Hahn Road	Cortina School Rd to I-5	Very Poor

Road	Segment	General Pavement Condition
Hillgate Road	Cortina School Rd to Reddington Ave	Good
Hillgate Road	Reddington Ave to I-5	Good

Source: Peters Engineering 2026 (Appendix N – Table 8).

Notes:

1) "Failed" includes unpaved roads.

The Pavement Analysis (Appendix O) estimated the traffic index (TI) for the project haul route roadway segments. The TI is a measure of the number of equivalent single axle loads (ESALs) expected over the design period of a roadway. Typical design periods are 20 years; however, a 30-year design period was considered herein as this is the maximum project duration during which project-generated haul trucks would use County roadways. The methodology for estimates of ESALs and TI is provided in the Pavement Analysis (Appendix O). Table 24, "Traffic Index Summary—30-Year Design Period," presents the results of the estimated TI values for the project haul route roadway segments.

TABLE 24
TRAFFIC INDEX SUMMARY—30-YEAR DESIGN PERIOD

Road	Segment	Direction	Traffic Index without Project	Traffic Index with Project
Husted Road	I-5 to Meyers Rd	NB	8.0	8.5
		SB	8.0	8.0
Meyers Road	Cortina School Rd to Husted Rd	EB	9.0	9.5
		WB	8.5	9.0
Cortina School Road	Meyers Rd to Hahn Rd	NB	7.5	8.0
		SB	7.0	7.0
Cortina School Road	Hahn Rd to Project	NB	7.0	9.0
		SB	7.0	7.0
Cortina School Road	Project to Hillgate Rd	NB	7.0	7.0
		SB	7.0	7.0
Hahn Road	Cortina School Rd to I-5	EB	8.0	9.0
		WB	8.0	8.0
Hillgate Road	Cortina School Rd to Reddington Ave	EB	7.5	7.5
		WB	7.5	7.5
Hillgate Road	Reddington Ave to I-5	EB	8.0	8.0
		WB	8.0	8.0

Source: Peters Engineering 2026 (Appendix N – Table 6).

As shown in the table, the TI for existing conditions *without* the project at each of the study segments is greater than the County-design standard of 5.0; therefore, the assumed County design standard pavement section is not adequate to accommodate the 30-year TI even without the project.

The TI estimates were then used to estimate pavement costs for conditions both with and without the project. The methodology for the estimated pavement costs is provided in the Pavement Analysis (Appendix O). Table 25, “Roadway 30-Year Cost Summary,” presents the estimated costs for development of the 30-year pavement design appropriate for project roadways under the no-project and with-project scenarios. The incremental difference that would be required to account for project-generated truck trips is also provided.

TABLE 25
ROADWAY 30-YEAR COST SUMMARY

Road	Segment	Direction	No-Project Cost	With-Project Cost	Project Difference
Husted Road	I-5 to Meyers Rd	NB	\$1,683,115	\$1,835,755	\$152,640
		SB	\$1,683,115	\$1,683,115	\$0
Meyers Road	Cortina School Rd to Husted Rd	EB	\$492,253	\$523,132	\$30,879
		WB	\$468,118	\$492,253	\$24,135
Cortina School Road	Meyers Rd to Hahn Rd	NB	\$2,470,038	\$2,608,827	\$138,789
		SB	\$2,233,444	\$2,233,444	\$0
Cortina School Road	Hahn Rd to Project	NB	\$1,621,049	\$2,171,705	\$550,656
		SB	\$1,621,049	\$1,621,049	\$0
Cortina School Road	Project to Hillgate Rd	NB	\$597,987	\$597,987	\$0
		SB	\$597,987	\$597,987	\$0
Hahn Road	Cortina School Rd to I-5	EB	\$2,608,827	\$2,992,126	\$383,299
		WB	\$2,608,827	\$2,608,827	\$0
Hillgate Road	Cortina School Rd to Reddington Ave	EB	\$2,709,074	\$2,709,074	\$0
		WB	\$2,709,074	\$2,709,074	\$0
Hillgate Road	Reddington Ave to I-5	EB	\$1,094,025	\$1,094,025	\$0
		WB	\$1,094,025	\$1,094,025	\$0
Totals			\$26,292,007	\$27,572,405	\$1,280,398

This Initial Study recommends mitigation requiring the project to contribute funding for road maintenance in an amount commensurate to the project’s incremental increase in TI and incremental increase in pavement maintenance costs over the life of the operation.

General Plan Policies Circ 1-11 and 1-12 require projects to fund fair-share costs of roadway improvements. Based on Table 25, a per-load fee for project pavement

impacts could be established by dividing the total additional pavement cost expected as a result of the project (\$1,280,398) by the total number of aggregate loads expected to be generated by the project (384,000 loads) resulting in a per-load fee calculation as follows: $\$1,280,398 / 384,000 = \$3.33$ per load. A per-ton fee for project pavement impacts can be calculated by dividing the per load fee by 25 tons per load: $\$3.33 \text{ per load} / 25 \text{ tons per load} = \$0.13$ (13 cents) per ton of material produced and transported from the site. As surface mining operations are required to report annual production in tonnage, annual payment of a per-ton fee is considered an appropriate and acceptable mitigation requirement as recommended in Mitigation Measure TR-1.

Mitigation Measure TR-1: County Road Maintenance Fee

The operator shall pay a roadway and pavement impact fee to Colusa County Public Works in the amount of \$0.1332 per ton of aggregate exported from the site. The funds provided by this fee shall be used by the County for activities related to maintenance or replacement of pavement on Husted Road, Meyers Road, Cortina School Road, Hahn Road, and Hillgate Road. The fees shall be paid by July 1 each year based on material sales during the preceding calendar year. With each annual payment, the operator shall submit a written record of material sold from the project site during each month of the preceding year, which shall be subject to verification through haul records, scale tickets, and other documentation deemed acceptable by Public Works.

Alternatively, an agreement with the Colusa County Public Works Department may be arranged in lieu of the payment of per ton fees that still provides the fair share funding over the life of the project. For example, the operator may fund roadway improvements along specific segments of County roads. Such an agreement shall require approval from the Colusa County Public Works Director.

With implementation of Mitigation Measure TR-1, the potential of the proposed project to conflict with General Plan Policies pertaining to funding of fair share costs for roadway maintenance would be less than significant.

Conclusion

Based on this review, the project would not conflict with any policies for transportation facilities and would therefore have a less-than-significant impact.

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

Less than Significant Impact. CEQA Guidelines Section 15064.6 pertains to determining the significance of transportation impacts. Subdivision (a) describes the purpose of the section discussing that vehicle miles traveled is the most appropriate

measure of transportation impacts, with “vehicle miles traveled” (VMT) referring to the amount and distance of *automobile* travel attributable to a project. Among other things, subdivision (a) specifies that a project’s effect on automobile delay shall not constitute a significant environmental impact.

Like many other jurisdictions in California, Colusa County has not adopted thresholds of significance for assessing VMT impacts under CEQA, and therefore, the potential for project-related VMT impacts was assessed based on guidance provided by the California Governor’s then-Office of Planning and Research in the publication *Transportation Impacts (SB 743) CEQA Guidelines Update and Technical Advisory*, 2018 (Technical Advisory). As noted on page 4 of the Technical Advisory, VMT refers to the distance traveled by on-road passenger vehicles such as cars and light trucks and does not require analysis of heavy-duty trucks such as those that would carry aggregate produced by the proposed project. Therefore, the VMT analyses considers employee commute trips pursuant to the Technical Advisory.

The Technical Advisory states, “projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact.” In consideration of the Technical Advisory and in consideration of the specific trip characteristics of the project and project region, it is determined that 110 trips per day represents an appropriate screening threshold for consideration of whether the project could have a significant impact associated with VMT and, therefore, if additional analysis is warranted.

The project would be expected to generate 36 new daily automobile (i.e., cars and light trucks) trips by employees. Since the project would generate fewer automobile trips than the Technical Advisory’s 110 trips per day small project screening threshold, the project may be presumed to result in a less-than-significant transportation impact related to VMT.

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

Less than Significant Impact. The TIS evaluates the potential for the project to impact safety in terms of the adequacy of sight distance and potential need for turn lanes at the project access driveway as well as the adequacy of existing dedicated turn lanes at study area intersections to accommodate additional queuing associated with project trips.

Access Driveway Sight Distance Analysis

Sight distances along Cortina School Road at the three driveway locations were evaluated based on sight distance criteria contained in the *Highway Design Manual* (HDM) published by Caltrans. The recommended sight distance at intersections of public streets, private streets, and rural driveways is based on corner sight distance with the approach travel speed used as the basis for determining the recommended sight distance; more corner sight distance is needed for making a left turn versus a right turn. Additionally, the stopping sight distance needed for a following driver to stop if there is a vehicle waiting or slowing to turn into the driveways was evaluated based on stopping sight distance criteria and the approach speed on the major street. Based on the analysis detailed in the TIS, W-Trans determined that sight lines at the location of the proposed project driveways would be adequate to accommodate all turns into and out of the site by trucks as well as passenger vehicles at the prima facie speed limit of 55 mph.

Site Access Turn Lane Analysis

The potential need for a left-turn lane at the Plant Site driveway was evaluated based on criteria contained in the *Intersection Channelization Design Guide, National Cooperative Highway Research Program* (NCHRP) Report No. 279 (Transportation Research Board 1985; cited in W-Trans 2026) as well as an update of the methodology published in the *Method For Prioritizing Intersection Improvements* (Washington State Department of Transportation 1997; cited in W-Trans 2026). Using these methodologies, W-Trans determined that a left-turn lane is not warranted on Cortina School Road at the project driveway under current or future volumes during either of the peak periods of project operations.

Queuing Analysis

The potential for queueing at the study intersections to extend past existing turn lane storage space and/or to extend onto the mainline of I-5 at the ramp terminals was assessed for peak future-with-project traffic volumes. Colusa County does not prescribe thresholds of significance regarding queue lengths. For this analysis, an increase in queue length due to project traffic would be considered potentially significant if the increase would cause the queue to extend out of a dedicated turn lane into a through traffic lane or cause the queue to extend into a visually restricted area, such as a blind corner. If queues within the project are expected to extend past a dedicated turn lane or into a visually restricted area without project traffic, the addition of project traffic would be considered to constitute a potentially significant impact only if project trips would cause a new unacceptable condition. For instance, if the queue were already beyond the turn lane and the project would cause it to extend into an adjacent intersection or a visually restricted area, in a manner that

would not occur without the project, a potentially significant impact would be identified.

Table 26, “Available Storage and Queues Under Future Conditions,” presents available storage and queue lengths under future (year 2045) conditions without and with the project. The analysis concludes that queues would remain within available stacking space under future conditions with the project. Since queues were found to remain within available storage under future with project conditions, queues would also be expected to remain with available storage under existing conditions with the project.

TABLE 26
AVAILABLE STORAGE AND QUEUES UNDER FUTURE CONDITIONS

Study Intersection Approach	Available Storage (feet)	95 th Percentile Queues (feet) ¹			
		AM Peak Hour		PM Peak Hour	
		Without Project	With Project	Without Project	With Project
1. Husted Rd/I-5 N Ramps					
NB Left Turn	115	0	1	1	1
WB Off-Ramp	700	5	5	7	7
2. Husted Rd/I-5 S Ramps					
SB Left Turn	165	4	5	2	2
EB Off-Ramp	680	5	6	4	5
3. Hahn Rd/I-5 S Ramps					
SB Off-Ramp	950	1	2	2	2
4. Hahn Rd/I-5 N Ramps					
NB Off-Ramp	1,100	8	8	8	8
5. Hillgate Rd/Putnam Way					
NB Right Turn	270	22	22	10	10
6. Hillgate Rd/I-5 N Ramps					
NB Off-Ramp	1,080	17	20	59	65

Source: W-Trans 2026 (Appendix N – Table 6).

Notes: All distances are measured in feet.

1) Data is for future year (2045) conditions without and with project trips.

Conclusion

Based on this review, the project would not substantially increase hazards due to a geometric design feature (e.g. sharp curves or dangerous intersections) or incompatible uses and would therefore have a less-than-significant impact.

d) Would the project result in inadequate emergency access?

Less than Significant Impact. Emergency response vehicles would be able to access the Plant Site via the project driveway from Cortina School Road. All on-site structures including the shop and processing plant would be accessible via a proposed 25-foot-wide (minimum), two-way access road. The final plant site layout and entrance drive would be developed in conformance with County Code and would require review and approval of the County Fire Chief to ensure the final access road design provides sufficient emergency access to areas within the processing plant site. As the project access would be designed to accommodate emergency vehicles, the project would have a less-than-significant impact on emergency access.

3.18 Tribal Cultural Resources

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

Discussion

a-i-ii) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historic resources as defined in Public Resources Code Section 5020.1(k), or 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 Resources Code

Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Less than Significant Impact. The following evaluation is based on the Archaeological Survey Report for the proposed project (Appendix E) to this Initial Study. The methodology for the report is summarized under the discussion of Section 3.5, above.

Ethnographic Background

The project site lies within Patwin territory. The Patwin had an expansive territory, covering much of the Southern Sacramento Valley and south to the San Pablo and Suisun bays. The Patwin were not a monolithic group but several separate tribelets with a close linguistic and cultural background. Ethnographic accounts report that the Patwin had strong religious beliefs. Patwin subsisted on a variety of resources found within the abundant rivers and wooded areas within their territories. Salmon, deer, duck, and acorns were staples in their diet. Salt was traded to the Pomo, and small game and pelts were traded with the Nomlaki, who traded beads in return.

The Patwin lived in villages located primarily along the Sacramento River, with one village serving as a tribelet center associated with the surrounding villages. The village of Yakut is described as being on the southern bank of Sand Creek. This village is likely a mile to two miles southwest of the project site, located further into the hills west of the project site.

Native American Outreach and AB 52 Consultation

As part of the preparation of the archeological survey for the proposed project, ALTA contacted the NAHC on June 14, 2024, to request a review of the Sacred Lands File for information on Native American cultural resources in the project site and to obtain a list of Native American contacts for consultation. The NAHC response, dated June 20, 2024, indicated that a search of the Sacred Lands File returned a negative result. The NAHC forwarded a list of suggested tribal entities to contact for additional input regarding the project.

On June 25, 2024, letters were sent to the Tribal Historic Preservation Officer (THPO) or appropriate representative of each tribal group identified by the NAHC as potentially affiliated with the project area. On August 2, 2024, ALTA received an email from Yvonne Perkins, THPO of the Yocha Dehe Wintun Nation, formally requesting to initiate consultation with the lead agency for the project. A hard copy of the request was received by ALTA on August 6, 2024. The Archeological Survey Report (Appendix J) provides copies of all Native American correspondence.

Pursuant to federal and state regulations, consultation has been initiated with affiliated tribes. The County of Colusa sent letters on June 25, 2025, to notify tribes in Colusa County of the proposed project and provide an opportunity for the tribes to consult with the County regarding the potential of the project to impact tribal cultural resources. The Yocha Dehe Wintun Nation requested the initiation of consultation on July 21, 2025. An initial meeting between the County of Colusa staff and Tribal representatives from the Yocha Dehe Wintun Nation was held via video conference on July 28, 2025. A site visit was then arranged and held on December 15, 2025. Tribal representatives recommended that tribal cultural resources sensitivity training be conducted for project construction personnel prior to implementation of the proposed project and for periodic monitoring to be conducted by a tribal monitor in certain areas.

Consultation is ongoing concurrent with the CEQA process.

Analysis

As described under Section 3.5, Checklist Question (a-b), no properties listed in or eligible for the National Register of Historic Places, California Historical Landmarks, or Points of Interest were identified within the study area. Additionally, no cultural resources were identified through the records search, literature review, Native American outreach, or archaeological field survey. Two historic-era cultural resources (P-06-000183 and P-06-000689) are documented within a half-mile of the project area (summarized in Table 7). The project activities are limited to ground disturbance onsite and would not result in impacts to offsite cultural resources.

However, the project site lies within Patwin territory and historic records indicate that the village of Yukat located southwest one to two miles southwest of the project area along Sand Creek. Therefore, it is possible that ground surface disturbance could inadvertently encounter buried historic and pre-historic cultural resources or human remains. Mitigation Measures CUL-1, CUL-2, and CUL-3 are provided to avoid adverse impacts to cultural resources under the proposed project through cultural resource training and reporting and evaluation of inadvertent discoveries of cultural resources or human remains. These mitigation measures are consistent with Colusa County General Plan Policy CON 3-2 for the treatment of the inadvertent discovery of cultural resources or human remains. With implementation of Mitigation Measures CUL-1, CUL-2, and CUL-3, the potential of the proposed project to cause a substantial adverse change in the significance of a tribal cultural resource would be less than significant.

3.19 Utilities and Service Systems

<i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☒	☐	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it had adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

Discussion

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

Less than Significant with Mitigation. The project would require construction of water and waste management infrastructure including ponds, drainage ditches, water and slurry lines, and bathroom facilities (with a septic system or portables). Electric power would be provided through connection to the existing PG&E powerlines along Cortina School Road. Mining and reclamation would occur in phases to minimize the

area of disturbance at any given time, and soil would be removed and stockpiled for reclamation no sooner than one year prior to mining activities to reduce erosion and runoff. These improvements are part of the proposed project, and their construction and operation are evaluated in this Initial Study. Implementation of Mitigation Measures BIO-1 through -10, FIRE-1, CUL-1 through -3, and GEO-2, identified in this Initial Study would reduce related impacts to a less-than-significant level.

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

Less than Significant Impact. The water demand for the proposed project consists of water needed for aggregate processing, water used for dust control, and water that evaporates from the Water Supply Pond and settling ponds. Water for the project would be supplied by the existing irrigation well located along the west side of APN 018-250-030, just south of the Northern Excavation Area.

A Water Supply Assessment (Appendix K) was prepared in accordance with California Senate Bill (SB) 610 and SB 1262 and provides an assessment of water supply adequacy for the project in accordance with California Water Code Sections 10910 through 10915. Based on the results of the Water Supply Assessment (Appendix K), Section 3.10, Checklist Question (b), evaluates the potential of the proposed project to impede the sustainable groundwater management of the Colusa Subbasin. Table 11 summarizes the annual water use estimated for the proposed project. Table 12 shows the simulated drawdowns for two scenarios at five target locations. As discussed in Section 3.10, Checklist Question (b), and detailed in the Water Supply Assessment (Appendix K), the annual net water demand for the project would range from 12 acre-feet/year for 350,000 tons per year annual production to 55 acre-feet/year for the 2 million tons per year annual production. This represents an extremely small percentage of the 510,000 af/year sustainable yield identified in the Groundwater Sustainability Plan. Furthermore, the results indicate that even at the maximum production scenario of 2 million tons per year:

- Groundwater elevations at Well 14Q and Well 20H (shown in Figure 28) would experience only minimal and short-term declines.
- Any drawdowns would be brief (hours to a few days) and fully recover between pumping events.
- The magnitude of these changes is negligible compared to normal seasonal and long-term groundwater fluctuations in the subbasin.

Pumping for the project would be intermittent and would therefore not have any consistent or persistent effect on the ability to maintain or achieve the Sustainable Management Criteria. Therefore, the project would have sufficient water available to serve the project and reasonably foreseeable development during single dry year and multiple dry year periods. This impact would be less than significant.

Upon completion of mining, the project site would be restored to open space, consistent with existing conditions. All impervious surfaces would be removed from the site, and no irrigation would be required to reclaim the site. Therefore, the reclaimed condition of the project site would have no impact on water supplies.

- c) *Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it had adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

No Impact. The project would either install bathroom facilities with a septic system or would provide portable bathroom facilities throughout the site. Any portable bathroom facilities would be serviced weekly by a third-party provider. Because wastewater would be managed onsite or offsite via commercial service, the project would have no impact on a wastewater treatment provider.

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

Less than Significant Impact. Topsoil and overburden material would be stockpiled and stored onsite for use in site reclamation. The mining operation would employ a limited workforce of approximately 12 and would not generate a substantial amount of solid waste. Additional waste would result from equipment maintenance at the Plant Site shop; however, this would also be minimal. Therefore, during operations, the proposed project would not have the potential to generate solid waste in excess of State or local standards and this impact would be less than significant.

Upon completion of reclamation, the project site would be returned to open space and would not generate solid waste. There would be no impact.

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

Less than Significant. The unused mined materials (i.e., process fines and unmarketable materials encountered within the excavations) would be managed and used entirely on site as part of reclamation. Some waste material would be generated at the Plant Site shop for minor equipment maintenance. The operator would be

required to prepare and obtain approval of a Hazardous Materials Business Plan, and all waste materials generated through equipment maintenance would be managed and disposed of in accordance with the plan. Additional solid waste would include small amounts of trash generated by the fewer than 20 workers on site, which would be collected in designated trash receptacles and disposed of through the County garbage collection service. Therefore, the project would comply with all federal, state, and local statutes and regulations related to solid waste, and this impact would be less than significant.

3.20 Wildfire

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

Discussion

Figure 25 shows the location of the project site in relation to State and local Fire Hazard Severity Zones. The project site west of Cortina School Road (i.e., those areas containing the Plant Site and Central and Western Excavation Areas) is located within a State Responsibility Area classified as a “High” Fire Hazard Severity Zone. The project site east of Cortina School Road is located in part in a Local Responsibility Area, with portions of the Northern and Southeastern Excavation Areas classified as “High” to “Moderate” Fire Hazard Severity Zones; the Eastern Excavation Area is not located in an area with a Fire Hazards Severity Zone designation (CAL FIRE 2024).

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

Less than Significant Impact. The *Colusa County Local Hazard Mitigation Plan Update* (Colusa County 2024b) documents the 2024 hazard mitigation planning process and identifies relevant hazards, community risk and vulnerabilities, and mitigation

strategies that the participating jurisdictions will use to decrease vulnerability and increase resiliency and sustainability in the Colusa County Planning Area.

As discussed under Section 3.9, Checklist Question (f), the project site is in a rural area of the County and is not located near any of critical facilities identified in the *Colusa County Local Hazard Mitigation Plan Update* (Colusa County 2024b) or along major roadways. The project does not propose any activities that would block or alter Cortina School Road. Furthermore, the project proposes to develop a box culvert under Cortina School Road to accommodate the movement of mined materials, process fines, and water between the Plant Site (on the west side of Cortina School Road) and the Northern, Eastern, and Southeastern Excavation Areas (on the east side of Cortina School Road). This design minimizes the need for internal truck traffic and equipment to cross Cortina School Road. Therefore, the potential of the proposed project to substantially impair the implementation of the *Colusa County Local Hazard Mitigation Plan Update* (Colusa County 2024b) would be less than significant.

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

Less than Significant Impact with Mitigation. The project site does not contain significant slopes and is not located along a ridgeline or otherwise exposed to extreme wind. The potential of the project to exacerbate wildfire risks is described in Section 3.9, “Hazards and Hazardous Materials,” Checklist Question (g) above. Although vegetation would be removed at the beginning of mining operations within the Excavation Areas, the project would introduce new potential fire ignition sources and activities within the project site and the analysis concludes that the increased fire risk is considered potentially significant. Mitigation Measure FIRE-1 presented in Section 3.9, Checklist Question (g), would require the operator to implement procedures to minimize wildland fire ignition risks during vegetation clearing and mining operations and to have measures in place for effective response should ignition occur. This would reduce the potential of the project to exacerbate wildfire risks to less than significant.

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

Less than Significant Impact with Mitigation. The project would not require the installation or maintenance of infrastructure outside of the infrastructure that would

be installed within the project site (e.g., internal roads, conveyors), the impacts of which are analyzed as part of the analysis of the proposed project in this Initial Study.

The proposed Plant Site facilities would connect to existing PG&E power lines located along Cortina School Road. Unpaved internal mine roads would be developed as needed to access the Excavation Areas. Unpaved roads already occur within the project site; however, additional mine roads would need to be installed within the site. Similarly, conveyors powered by electricity would be used to transport aggregate from the Excavation Areas to the Plant Site. The conveyors would be located adjacent to the internal mine roads to allow easy access for maintenance, and vegetation would be cleared along the route of the conveyors concurrent with the development of the internal mine roads. As discussed under Checklist Question (g) in Section 3.9, "Hazards and Hazardous Materials," above, the installation and use of this infrastructure would introduce new potential fire ignition sources. Per the analysis in Section 3.9, Checklist Question (g), activities within the project site could increase fire risk to a degree that is potentially significant. Mitigation Measure FIRE-1 presented in Section 3.9, Checklist Question (g), would require the operator to implement procedures to minimize wildland fire ignition risks during vegetation clearing and mining operations and to have measures in place for effective response should ignition occur. This would reduce potential risk associated with wildland fire hazards to a less-than-significant level.

Upon completion of mining, all conveyors would be removed and internal access roads not required for post-mining land use access would be reclaimed to open space. No emergency water sources or fuel breaks would be required during or after the completion of mining.

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

Less than Significant Impact. As described under criteria (b) above, the project site does not contain significant slopes, is not located along a ridgeline or otherwise exposed to extreme wind, and the majority of the site is sparsely vegetated ruderal land or irrigated agricultural land. The project site is located outside of the 100-year floodplain of Sand Creek and would not construct any permanent structures in close proximity to the creek. Upon completion of mining, the entire project site would be reclaimed to land cover types similar to existing conditions. For these reasons, the potential of the proposed project to expose people or structures to significant risks due to post-fire slope instability, runoff, or drainage changes would be less than significant.

3.21 Mandatory Findings of Significance

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

Discussion

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

This Initial Study evaluates the potential of the proposed project to degrade the quality of the environment. With incorporation of the mitigation measures described in this Initial Study, none of the environmental effects identified for the proposed project would have the ability to substantially reduce the habitat of a fish or wildlife

species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, eliminate important examples of the major periods of California history or prehistory, or otherwise degrade the quality of the environment. Thus, impacts concerning degradation of the environment and biological and cultural resources would be less than significant with mitigation measures incorporated.

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

This Initial Study evaluates the potential environmental effects of the proposed project. Section 3.3, Checklist Question (b) and Section 3.8, “Greenhouse Gas Emission,” indicate that there is an existing cumulative impact from the emission of criteria air pollutants and greenhouse gas emission. The project’s contribution to these impacts is analyzed in Section 3.3, Checklist Question (b) and Section 3.8, Checklist Question (a). As shown in these analyses, the potential of the proposed project to result in a cumulatively considerable contribution to impacts pertaining to criteria air pollutants and GHG emissions would be less than significant.

With regard to potential impacts pertaining to the other resource topics evaluated in this Initial Study, the project is located in a rural area and is not located along a major roadway. There are no projects are proposed in the project vicinity. There is one project that would generate traffic along the proposed project haul routes. The Saloon Energy Storage Project would generate traffic along multiple local roads, including Meyers Road and Husted Road. Traffic would primarily occur during a temporary construction period with an estimated duration of 12 months. Project operations would generate fewer than 10 daily trips (Dudek 2025). Based on the short duration of construction and the limited trips generated by operation of the Saloon Energy Storage Project, the potential of cumulative impacts related to transportation would be less than significant.

All potential project impacts were determined either to have no impact, to be less than significant following compliance with the established regulatory framework, or less than significant with implementation of mitigation measures. Based on the project site’s characteristics, the surrounding environment, the lack of project proposed in the vicinity of the project and its roadways, and the ability to mitigate potential project impacts to a less-than-significant level, the potential of the proposed project to result

in a cumulatively considerable contribution to a potential cumulative impact would be less than significant.

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

This Initial Study evaluates the potential environmental impacts of the proposed project, including effects that could cause a substantial adverse effect on human beings. With incorporation of the mitigation measures described in this Initial Study, none of the potential environmental effects of the proposed project would cause substantial adverse effects on human beings, either directly or indirectly.

REFERENCES AND RESOURCES

- ALTA Archaeological Consulting (ALTA). 2025 (May) *Archaeological Survey Report for Westside Aggregates Project*.
- Baseline Environmental Consulting. 2025 (December). *Air Quality, Greenhouse Gas, and Energy Analysis*. Westside Aggregates Project, Colusa County, California.
- Bates, Robert L. and Julia A. Jackson, 1980, *Glossary of Geology*, American Geophysical Union, Falls Church, Virginia. Cited in EMKO 2025.
- Beier, P., and S. Loe. 1992. A checklist for evaluating impacts to wildlife movement corridors. *Wildlife Society Bulletin* 20(4):434–440. Cited in WRA 2025.
- Benchmark Resources. 2025. *Westside Aggregates Reclamation Plan*.
- California Air Resources Board (CARB). 1998. Initial Statement of Reasons for Rulemaking; Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant.
- _____. 2022 (December). *2022 Scoping Plan for Achieving Carbon Neutrality*.
- _____. 2026. Biodiesel and Renewable Diesel website. Available online at: <https://ww2.arb.ca.gov/our-work/programs/alternative-diesel-fuels/biodiesel-renewable-diesel>. Accessed February 11, 2026.
- California Air Resources Board and California Air Pollution Control Officers Association (CARB/CAPCOA), 2015. Risk Management Guidance for Stationary Sources of Air Toxics. July.
- California Department of Conservation. 2025. California Important Farmland Finder. Available online at: <https://maps.conservation.ca.gov/DLRP/CIFF/>. Accessed November 4, 2025.
- California Department of Fish and Wildlife (CDFW). 2012 *Staff Report on Burrowing Owl Mitigation*.
- _____. 2024c. Biogeographic Information and Observation System. Biogeographic Data Branch. Sacramento, California. Online at: <https://wildlife.ca.gov/Data/BIOS>. Cited in WRA 2025.
- California Department of Forestry and Fire Protection (CAL FIRE). 2024. Fire Hazard Severity Zone Viewer. Available online at: <https://osfm.fire.ca.gov/what-we>

do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones. Accessed October 13, 2025.

California Environmental Protection Agency. 2025. Cortese List Background and History website. Available online at: <https://calepa.ca.gov/sitecleanup/corteselist/Background/>. Accessed December 7, 2025.

California Geological Survey. 2008. Guidelines for Evaluating and Mitigating Seismic Hazards in California.

_____. 2025a. Alquist-Priolo Earthquake Fault Zones. Available online at: <https://www.conservation.ca.gov/cgs/alquist-priolo>. Accessed December 5, 2025.

_____. 2025b. ArcGIS Web Map. Earthquake Zones of Required Investigation. Available online at: <https://maps.conservation.ca.gov/cgs/informationwarehouse/eqzapp/>. Accessed December 5, 2025.

California Department of Transportation (Caltrans). 2010. California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California. Prepared for California Department of Transportation, California Department of Fish and Game, and Federal Highways Administration. Available online at: <https://www.wildlife.ca.gov/Conservation/Planning/Connectivity/CEHC>. Cited in WRA 2025.

_____. 2026. California State Scenic Highway System Map. Available online at: <https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aaca>. Accessed February 4, 2026.

Central Valley Regional Water Quality Control Board (RWQCB). 2019. The Water Quality Control Plan (Basin Plan) for the California Regional Water Quality Control Board Central Valley Region. Fifth Edition, Revised February 2019 (With Approved Amendments). Available online at: https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/#basinplans.

_____. 2024. 2024 California Integrated Report

Colusa County. 2008. *Colusa County Voluntary Oak Woodlands Management Plan*.

_____. 2011 (November). *Public Draft Environmental Impact Report for the 2030 Colusa County General Plan Update (SCH# 2011062052)*.

_____. 2012 (Adopted July 31). *Colusa County General Plan*.

_____. 2014 (Adopted September 24). *Colusa County Airport Land Use Compatibility Plan*.

_____. 2024a. Interactive Map. Available online at: <https://www.countyofcolusaca.gov/139/Geographic-Information-Systems>. Accessed November 5, 2024.

_____. 2024b. *Colusa County Local Hazard Mitigation Plan Update*.

_____. 2025. Hazardous Materials & Waste (CUPA) website. Available on at: <https://www.countyofcolusaca.gov/426/Hazardous-Materials-Waste-CUPA>. Accessed December 7, 2025.

Colusa County Transportation Commission. 2025. *2025 Colusa County Regional Transportation Plan*. Adopted November 2025.

Colusa Groundwater Authority Groundwater Sustainability Agency and the Glenn Groundwater Authority Groundwater Sustainability Agency (Groundwater Sustainability Agencies). 2024. Colusa Subbasin Groundwater Sustainability Plan. Final Report – December 2021. Revised Report – April 2024.

Claassen, Vic. 2024 (September). *Conservation of Soils Resources at the Westside Aggregates Plant Site*.

_____. 2025 (July). *Field Assessment of Reclamation Soils and Vegetation Cover*. West Side Aggregates Reclamation Plan.

- Department of Water Resources. 2006. California's Groundwater Bulletin 118: Sacramento Valley Groundwater Basin, Colusa Subbasin. Available online at: <https://data.cnra.ca.gov/dataset/bulletin-118-update-2003-basin-reports>.
- Department of Toxic Substances Control (DTSC). 2025. EnviroStor. Available online at: <https://www.envirostor.dtsc.ca.gov/public/>. Accessed December 7, 2025.
- Doherty, Michael. Colusa County, CA. January 28, 2026 – email to Monika Krupa of Benchmark Resources regarding noise generated by project at personal residence.
- Dudek. 2025 (June). Initial Study/Mitigated Negative Declaration. Saloon Energy Storage Project. Prepared for QCELLS North America. Prepared by Dudek.
- EMKO Environmental, Inc. 2024a (July). *Water Supply Assessment for the Westside Aggregates Project*. Colusa County, California.
- _____. 2024b (October). Technical Memorandum: SMARA Runoff Analysis, Westside Aggregates Reclamation Plan.
- _____. 2025 (December). *Hydrology and Water Quality Analysis Report for the Westside Aggregates Project*. Colusa County, California.
- ENGEO. 2024. *Hydrologic and Hydraulic Evaluation of Sand Creek*. Westside Aggregates Project, Colusa County, California.
- _____. 2025a (November). *Slope Stability Evaluation Report*. Westside Aggregate Quarry, Colusa County, California.
- _____. 2025b (November). *Naturally Occurring Asbestos Geologic Evaluation*. Westside Aggregates Project, Colusa County, California.
- Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment Manual*.
- Field et al. 2013. Uniform California Earthquake Rupture Forecast, Version 3 (UCERF3)—The Time-Independent Model. USGS Open-File Report 2013-1165. CGS Special Report 228. Southern California Earthquake Center Publication 1792.
- M.T. Hall & Associates. 2024. Letter of Transmittal: Moisture Content. November 15, 2024.
- Office of Planning and Research. 2018. *Transportation Impacts (SB 743) CEQA Guidelines Update and Technical Advisory*.

- Pacific Gas and Electric (PG&E). 2015. *Nesting Birds: Species-Specific Buffers for PG&E Activity*.
- Paleobiological Database (PBDB). 2025. Paleobiological Database Navigator. Available at: <https://paleobiodb.org/navigator/#/91bf30e0>. Accessed December 6, 2025.
- Peters Engineering Group. 2026. *Pavement Analyses – Proposed Westside Aggregates Mine, Near the Intersection of Cortina School Road and Sand Creek Road, Colusa County, California*.
- Sacramento Metropolitan Air Quality Management District (SMAQMD). 2014. Justification for Greenhouse Gas Emissions Thresholds of Significance.
- Sacramento Valley Air Quality Engineering and Enforcement Professionals. 2024. *Northern Sacramento Valley Planning Area 2024 Triennial Air Quality Attainment Plan*.
- San Joaquin Valley Unified Air Pollution Control District. 2015. Amicus Curiae Brief of San Joaquin Valley Unified Air Pollution Control District.
- Soulé, M. E., and J. Terbough. 1999. Conserving nature at regional and continental scales - a scientific program for North America. *BioScience* 49(10):809–817. Cited in WRA 2025.
- South Coast Air Quality Management District (SCAQMD). 2015. Amicus Curiae Brief of South Coast Air Quality Management District.
- State Water Resources Control Board (SWRCB). 2012. *State Policy for Water Quality Control: State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*.
- _____. 2024. 2024 California Integrated Report. Available online at: https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2024-integrated-report.html. Accessed December 8, 2025.
- _____. 2025. GeoTracker. Available online at: <https://geotracker.waterboards.ca.gov/>. Accessed December 7, 2025.
- Swainson's Hawk Technical Advisory Committee. 2000 (May 31). Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley.
- Tehama County Air Pollution Control District (TCAPCD). 2015 (April). *Air Quality Planning & Permitting Handbook – Guidelines for Assessing Air Quality Impacts*.

- Transportation Research Board. 1985. Intersection Channelization Design Guide, National Cooperative Highway Research Program (NCHRP) Report No. 279. Cited in W-Trans 2026.
- UC Museum of Paleontology Localities. 2025. Available online at: <https://ucmpdb.berkeley.edu/>. Accessed February 11, 2025.
- U.S. Army Corps of Engineers (USACE). 1994. Hydraulic Stability of Natural Channels EM 1110-2-1418. 1994. Cited in ENGEO 2024.
- U.S. Department of Agriculture Natural Resources Conservation Service. 2024. Web Soils Survey. Available online at: <https://websoilsurvey.nrcs.usda.gov/app/>. Accessed October 4, 2024.
- U.S. Environmental Protection Agency, *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*, Appendix B, Table B-4, p. B-6, March 1974.
- U.S. Geological Survey (USGS). 2024a. National Water Information System (NWIS) web interface, Sand Creek water quality data, available at https://nwis.waterdata.usgs.gov/usa/nwis/qwdata/?site_no=385935122133001&agency_cd=USGS&inventory_output=0&rdb_inventory_output=file&TZoutput=0&pm_cd_compare=Greater%20than&radio_parm_cds=all_parm_cds&format=html_table&qw_attributes=0&qw_sample_wide=wide&rdb_qw_attributes=0&date_format=YYYY-MM-DD&rdb_compression=file&submitted_form=brief_list. Cited in EMKO 2025
- _____. 2024b. National Water Information System (NWIS) web interface, Well 13N3W1G1 water quality data, available at https://nwis.waterdata.usgs.gov/usa/nwis/qwdata/?site_no=390000122080001&agency_cd=USGS&inventory_output=0&rdb_inventory_output=file&TZoutput=0&pm_cd_compare=Greater%20than&radio_parm_cds=all_parm_cds&format=html_table&qw_attributes=0&qw_sample_wide=wide&rdb_qw_attributes=0&date_format=YYYY-MM-DD&rdb_compression=file&submitted_form=brief_list. Cited in EMKO 2025.
- _____. 2024c. National Water Information System (NWIS) web interface, Well 14N2W29J1 water quality data, available at https://nwis.waterdata.usgs.gov/usa/nwis/qwdata/?site_no=390203122055001&agency_cd=USGS&inventory_output=0&rdb_inventory_output=file&TZoutput=0&pm_cd_compare=Greater%20than&radio_parm_cds=all_parm_cds&format=html

_table&qw_attributes=0&qw_sample_wide=wide&rdb_qw_attributes=0&date_format=YYYY-MM-DD&rdb_compression=file&submitted_form=brief_list. Cited in EMKO 2025.

Washington State Department of Transportation. 1997. *Method For Prioritizing Intersection Improvements*. Cited in W-Trans 2026.

Western Regional Climate Center (WRCC), 2024, Monthly Precipitation for Colusa 2 SSW, Station ID 41948, <https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca1948>. Cited in EMKO 2025.

Westside Aggregates, Inc. 2025 (February). *Westside Aggregates Application Package*.

WRA Environmental Consultants. 2025. *Biological Resources Technical Report for the Westside Aggregates Quarry*.

W-Trans. 2026. Transportation Impact Study for the West Side Aggregates Project.

APPENDICES

APPENDIX A RECLAMATION PLAN

APPENDIX B SOILS FIELD ASSESSMENT

APPENDIX C

PLANT SITE SOIL CONSERVATION MEMORANDUM

APPENDIX D
SLOPE STABILITY REPORT

APPENDIX E

AIR QUALITY ANALYSIS

APPENDIX F

NATURALLY OCCURRING ASBESTOS

APPENDIX G BIOLOGICAL RESOURCES

APPENDIX H HYDROLOGIC AND HYDRAULIC EVALUATION

APPENDIX I HYDROLOGY REPORT

APPENDIX J
ARCHAEOLOGICAL SURVEY REPORT

APPENDIX K WATER SUPPLY ASSESSMENT

APPENDIX L RUNOFF ANALYSIS

APPENDIX M NOISE ASSESSMENT

APPENDIX N
TRANSPORTATION IMPACT STUDY

APPENDIX O

PAVEMENT ANALYSIS