DRAFT

Initial Study and Mitigated Negative Declaration

STEWART GRAVEL BAR USE PERMIT AND RECLAMATION PLAN

Mendocino County, California

Prepared For:

County of Mendocino
Planning and Building Services
860 North Bush Street
Ukiah, California 95482

Prepared By:

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

55 Hanover Lane, Suite A
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January 2022

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DRAFT MITIGATED NEGATIVE DECLARATION

Lead Agency:	County of Mendocino
Project Proponent:	Wylatti Resource Management, Inc.
Project Location:	The Stewart Gravel Bar is located within the Middle Fork Eel River, approximately 7 miles southwest of Covelo and approximately one mile southeast of the unincorporated community of Dos Rios in Mendocino County, California.

Project Description:

The Proposed Project consists of seasonal gravel extraction and reclamation activities on a gravel bar known as the Stewart Bar located on the Middle Fork of the Eel River (Middle Fork Eel River) in Mendocino County. Stewart Bar is an instream gravel bar with aggraded sand and gravel that contains no topsoil, overburden, trees, or vegetation.

Project activities will involve the excavation of sand and gravel using conventional construction equipment (e.g., dozer, excavator, water truck) and loading of the material into haul trucks for transport to an existing processing facility located off Highway 162 near Longvale, California. Only extraction, loading, and haul out are to occur at the Stewart Bar, with no processing onsite. A total annual extraction limit of 20,000 cubic yards of sand and gravel is proposed.

Project activities will be timed during the summer low-flow season (June 1 through October 30), with an anticipated total of 45 operating days per year. Hours of operation will be 7:00 a.m. to 5:00 p.m. Monday through Friday during the seasonal extraction period. The Use Permit will allow gravel extractions up to 20,000 cubic yards per year for the next 20 years (400,000 cubic yards total).

Public Review Period: January 6, 2022 to February 4, 2022

Mitigation Measures Incorporated into the Project to Avoid Significant Effects:

Biological Resources

BIO-1: **Western Pond Turtle.** The following are avoidance and minimization measures required in order to avoid and minimize potential impacts to western pond turtle:

- Immediately prior to the start of work, a qualified biologist shall conduct a survey to determine the presence or absence of western pond turtles. If western pond turtles are observed where they could be potentially impacted by Project activities, as determined by the onsite biologist, then work shall not be conducted within 100 feet of the sighting until the turtle(s) have left the Project site or a qualified biologist has relocated the turtle(s) immediately outside of the Project site.
- If turtle eggs are uncovered during construction activities, then all work shall stop within a 25-foot radius of the nest and the qualified biologist should be notified immediately. The 25-foot buffer should be marked with identifiable markers that do not consist of fencing or materials that might block the migration of young turtles to the water or attract predators to the nest site. No work will be allowed within the 25-foot buffer until the turtle eggs have hatched or the nest fails.
- All portions of the Project site that could result in inadvertently trapping turtles, such as open pits, trenches, and dewatered areas will be covered and/or exclusion fencing will be installed to prevent turtles from entering these areas.

Timing/Implementation:	*During construction and operation*
Monitoring/Enforcement:	*The Mendocino Planning and Building Services and Project proponent.*

BIO-2: **Anadromous Fish Species.** The operator/contractor shall avoid impacts to anadromous fishes (Chinook salmon and Steelhead) and their habitat by avoiding in-water work. This will be done by commencing Project activities when there is no flowing or ponded water within the Biological Survey Area (BSA) and concluding Project activities within Middle Fork Eel River before flows increase again the following fall/winter. To avoid potential impacts to anadromous fish species and their critical habitat, the following are recommended avoidance and minimization measures:

- Extraction activities shall only occur during daylight hours to allow "noise refugia" and time for fish to migrate out of or past the area of Project noise occurrence.
- Channel disturbance shall be kept to a minimum during construction activities within the channel and only occur within designated areas. Silt fencing should be installed to delineate a 50-foot buffer between all construction activities and the active wetted channel at all times.

- Extraction shall maintain an undisturbed head buffer that shall begin at the upstream end of the primary extraction area and extend downstream for a distance equaling approximately 30 to 35 percent of the total length of the exposed bars to protect bar stability as recommended in National Oceanic and Atmospheric Administration (NOAA) Fisheries' sediment removal guidelines. All bare mineral soil exposed in conjunction with road construction that leads to the affected stream shall be treated for erosion prior to the onset of precipitation capable of generating runoff or the end of the yearly work period, whichever comes first. Restoration shall include using native slash or seeding and mulching of all bare mineral soil exposed in conjunction with encroachment work. No known invasive grass seed shall be used, such as annual or perennial ryegrass (*Festuca perennis*).
- The Project proponent shall provide site maintenance including, but not limited to, reapplying erosion control to minimize surface erosion and ensuring drainage structures, streambeds, and banks remain sufficiently armored and stable.
- Structures and associated materials not designed to withstand high seasonal flows shall be removed to areas above the ordinary high-water mark (OHWM) before such flows occur or the end of the yearly work period, whichever comes first.
- Refueling of equipment and vehicles and storing, adding, or draining lubricants, coolants, or hydraulic fluids shall not take place within or adjacent to any stream. All such fluids and containers shall be disposed of properly. Heavy equipment parked within or adjacent to the stream shall use drip pans or other devices (e.g., absorbent blanks, sheet barriers, or other materials) as needed to prevent soil and water contamination.
- All activities performed in the field that involve the use of petroleum- or oil-based substances shall employ absorbent material designated for spill containment and cleanup activity onsite for use in case of accidental spills. Cleanup of all spills shall begin immediately. The California Department of Fish and Wildlife (CDFW) shall be notified by the Project proponent and consulted regarding clean-up procedures.
- No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete washings, oil or petroleum products, or other organic or earthen material from construction work, or associated activity of whatever nature shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into the stream. When operations are completed, any excess materials or debris shall be removed from the work area.
- All traffic and equipment staging should be limited to the existing access road and designated staging areas.
- The excavation site shall be recontoured following extraction activities each season to prevent the entrapment or entrainment of wildlife in open trenches or borrow pits.

Timing/Implementation: *During construction and operation*

Monitoring/Enforcement: *The Mendocino Planning and Building Services and Project proponent.*

BIO-3: **Foothill Yellow-Legged Frog (FYLF).** Under state regulations, a candidate threatened species receives the same protections as listed species until the final determination is made on its status. Although there is no potential for FYLF to occur within the BSA when it is dry, in an abundance of caution the contractor shall implement the following mitigations in an effort to avoid and minimize impacts to this species:

- Construction within Middle Fork Eel River shall commence when there is no flowing or ponded water within the BSA and shall conclude before the river begins to flow through the BSA again the following fall/winter.
- If flowing or ponded water is present within the BSA, a qualified biologist shall conduct a preconstruction survey within 72 hours prior to the start of construction to determine the absence/presence of FYLF. If at any point FYLF are found within the Project site, CDFW shall be consulted. Construction activities shall not commence until the contractor has received written verification from CDFW that the Project can continue.
- Only wildlife-friendly, 100-percent biodegradable erosion control products that will not entrap or harm wildlife shall be used. Erosion control products shall not contain synthetic (e.g., plastic or nylon) netting. Photodegradable synthetic products are not considered biodegradable.

Timing/Implementation: *During construction and operation*

Monitoring/Enforcement: *The Mendocino Planning and Building Services and Project proponent.*

BIO 4: **Waters of the United States.** If activities occur within the OHWM and/or result in fill or discharge to any waters of the U.S that include but are not limited to intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, vernal pools, or natural ponds, then the following will need to be obtained:

- Prior to any discharge or fill material into Waters of the U.S, authorization under a Nationwide Permit or Individual Permit shall be obtained from the U.S. Army Corps of Engineers (USACE). For fill requiring a Corps permit, a water quality certification from the Regional Water Quality Control Board (RWQCB; Clean Water Act §401) shall also be obtained prior to discharge of dredged or fill material.
- Prior to any activities that would obstruct the flow of or alter the bed, channel, or bank of any perennial, intermittent, or ephemeral creeks, notification of streambed alteration shall be submitted to the CDFW, and, if required, a Lake and Streambed Alteration Agreement (§1602) shall be obtained.

Timing/Implementation: *During construction and operation*

Monitoring/Enforcement: *The Mendocino Planning and Building Services and Project proponent.*

BIO-5: **Migratory Birds and Raptors.** To avoid impacts to avian species protected under the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code (CFGC) the following are required avoidance and minimization measures for migratory birds and raptors:

- Project activities including site grubbing and vegetation removal shall be initiated outside of the bird nesting season (February 1 through August 31).
- If Project activities cannot be initiated outside of the bird nesting season, then the following will occur:
  - A qualified biologist will conduct a preconstruction survey within 250 feet of the BSA, where accessible, within 7 days prior to the start of Project activities.
  - If an active nest (i.e., containing egg[s] or young) is observed within the BSA or in an area adjacent to the BSA where impacts could occur, then a species protection buffer will be established. The species protection buffer will be defined by the qualified biologist based on the species, nest type, and tolerance to disturbance. Construction activity shall be prohibited within the buffer zones until the young have fledged or the nest fails as determined by a qualified biologist. Nests shall be monitored by a qualified biologist once per week and a report submitted to the California Environmental Quality Act (CEQA) lead agency weekly.

Timing/Implementation: *During construction and operation*

Monitoring/Enforcement: *The Mendocino Planning and Building Services and Project proponent.*

BIO 6: **Environmental Awareness Training.** Contractual requirements shall include a requirement for tail-gate training by the Project's designated qualified biologist. All employees involved in Project activities and environmental specialists will attend a mandatory Environmental Awareness Training prior to any site disturbances. The program will address proper implementation of minimization and avoidance measures contained herein including, but not limited to:

- Avoiding inadvertent animal trapping.
- Site maintenance.
- Controlling invasive species.
- Handling leaks and spills.
- Fencing environmentally sensitive areas.

- Cultural resources training to inform construction personnel of the types of cultural resources they may encounter, the laws protecting those resources, and the standard protocols to be implemented.
- Hazardous materials response.

Timing/Implementation: *During construction and operation*

Monitoring/Enforcement: *The Mendocino Planning and Building Services and Project proponent.*

Cultural Resources

CUL-1: **Cultural or Archaeological Resource Discovery.** All extraction and reclamation plans shall include the following.

If buried materials are encountered, all soil disturbing work should be halted within 60 feet of any discovery. An archaeologist who meets the Secretary of the Interior's Standards for Archaeology must be contacted and the requirements under 36 Code of Federal Regulations (CFR) 800.13 followed. Work should not commence in the vicinity of the inadvertent discovery until a qualified archaeologist completes a significance evaluation of the find(s) pursuant to Section 106 of the National Historic Preservation Act (36 CFR 60.4).

The following actions are promulgated in the CEQA Guidelines Section 15064.5(d) and pertain to the discovery of human remains. If human remains are encountered, excavation or disturbance of the location must be halted in the vicinity of the find, and the county coroner contacted. If the coroner determines the remains are Native American, the coroner will contact the Native American Heritage Commission (NAHC). The NAHC will identify the person or persons believed to be most likely descended from the deceased Native American. The most likely descendent makes recommendations regarding the treatment of the remains with appropriate dignity.

Timing/Implementation: *During construction and operation*

Monitoring/Enforcement: *The Mendocino Planning and Building Services and Project proponent.*

Geology and Soils

GEO-1: **Paleontological Resources.** If paleontological resources are encountered during Project activities and no paleontological monitor is present, all ground-disturbing activities within 50 feet of the find shall be redirected to other areas until a qualified paleontologist (as determined by the Project's qualified cultural resource professional) can be contacted to evaluate the find and make recommendations. If determined significant pursuant to CEQA and Project activities cannot avoid the paleontological resources, a paleontological evaluation and monitoring plan shall be implemented.

Adverse impacts to significant paleontological resources shall be mitigated, which may include monitoring, data recovery and analysis, a final report, and the curation of all fossil material to a paleontological repository, museum, or academic institution, as appropriate. Upon completion of Project ground-disturbing activities, a report documenting methods, findings, and recommendations shall be prepared and submitted to the paleontological repository.

Timing/Implementation: *During construction and operation*

Monitoring/Enforcement: *The Mendocino Planning and Building Services and Project proponent.*

Hazards and Hazardous Materials

HAZ-1: **Spill Prevention Plan.** Prior to site disturbance, prepare a spill response plan to address the appropriate methods for containing accidental spills of toxic materials (e.g., engine oils). This plan shall be submitted to the County for approval prior to any Project operations.

Timing/Implementation: *Prior to Project operations.*

Monitoring/Enforcement: *The Mendocino Planning and Building Services and Project proponent.*

HAZ-2: **Fire Safety Procedures.** The operator/contractor shall implement the following fire prevention procedures to reduce the potential risk of fire ignitions during construction:

- No work shall occur on red-flag days declared by the weather service for Mendocino County.
- Earthmoving and portable equipment with internal combustion engines shall be equipped with a spark arrestor to reduce the potential for igniting a wildland fire.
- Appropriate fire suppression equipment shall be maintained and available at the Project Site.
- Flammable materials shall be removed to a distance of 10 feet from any equipment that is either operating, a significant heat source, or that could produce a spark, fire, or flame.
- The access road shall be maintained in a state such that it is free of vegetation during times of activity.
- Construction personnel shall be trained in fire safe work practices (e.g., smoking in enclosed spaces or parking in designated parking locations), use of fire suppression equipment, and procedures to follow in the event of a fire, including use of emergency radios provided by the County.

Timing/Implementation: *During construction and operation.*

Monitoring/Enforcement: *The Mendocino Planning and Building Services and Project proponent.*

Hydrology and Water Quality

HYD-1: This Project is subject to the National Pollution Discharge Elimination System (NPDES) requirements, and coverage under the State General Industrial Permit, as adopted by the State Water Resources Control Board (SWRCB). A copy of the Notice of Intent (NOI) filed with the SWRCB, as well as the Waste Discharge Identification Number issued by that agency, must be submitted to the Mendocino County Planning and Building Services.

Timing/Implementation: *During construction and operation*

Monitoring/Enforcement: *The Mendocino Planning and Building Services and Project proponent.*

HYD-2 During operation activities, all vehicles and equipment utilized onsite will be regularly inspected and maintained per manufacturers' recommendations to minimize the potential for leaks.

Timing/Implementation: *During construction and operation*

Monitoring/Enforcement: *The Mendocino Planning and Building Services and Project proponent.*

HYD-3 Prior to mining or reclamation activities as authorized by this approval, the Project proponent shall submit to the respective agency the necessary application(s) for any approvals and/or permits from the: (a) SWRCB, and (b) California RWQCB, North Coast Region. Upon issuance of the requisite approvals or permits, copies shall be furnished to the Mendocino County Planning and Building Services for incorporation into the approved surface mining and reclamation plan in accordance with the provisions of the Surface Mining and Reclamation Act of 1975. Should no approvals and/or permits be required from the referenced agencies, written evidence documenting this first fact shall be furnished to the Mendocino County Planning and Building Services.

Timing/Implementation: *During construction and operation*

Monitoring/Enforcement: *The Mendocino Planning and Building Services and Project proponent.*

HYD-4 Prior to commencement of mining activities as authorized by this approval, the Project proponent shall prepare and obtain approval of a Spill Prevention Control and Countermeasures Response Plan from the Mendocino County Public Health Services Department/Environmental Health Division and the California Department of Water Resources, for review and approval by those agencies.

Timing/Implementation: *During construction and operation*

Monitoring/Enforcement: *The Mendocino Planning and Building Services and Project proponent.*

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ACRONYMS AND ABBREVIATIONS

Term	Description
AB	Assembly Bill
APE	Area of Potential Effect
APN	Assessor Parcel Number
Basin Plan	Water Quality Control Plan for the North Coast Region
BMPs	Best Management Practices
BRA	Biological Resources Assessment
BSA	Biological Survey Area
CAA	Clean Air Act
CAL FIRE	California Department of Forestry and Fire Protection
CalEEMod	California Emissions Estimator Model
CAISO	California Independent System Operator
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CC	California Coastal
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CGS	California Geological Survey
CH_4	methane
CHRIS	California Historical Resources Information System
CNDDB	California Natural Diversity Data Base
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CNEL	Community Noise Equivalent Level
County	County of Mendocino
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CWA	Clean Water Act
dB	decibel
dBA	A-weighted sound level
DMR	Division of Mine Reclamation
DOC	Department of Conservation
DOF	Department of Finance
DPM	diesel particulate matter
DPS	Distinct Population Segment
DTSC	Department of Toxic Substances Control
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
EO	Executive Order
ESA	Endangered Species Act

ACRONYMS AND ABBREVIATIONS

Term	Description
ESU	Evolutionarily Significant Unit
FHWA	Federal Highway Administration
GHG	Greenhouse Gas
HHDT	Heavy-Heavy Duty Truck
HSA	Hydrologic Study Area
in/sec	inch per second
kv	kilovolt
MBTA	Migratory Bird Treaty Act
MCAQMD	Mendocino County Air Quality Management District
MRZ	Mineral Resource Zone
MND	Mitigated Negative Declaration
NAHC	Native American Heritage Commission
NC	Northern California
NCAB	North Coast Air Basin
ND	Negative Declaration
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
N_2O	nitrous oxide
NOI	Notice of Intent
NO_x	nitrogen oxides
NVA	Noise and Vibration Assessment
NWIC	Northwest Information Center
OHP	Office of Historic Preservation
OHWM	ordinary high-water mark
PG&E	Pacific Gas and Electric
$PM_{2.5}$	Particulate Matter Less than 2.5 Microns in Diameter
PM_{10}	Particulate Matter Less than 10 Microns in Diameter
PPV	peak particle velocity
PRC	Public Resources Code
Project	Stewart Gravel Bar Use Permit and Reclamation Plan Project
RCNM	Roadway Construction Noise Model
ROG	Reactive Organic Gases
RWQCB	Regional Water Quality Control Board
SCAQMD	South Coast Air Quality Management District
SIP	State Implementation Plan
SR	State Route
SRA	State Responsibility Area
SSC	Species of Special Concern
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TMDL	Total Maximum Daily Load

ACRONYMS AND ABBREVIATIONS

Term	Description
TNM	Traffic Noise Model
UCMP	University of California Museum of Paleontology
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USEPA	U.S. Environmental Protection Agency
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

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1.0 BACKGROUND

1.1 Summary

Project Title:	Stewart Gravel Bar Use Permit and Reclamation Plan
Lead Agency Name and Address:	County of Mendocino Planning and Building Services 860 North Bush Street Ukiah, California 95482
Contact Person and Phone Number:	Dirk Larson (707) 234-6650
Project Location:	The Stewart Gravel Bar is located within Middle Fork Eel River, approximately 7 miles southwest of Covelo and approximately 1 mile southeast of the unincorporated community of Dos Rios. The site is located within Section 5, Township 21N, Range 13W; latitude 39.705345, longitude -123.328395.
General Plan Designation:	R-L 160 (Rangeland) and RMR 40 (Remote Residential, 40 acres)
Zoning:	RL (Rangeland) and UR 40 (Upland Residential, 40-acre minimum)

1.2 Introduction

The County of Mendocino is the lead agency for this Initial Study. The Initial Study has been prepared to identify and assess the anticipated environmental impacts of the Stewart Gravel Bar Use Permit and Reclamation Plan Project (Project). This document has been prepared to satisfy the California Environmental Quality Act (CEQA; Public Resources Code [PRC], Section 21000 et seq.) and state CEQA Guidelines (14 California Code of Regulations [CCR] 15000 et seq.). CEQA requires that all state and local government agencies consider the environmental consequences of projects over which they have discretionary authority before acting on those projects. A CEQA Initial Study is generally used to determine which CEQA document is appropriate for a project (Negative Declaration [ND], Mitigated Negative Declaration [MND], or Environmental Impact Report [EIR]).

1.3 Lead Agency

The lead agency is the public agency with primary responsibility over a proposed project. Where two or more public agencies will be involved with a project, CEQA Guidelines Section 15051 provides criteria for identifying the lead agency. In accordance with CEQA Guidelines Section 15051(b)(1), "the lead agency will normally be the agency with general governmental powers, such as a city or county, rather than an agency with a single or limited purpose." Based on the criteria above, the County of Mendocino (County) is the lead agency for the Proposed Project.

1.4 Purpose and Document Organization

The purpose of this Initial Study is to evaluate the potential environmental impacts of the Proposed Project. This document is divided into the following sections:

1.0 Introduction – This section provides an introduction and describes the purpose and organization of the document. This section provides general information regarding the Project, including the Project title, lead agency and address, contact person, brief description of the Project location, General Plan land use designation, zoning district, and identification of surrounding land uses.

2.0 Project Description – This section provides a detailed description of the Proposed Project, as well as the identification of other public agencies whose review, approval, and/or permits may be required. Also listed in this section is a checklist of the environmental factors that are potentially affected by the Project.

3.0 Environmental Factors Potentially Affected and Determinations – This section is a summary of the environmental topic areas that were found to potentially impact the environment.

4.0 Environmental Checklist and Discussion – This section describes the environmental setting and overview for each of the environmental subject areas, evaluates a range of impacts classified as "no impact," "less than significant impact," "less than significant impact with mitigation incorporated," and "potentially significant impact" in response to the environmental checklist.

5.0 List of Preparers – This section lists the names of document preparers.

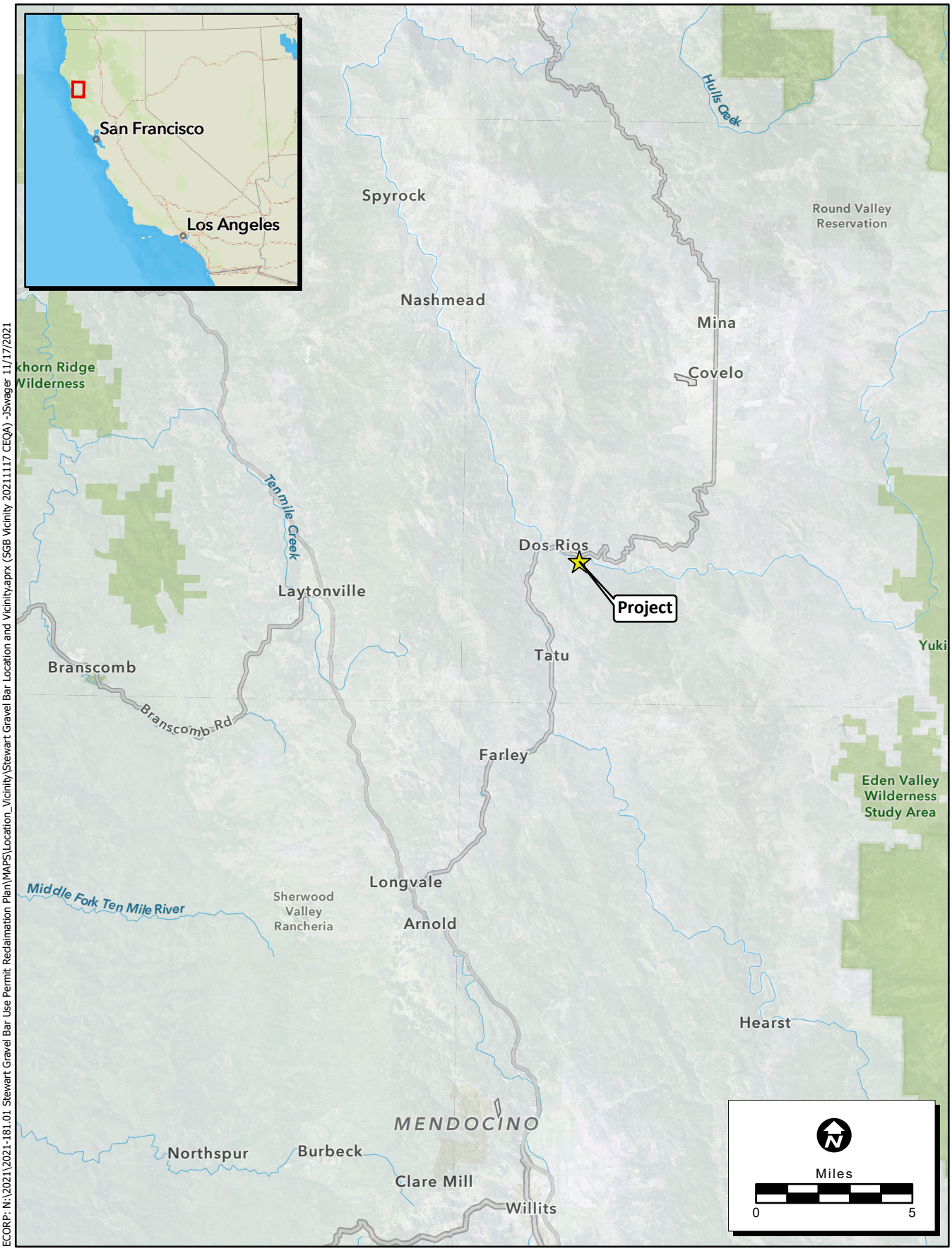
6.0 Bibliography – This section identifies documents, websites, people, and other sources consulted during the preparation of this Initial Study.

7.0 List of Attachments – This section provides a list of document attachments.

1.5 Project Location and Surrounding Land Uses

The Project Site is located in unincorporated Mendocino County on the Stewart Gravel Bar, located within Middle Fork Eel River, approximately 7 miles southwest of Covelo and approximately 1 mile southeast of the unincorporated community of Dos Rios (Figures 1-1 and 1-2). The Project Site is accessed by a dirt road that connects via an existing encroachment to State Route 162 (SR 162) located north of the Site.

The Project is comprised of portions of three parcels that in total amounts to 26.84 acres in size as shown in Table 1-1. Actual Project-related gravel extraction area is 3.7 acres (Figure 2).



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Map Date: 11/17/2021

Sources: ESRI, Compass Land

Figure 1. Project Location and Vicinity

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Stewart Gravel Bar Use Permit Reclamation Plan

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Map Date: 11/17/2021

Sources: ESRI, Compass Land, Maxar (2020)

Figure 2. Project Location

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

2021-180.01 Stewart Gravel Bar Use Permit Reclamation Plan

Table 1.0-1. Project Assessor's Parcel Numbers	
Assessor's Parcel Number (APN)	**Acreage**
035-030-49	12.5
035-030-17	1.88
035-030-65	12.46

The Countywide General Plan Land Use Map (2009) designates the Project Site as Remote Residential (RMR) and Rangeland (R-L). The Project Site is zoned Upland Residential (UR) and Rangeland (RL) by the Mendocino Zoning Map (2021).

The Project Site is located within the California Coast Range mountains. North of the Project Area is a single-family residence and several associated outbuildings. South of the Project Site is the Middle Fork Eel River.

1.6 Environmental Setting

The Project Site is located approximately 7 miles southwest of the census-designated place Covelo and about 1 mile southeast of the unincorporated community Dos Rios. The Project Site falls within Section 5, Township 21N, Range 13W; latitude 39.705345, longitude -123.328395. Mendocino National Forest is located approximately 14 miles east of the Project Site. The location where gravel extraction will take place is comprised of a gravel bar on the Middle Fork Eel River. While the gravel bar is located within the Middle Fork Eel River, it is generally dry and exposed during the summer months. During periods of high flows during the winter and early spring, water may flow through over the gravel bar.

The topography of the Project Site ranges in elevation. The access road off SR 162 is at approximately 1,033 feet in elevation with a steep drop in elevation to river access. The gravel bar where gravel extraction will take place is relatively flat at approximately 909 feet in elevation across the bar. The access road is surrounded by mixed oak-foothill pine woodlands, interspersed with annual grassland and manzanita. The gravel bar itself is barren, with little to no vegetation present.

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2.0 PROJECT DESCRIPTION

2.1 Project Description

The Proposed Project consists of seasonal gravel extraction and reclamation activities on a gravel bar known as the Stewart Bar located on the Middle Fork Eel River in Mendocino County. See Figure 2 for the Project boundary. Stewart Bar is an instream gravel bar with aggraded sand and gravel that contains no topsoil, overburden, trees, or vegetation.

Project activities will involve the excavation of sand and gravel using conventional construction equipment (e.g., dozer, excavator, water truck) and loading of the material into haul trucks for transport to an existing processing facility located off SR 162 near Longvale, California (APN 036-190-26; 37342 Covelo Road). Only extraction, loading, and haul out are to occur at the Stewart Bar, with no processing onsite. A total annual extraction limit of 20,000 cubic yards of sand and gravel is proposed.

Project activities will be timed during the summer low-flow season (June 1 through October 30), with an anticipated total of 45 operating days per year. Hours of operation will be 7:00 a.m. to 5:00 p.m. Monday through Friday during the seasonal extraction period. The Use Permit will allow gravel extractions up to 20,000 cubic yards per year for the next 20 years (400,000 cubic yards total).

The seasonal gravel extraction and reclamation activities are subject to review and oversight by the U.S. Army Corps of Engineers (USACE), National Marine Fisheries Service (NMFS), California Department of Fish and Wildlife (CDFW), North Coast Regional Water Quality Control Board (RWQCB), and County Planning and Building Services .

2.1.1 Gravel Extraction

The gravel bar is an open, active bar without topsoil or significant amounts of vegetation. Extraction will occur on approximately 3 acres of the dry gravel bar surface, generally covering the western half of the exposed bar. During the summer low-flow season (June 1 through October 30), when extraction would take place, the bar is dry and exposed. No gravel extraction will take place within the wetted channel.

Prior to extraction, the access/haul road will be improved with shallow grading to improve access and to winterize the road. Following extraction, reclamation will apply to this bar and the associated access/haul road.

Gravel extraction at the site will be consistent with the NMFS- and CDFW-approved skimming methodology that involves removal of gravel from selected areas of the bar in a sloped configuration, which avoids creating holes or channels, and is done by using excavators, loaders, and haul trucks. Extraction will be limited to the aggraded portion of the bars, utilizing horizontal and vertical offsets for buffers from the low-flow channel. Only extraction, loading, and haul out will occur at the Stewart Gravel Bar, with no processing onsite.

Gravel will be excavated and loaded into haul trucks for transport down SR 162 to the existing facility located at 37342 Covelo Road approximately 14 miles from the site. A maximum of 20,000 cubic yards of material will be removed annually, with actual quantities determined based on channel morphology and

gravel replenishment, and subject to review and approval by CDFW and NMFS. Extraction and reclamation will take place for approximately 45 days during the summer low-flow period between June 1 and October 30.

2.1.2 Reclamation Plan

A Reclamation Plan has been prepared in support of seasonal gravel extraction and reclamation activities on the Stewart Bar. See Attachment 2.0 for Reclamation Plan. Post-extraction reclamation activities will include the removal of any remaining temporary gravel stockpiles, finished grading of the gravel bar to fill in low areas and depressions, recontouring of the gravel bar to meet agency-approved post-extraction slopes and gravel bar configuration, removal of temporary culverts (if necessary), installation of storm water control measures, and removal of all work materials and debris. The seasonal gravel extraction and reclamation activities are subject to review and oversight by the USACE, NMFS, CDFW, North Coast RWQCB, and County Planning and Building Services.

Mining activities are seasonally limited between June 1 and October 30 each year and are dependent on sufficient accumulation of materials moving through the river system during large annual flow events. Between October 1 to October 30, seasonal reclamation activities would commence. All temporarily stockpiled material would be removed from bars daily and extraction sites would be smoothed to reclaimed condition at the end of each work day. Reclamation grading of the gravel bar would be performed to fill in low areas and depressions. The extraction surface would be reclaimed to a smoothly graded condition such that no depressions or lumps greater than 0.5 foot higher or lower than the planned grading plane remain. In addition, final contouring of the gravel bar would be performed to meet agency approved post-extraction slopes and gravel bar configuration to minimize erosion.

On October 30, all temporary wet stream channel crossings (if used) would be removed to provide an unobstructed channel for winter flows. The culvert area would be backfilled with clean sandy gravel from the gravel bar to ensure a clean channel is left after the culvert is removed.

The proposed end use of the instream gravel bar is riverine (gravel bar) consistent with pre-mining conditions. In addition, the existing access road is proposed to remain following reclamation for future access to the river.

2.2 Regulatory Requirements, Permits, and Approvals

The following approvals and regulatory permits would be required for implementation of the Proposed Project:

- Mendocino County Planning and Building Services
- U.S. Army Corps of Engineers
- National Marine Fisheries Service
- California Department of Fish & Wildlife

2.3 Consultation with California Native American Tribe(s)

Assembly Bill (AB) 52 requires that prior to the release of a CEQA document for a project, an agency begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if: (1) the California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe and (2) the California Native American tribe responds in writing, within 30 days of receipt of the formal notification, and requests the consultation. A summary of the notification process is provided in Section 4.18 of this Initial Study.

The following California Native American tribes traditionally and culturally affiliated with the Project Area have been notified of the Project:

Coyote Valley Band of Pomo Indians
P.O. Box 39/ 7901 Hwy 10, North
Redwood Valley, CA, 95470

Hopland Band of Pomo Indians
3000 Shanel Road
Hopland, CA, 95449

Kashia Band of Pomo Indians of the Stewarts Point Rancheria
1420 Guerneville Road, Ste 1
Santa Rosa, CA, 95403

Cahto Tribe
P.O. Box 1239
Laytonville, CA, 95454

Manchester Band of Pomo Indians of the Manchester Rancheria
P.O. Box 623
Point Arena, CA, 95468

Guidiville Band of Pomo Indians
P.O. Box 339
Talmage, CA, 95481

Pinoleville Pomo Nation
500 B Pinoleville Drive
Ukiah, CA, 95482

Potter Valley Tribe
2251 South State Street
Ukiah, CA, 95482

Redwood Valley or Little River Band of Pomo Indians
3250 Road I
Redwood Valley, CA, 95470

Noyo River Indian Community
P.O. Box 91
Fort Bragg, CA, 95437

Round Valley Reservation/Covelo Indian Community
77826 Covelo Road
Covelo, CA, 95428

Sherwood Valley Band of Pomo Indians
190 Sherwood Hill Drive
Willits, CA, 95490

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3.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED AND DETERMINATION

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

Determination

On the basis of this initial evaluation:

I find that the Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.	☐
I find that although the Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.	☒
I find that the Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.	☐
I find that the 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 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 Project, nothing further is required.	☐

January 5, 2022

Ignacio Gonzalez — Date
Interim Director, Planning and Building Services

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4.0 ENVIRONMENTAL CHECKLIST AND DISCUSSION

4.1 Aesthetics

4.1.1 Environmental Setting

The Project Site is located off SR 162 just southeast of the community of Dos Rios in Mendocino County, California. The Project Site is approximately 3.7 acres and consists of an access road and a gravel bar known as the Stewart Gravel Bar on the Middle Fork Eel River. The Project Site is currently vacant and surrounded Coast Range mountains. There are no dedicated scenic vistas in the Project Area; however, the 2009 County General Plan does identify Mendocino National Forest as a Scenic Resource (Mendocino County 2009). The Project Site is approximately 14 miles west of the Mendocino National Forest.

There are no existing substantial light or glare sources in the Project Area. Light and glare sources near the Project Site consist of interior and exterior lighting related to single-family residences to the north.

4.1.1.1 Regional Setting

Wild and Scenic Rivers

The National Wild and Scenic Rivers System was created to preserve certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations. The Eel River is designated as both a federal and California Wild and Scenic River (Mendocino County 2009).

State Scenic Highways

The California Scenic Highway Program protects and enhances the scenic beauty of California's highways and adjacent corridors. A highway can be designated as scenic based on how much natural beauty can be seen by users of the highway, the quality of the scenic landscape, and if development impacts the enjoyment of the view (California Department of Transportation [Caltrans] 2008). No designated State Scenic Highways exist in the vicinity of the Project.

4.1.1.2 Visual Character of the Project Site

The Project Area is comprised of a gravel bar on the Middle Fork Eel River and an existing access road off SR 162. The surrounding area consists of the foothills of the Coast Range and the Middle Fork Eel River immediately south of the gravel bar. The access road is surrounded by mixed oak-foothill pine woodlands, interspersed with annual grassland and manzanita. The gravel bar itself is barren, with little to no vegetation present.

4.1.2 Aesthetics (I) Environmental Checklist and Discussion

Except as provided in Public Resources Code Section 21099, would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐

Less than Significant Impact.

A scenic vista is a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. As previously described, the County of Mendocino is distinguished with its views of the surrounding forests and agricultural lands and considers these views to be significant and to be protected. As such, the County includes policies and actions in its 2009 General Plan designed to protect and enhance scenic views throughout the County. These include:

> Policy RM-67: Surface mining sites, especially those in areas with cultural, scenic or recreational values, shall be restored to harmonize with the natural environment when the mine's reclamation plan is implemented.
>
> Policy RM-130: Protect the outstanding values of designated river corridors within the State Wild and Scenic River System by limiting land use and site development impacts (including grading and vegetation removal but not including regulated timber harvesting).

The Eel River, in which the Stewart Gravel Bar is located, is designated as both a federal and California Wild and Scenic River (Mendocino County 2009).

The Project Site is located off SR 162 and is not visible from the roadway because the gravel bar is located at a lower elevation. In addition, existing vegetation along the highway provides visual screening. One residence exists along the access road that will be used to access the Project Site; however, no visual changes are proposed in this area. Vegetation to the north and south of the gravel bar serve to hide the excavation and reclamation area from nearby properties. The general public does not have views of the area to be mined or reclaimed because the property is behind and below a private road off SR 162. Additionally, upon completion of the Project, the Site will be restored as required by General Plan Policy RM-67. Therefore, the Project would have a less than significant impact on potential scenic vistas.

Except as provided in Public Resources Code Section 21099, would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒

No Impact.

The Proposed Project is not located within the vicinity of an officially designated scenic highway (Caltrans 2018). No substantial damage to scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway would occur. No impact would occur.

Except as provided in Public Resources Code Section 21099, would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☐	☒

No Impact.

As discussed under question a) above, the Project Site is located off SR 162 and is not visible from the roadway. The general public does not have views of the area to be mined or reclaimed because the property is behind and below a private road off SR 162. No impact would occur.

Except as provided in Public Resources Code Section 21099, would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Would the project create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

No Impact.

No lighting is proposed as part of the Project. Project activities would not include nighttime work. Mining activities would take place during daylight hours between 7:00 a.m. to 5:00 p.m., Monday through Friday, during the seasonal extraction period (June 1 through October 30). The Project would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area. No impact would occur.

4.1.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.2 Agriculture and Forestry Resources

4.2.1 Environmental Setting

The Project Site is undeveloped and located in rural, unincorporated Mendocino County.

The California Department of Conservation (DOC) manages the Farmland Mapping and Monitoring Program, which identifies and maps significant farmland. Farmland is classified using a system of five categories including Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land. The classification of farmland as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance is based on the suitability of soils for agricultural production, as determined by a soil survey conducted by the Natural Resources Conservation Service. The California DOC manages the California Important Farmland Finder, an interactive website program that identifies the Project Site as being within an area of "Nonagricultural and Natural Vegetation" and "Rural Residential Land" (DOC 2021).

According to the Mendocino County Timber Production and Williamson Act Lands Map, none of the land within the Project Site or vicinity is under a Williamson Act contract and does not contain possible forest or timber resources (Mendocino County 2014).

4.2.2 Agriculture and Forestry Resources (II) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒

No Impact.

As discussed above, the DOC identifies the Project Site as Nonagricultural and Natural Vegetation and Rural Residential Land with no agricultural resources (DOC 2021). There is currently no designated Important Farmland within the Project Site, nor within the Project vicinity. The Proposed Project would not result in the conversion of any Important Farmland (Prime Farmland, Unique Farmland, or Farmland of Statewide Importance) to any uses other than agriculture. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒

No Impact.

According to Mendocino County Timber Production and Williamson Act Lands Map, the are no properties within the Project Site or within the Project vicinity that are subject to a Williamson Act contracts (Mendocino County 2014). The closest County Agricultural Zoning Williamson Act Contract Land is located approximately 7 miles northeast of the Project Site. The Project would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
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))?	☐	☐	☐	☒

No Impact.

The Project Site is not located in a protected forestland or timber production area. All gravel extraction operations will occur on a gravel bar of the Middle Fork Eel River and would not affect any timber resources. The Project would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒

No Impact.

No identified forest lands exist on the Project Site or within the vicinity of the Project. All gravel extraction operations will occur on a gravel bar of the Middle Fork Eel River and would not affect any timber resources. The Project would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

No Impact.

As previously addressed, according to the Mendocino County Timber Production and Williamson Act Lands Map, the Project Site is not located within lands designated as forest land, timberland, or agricultural land (Mendocino County 2014). The closest Prime Farmland and Unique Farmland areas are located approximately 7 miles northeast of the Project Site. As such, the Proposed Project would not involve other changes in the existing environment that would result in the conversion of farmland to a non-agricultural use or the conversion of forestland to a non-forest use. No impact would occur.

4.2.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.3 Air Quality

4.3.1 Environmental Setting

Air quality in a region is determined by its topography, meteorology, and existing air pollutant sources. These factors are discussed below, along with the current regulatory structure that applies to the Mendocino County Air Quality Management District (MCAQMD), which encompasses the Project Site, pursuant to the regulatory authority of the MCAQMD.

Ambient air quality is commonly characterized by climate conditions, the meteorological influences on air quality, and the quantity and type of pollutants released. The air basin is subject to a combination of topographical and climatic factors that reduce the potential for high levels of regional and local air pollutants. The following section describes the pertinent characteristics of the air basin and provides an overview of the physical conditions affecting pollutant dispersion in the Project Area.

The California Air Resources Board (CARB) divides the state into air basins that share similar meteorological and topographical features. Mendocino County lies in the North Coast Air Basin (NCAB), which includes Del Norte, Humboldt, Trinity, Mendocino, and northern Sonoma counties. Mendocino County lies entirely within the Coast Range Geomorphic Province of California with a western limit marked by the Pacific Ocean. The province is characterized by a series of northwest-trending mountain ranges and intervening canyons or valleys. The eastern portion of Mendocino County is characterized by warm, dry summers and cool, wet winters. While the Pacific Ocean moderates temperature, maritime influences in

the eastern valleys are lower. Climate becomes more continental due to the distance from the ocean and the mountain ridges that block the inland flow of marine air.

Prevailing winds are from the northwest, with local variations due to topography. During daylight hours, up-canyon local winds predominate. In the evening hours, down-canyon winds along watercourses predominate. The entire county is affected by inversion layers, where warm air overlays cooler air. Inversion layers trap pollutants close to the ground. In the winter, these pollutant-trapping, ground-based inversions are formed during windless, clear-sky conditions because cold air collects in low-lying areas such as valleys and canyons. Mendocino County has a high frequency of both ground-based and elevated inversions. During the winter months, strong inversions that persist for several days at a time are common.

Both the U.S. Environmental Protection Agency (USEPA) and the CARB have established ambient air quality standards for common pollutants. These ambient air quality standards are levels of contaminants representing safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called "criteria" pollutants because the health and other effects of each pollutant are described in criteria documents. The six criteria pollutants are O_3 (precursor emissions include nitrogen oxide [NOx] and reactive organic gases [ROG]), carbon monoxide (CO), particulate matter (PM), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead. Areas that meet ambient air quality standards are classified as attainment areas, while areas that do not meet these standards are classified as nonattainment areas. The county portion of the NCAB is designated as nonattainment for the state standards of PM_{10} and is in attainment or unclassified for state and federal standards for all other air quality emissions (CARB 2019).

The MCAQMD's primary responsibility is ensuring that the federal and state ambient air quality standards are attained and maintained in the NCAB. The MCAQMD is responsible for permitting and inspection of stationary sources, enforcement of regulations (including setting fees, levying fines, and enforcement actions), and ensuring that public nuisances are minimized. MCAQMD Regulation 4, Particulate Matter Reduction Measures, would apply to extraction operations for the Project. This Regulation contains general limitations associated with air emission source operations including those relating to public nuisance, visible emissions, particulate matter emissions, and fugitive dust.

Following is a list of other noteworthy MCAQMD rules required of extraction activities associated with the Proposed Project:

- **Rule 1-400(a) Public Nuisance –** This is a general requirement that is applicable to odors as well as other air contaminants. Specifically, the rule states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public or that endanger the comfort, repose, health or safety of any such persons or the public or that cause or have a natural tendency to cause injury or damage to business or property.
- **Rule 1-410 Visible Emissions –** This applies to any source at the facility and limits visible emissions to no more than 20-percent opacity for more than a 3-minute period in any 1 hour.

- **Rule 1-420 Particulate Matter –** This rule imposes particulate matter emission rate limitations and is applicable to combustion and non-combustion sources. Combustion sources do not include mobile sources. The Proposed Project will have both combustion and non-combustion sources that would be subject to these requirements.
- **Rule 1-430 Fugitive Dust Emissions –** This rule requires that (a) all reasonable precautions be taken to prevent particulate matter from becoming airborne and (b) specifies airborne dust control measures that would be required. The Project would be subject to these requirements.

In addition, there are other MCAQMD rules and regulations, not detailed here, which may apply to the Proposed Project but are administrative or descriptive in nature. These include rules associated with fees, enforcement and penalty actions, and variance procedures.

4.3.2 Air Quality (III) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐

Less than significant impact.

As part of its enforcement responsibilities, the USEPA requires the state with nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under state law, the California Clean Air Act (CAA) requires an air quality attainment plan to be prepared for areas designated as nonattainment with regard to the federal and state ambient air quality standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

As previously mentioned, the Project Site is located within the NCAB, which is under the jurisdiction of the MCAQMD. The MCAQMD is required, pursuant to the federal CAA, to reduce emissions of criteria pollutants for which the NCAB is in nonattainment. The NCAB is in nonattainment for state PM_{10} emission standards. In order to reduce such emissions, the NCAQMD drafted the 2005 PM Plan. The 2005 PM Plan establishes a program of rules and regulations directed at reducing air pollutant emissions and achieving California air quality standards while maintaining the attainment of federal standards. The plan's pollutant control strategies are action items for the MCAQMD to more stringently enforce and improve existing air quality regulations. The 2005 PM Plan includes action items for woodstoves, campgrounds, unpaved roads, construction and grading activities, new residential development, and open burning. The MCAQMD does not provide specific guidance measures that must be considered for compliance of proposed land use projects with the 2005 PM Plan. However, a project that results in an increase in the frequency or severity of existing air quality violations or causes or contributes to new air quality violations could be considered a project that inhibits the overall reduction goals of the 2005 PM Plan. As shown in Table

4.3-1, the Proposed Project would result in emissions that would be below the MCAQMD thresholds during operations. The Project has no construction phase beyond minor improvements to the existing access road. Therefore, the Proposed Project would not result in an increase in the frequency or severity of existing air quality violations and would not have the potential to cause or affect a violation of the ambient air quality standards. Thus, it can be assumed that the Project would not conflict with 2005 PM Plan. This impact is found to be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐

Less than significant impact.

By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's individual emissions exceed its identified significance thresholds, the project would be cumulatively considerable. Projects that do not exceed significance thresholds would not be considered cumulative considerable.

Table 4.3-1. Operational-Related Emissions

	Maximum Pollutants (pounds per day)					
	ROG	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Extraction and Reclamation Activities	1.51 lbs/day	17.80 lbs/day	0.51 tons/year	0.05 lbs/day	50.74 lbs/day	5.55 lbs/day
MCAQMD Significance Threshold	*180 lbs/day*	*42 lbs/day*	*125 tons/year*	*None*	*82 lbs/day*	*54 lbs/day*
Exceed MCAQMD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: California Emissions Estimator Model (CalEEMod) version 2020.4.0. Refer to Attachment 4.3 for Model Data Outputs.

Notes: Operational emissions taken from the season (summer or winter) with the highest output. Modeling outputs account for the use of a Cat D6R tractor dozer at 187 horsepower, a Cat 330 excavator at 275 horsepower and a water truck during Project operations. It was assumed that the same equipment used for extraction operations would be used for reclamation as well.

Construction Emission Impacts

The Project is proposing gravel extraction operations on the Stewart Gravel Bar and the hauling of material to an existing facility. It would therefore have no construction phase beyond minor improvements to the existing access road that would assist in reducing air quality impacts during Project operations.

Operational Emission Impacts

Implementation of the Project would result in long-term operational emissions of criteria air pollutants such as PM_{10}, $PM_{2.5}$, CO, and SO_2 as well as O_3 precursors such as ROG and NO_X. Project-generated increases in emissions would be predominantly associated with motor vehicle use. Long-term operational emissions attributable to the Project, including extraction and reclamation activities, are identified in Table 4.3-1 and compared to the operational significance thresholds promulgated by the MCAQMD.

As indicated in Table 4.3-1, Project operational-generated emissions would not exceed MCAQMD thresholds for any criteria air pollutants.

As previously described, the NCAB is listed as a nonattainment for state standards for PM_{10} and is in attainment or unclassified for state and federal standards for all other air quality emissions. O_3 is a health threat to persons who already suffer from respiratory diseases and can cause severe ear, nose, and throat irritation and increases susceptibility to respiratory infections. Particulate matter can adversely affect the human respiratory system. As shown in Table 4.3-1, the Proposed Project would result in increased emissions of the O_3 precursor pollutants ROG and NO_x, PM_{10}, and $PM_{2.5}$; however, the correlation between a project's emissions and increases in nonattainment days, or frequency or severity of related illnesses, cannot be accurately quantified. The overall strategy for reducing air pollution and related health effects in Mendocino County is contained in MCAQMD's Rules and Regulations. As noted above, the Project would increase the emission of these pollutants, but would not exceed the thresholds of significance established by the MCAQMD for purposes of reducing air pollution and its deleterious health effects. Additionally, the Project is only anticipated to last 45 days per year for the 20-year permit term.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐

Less than significant impact.

Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. The CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. The nearest sensitive receptors to the Project Site

are rural residences to the north located approximately 900 to 1,100 feet north of the proposed mining and reclamation activities, and approximately 410 to 450 feet from the access road.

Construction Generated Air Contaminants

Construction of the Proposed Project would not result in the development of any substantial sources of air toxics. There are no stationary sources associated with construction. The Project is proposing gravel extraction operations on the Stewart Gravel Bar and the hauling of material to an existing facility. It would therefore have no construction phase beyond minor improvements to the existing access road that would assist in reducing air quality impacts during Project operations. Thus, the Project would not be a source of toxic air contaminant (TAC) concentrations during the limited Project construction phase.

Operational Air Contaminants

Operational-related activities would result in temporary, short-term Proposed Project-generated emissions of diesel particulate matter (DPM), ROG, NOx, CO, and PM_{10} from the exhaust of off-road, heavy-duty diesel equipment for extraction, material hauling, and reclamation activities. The portion of the NCAB that encompasses the Project vicinity is designated as a nonattainment area for PM_{10} under state standards and attainment or unclassified for state and federal standards for all other air quality emissions (CARB 2019). Thus, existing O_3 and PM_{10} levels in the NCAB are at unhealthy levels during certain periods. However, as shown in Table 4.3-1, the Project would not exceed the MCAQMD emission thresholds during Project operations. Additionally, the Project gravel extraction operations are only anticipated to last 45 days per year for the 20-year permit term.

The health effects associated with O_3 are generally associated with reduced lung function. Because the Project would not involve operational activities that would result in O_3 precursor emissions (ROG or NO_x) in excess of the MCAQMD thresholds, the Project is not anticipated to substantially contribute to regional O_3 concentrations and the associated health impacts.

CO tends to be a localized impact associated with congested intersections. In terms of adverse health effects, CO competes with oxygen, often replacing it in the blood, reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions. The Project would not involve operational activities that would result in CO emissions in excess of the MCAQMD thresholds. Thus, the Project's CO emissions would not contribute to the health effects associated with this pollutant.

PM_{10} and $PM_{2.5}$ contain microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. PM exposure has been linked to a variety of problems, including premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms such as irritation of the airways, coughing, or difficulty breathing. For construction activity, DPM is the primary TAC of concern. The potential cancer risk from the inhalation of DPM outweighs the potential for all other health impacts (i.e., non-cancer chronic risk, short-term acute risk) and health impacts from other TACs. Based on the emission modeling conducted, the maximum onsite operational-related daily emissions of exhaust PM_{10}, considered a surrogate for DPM and includes emissions of exhaust $PM_{2.5}$, would be 0.46 pounds per day

during operations (see Attachment 4.3). PM_{10} exhaust is considered a surrogate for DPM as all diesel exhaust is considered to be DPM. As with O_3 and NO_X, the Project would not generate emissions of PM_{10} or $PM_{2.5}$ that would exceed the significance thresholds. Accordingly, the Project's PM_{10} and $PM_{2.5}$ emissions are not expected to cause any increase in related regional health effects for these pollutants. Additionally, as previously stated the Project gravel extraction operations are only anticipated to last 45 days per year for the 20-year permit term. As such, these emissions would be temporary.

In summary, the Project would not result in a potentially significant contribution to regional concentrations of nonattainment pollutants and would not result in a significant contribution to the adverse health impacts associated with those pollutants.

Carbon Monoxide Hot Spots

It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when idling at intersections. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. Under certain meteorological conditions, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. Given the high traffic volume potential, areas of high CO concentrations, or "hot spots," are typically associated with intersections that are projected to operate at unacceptable levels of service during the peak commute hours. It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. However, transport of this criteria pollutant is extremely limited, and CO disperses rapidly with distance from the source under normal meteorological conditions. Furthermore, vehicle emissions standards have become increasingly more stringent in the last 20 years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams per mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the MDAB is designated as in attainment. Detailed modeling of Project-specific CO hot spots is not necessary and thus this potential impact is addressed qualitatively.

A CO hot spot would occur if an exceedance of the state 1-hour standard of 20 parts per million (ppm) or the 8-hour standard of 9 ppm were to occur. The analysis prepared for CO attainment in the South Coast Air Quality Management District's (SCAQMD's) *1992 Federal Attainment Plan for Carbon Monoxide* in Los Angeles County and a Modeling and Attainment Demonstration prepared by the SCAQMD as part of the 2003 Air Quality Management Plan can be used to demonstrate the potential for CO exceedances of these standards. The SCAQMD is the air pollution control officer for much of southern California. The SCAQMD conducted a CO hot spot analysis as part of the 1992 CO Federal Attainment Plan at four busy intersections in Los Angeles County during the peak morning and afternoon time periods. The intersections evaluated included Long Beach Boulevard and Imperial Highway (Lynwood), Wilshire Boulevard and Veteran Avenue (Westwood), Sunset Boulevard and Highland Avenue (Hollywood), and La Cienega Boulevard and Century Boulevard (Inglewood). The busiest intersection evaluated was at Wilshire Boulevard and Veteran Avenue, which has a traffic volume of approximately 100,000 vehicles per day. Despite this level of traffic, the CO analysis concluded that there was no violation of CO standards (SCAQMD 1992). In order to establish a more accurate record of baseline CO concentrations affecting the

Los Angeles area, a CO hot spot analysis was conducted in 2003 at the same four busy intersections in Los Angeles at the peak morning and afternoon time periods. This hot spot analysis did not predict any violation of CO standards. The highest 1-hour concentration was measured at 4.6 ppm at Wilshire Boulevard and Veteran Avenue and the highest 8-hour concentration was measured at 8.4 ppm at Long Beach Boulevard and Imperial Highway. Thus, there was no violation of CO standards.

Similar considerations are also employed by other air districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District, the air pollution control officer for the San Francisco Bay Area, concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour or 24,000 vehicles per hour where vertical and/or horizontal air does not mix in order to generate a significant CO impact.

According to the Greenhouse Gas Assessment prepared by Illingworth & Rodkin, Inc. (2019a) the Project is anticipated to generate a maximum of three worker trips per day, one water truck trip, and 2,966 hauling trips. It is noted that hauling trips were estimated based off information provided by CalEEMod for land use development projects and are considered very conservative for this specific Project. Nonetheless, the Proposed Project would not result in traffic volumes at any intersection of more than 100,000 vehicles per day, and there is no likelihood of the Project traffic exceeding CO values.

For these reasons, this impact would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Less than significant impact.

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another. It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

Project Construction

As previously described, there is no construction phase beyond minor improvements to the existing access road associated with the Project. This process has the potential to generate objectionable odors in the form of diesel exhaust. However, these emissions are short term in nature and will rapidly dissipate and be diluted by the atmosphere downwind of the emission sources.

Project Operations

During Project operations, the Proposed Project presents the potential for generation of objectionable odors in the form of diesel exhaust in the immediate vicinity of the site. However, these emissions and will rapidly dissipate and be diluted by the atmosphere downwind of the emission sources and are short term in nature given the timeframe of the Project. Additionally, odors would be localized and generally confined to the area where extraction and reclamation activities occur.

For these reasons, this impact would be less than significant.

4.3.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.4 Biological Resources

Gallaway Enterprises conducted a Biological Resources Assessment (BRA) for the Proposed Project (Gallaway Enterprises 2019). The purpose of the BRA was to document the endangered, threatened, sensitive, and rare species that occur or may occur in the biological survey area of the Project. The following information was excerpted from the BRA. Since the time of the writing of the BRA for the Stewart Bar Mining Project, the Project incorporated the full extent of Stewart Bar into their project boundary with regard to the biological resources survey. The additional 1.6 acres of gravel bar resulted in a Biological Survey Area (BSA) of 5.3 acres (Gallaway Enterprises 2020). The additional acreage being added to the BSA consists solely of barren gravel bar that is classified as the barren habitat type as described in the June 2019 BSA. The BRA is included as Attachment 4.4 of this Initial Study and provides the information for the following sections.

4.4.1 Methods

On May 30, 2019, biologist Brittany Reaves conducted a wildlife habitat assessment and senior botanist Elena Gregg conducted a botanical habitat assessment and protocol-level rare plant survey within the BSA for the Project. In addition, a review of the California Natural Diversity Data Base (CNDDB) was also consulted to locate records of special-status species within a 5-mile radius of the Project Area. The BRA also reviewed the U.S. Fish and Wildlife Service (USFWS) Species List, the CDFW CNDDB Rarefind 5 database, the California Native Plant Society (CNPS) Inventory of Rare and Endangered Vascular Plants of California, the USFWS Critical Habitat Portal, and results from the habitat assessment conducted by Gallaway Enterprises on May 30, 2019 (Gallaway Enterprises 2019).

4.4.2 Environmental Setting

The Project Site is located off SR 162, just southeast of the unincorporated community of Dos Rios in Mendocino County, California. The Project Area is approximately 3.7 acres and is comprised of a gravel bar on the Middle Fork Eel River and an existing access road. The surrounding area consists of the foothills of the Coast Range. The gravel bar is located within the Middle Fork Eel River but is generally dry and exposed during the summer months. During periods of high flows during the winter and early spring, water may flow through the BSA. There is a residential home and several associated outbuildings located at a higher elevation just north of the BSA. Immediately south of the BSA is the Middle Fork Eel River.

4.4.2.1 Topography and Soils

The overall topography of the BSA where gravel extraction will take place is relatively flat; the access road from SR 162 to the Middle Fork Eel River is located on hilly terrain with a steep drop in elevation to river access. The access road from SR 162 is at approximately 1,033 feet in elevation, and the BSA within the Middle Fork Eel River where extraction will occur is located at approximately 909 feet in elevation. The access road is surrounded by mixed oak-foothill pine woodlands, interspersed with annual grassland and manzanita. The gravel bar itself is barren, with little to no vegetation present.

Soils within the BSA are Xerofluvents-Riverwash complex, 0 to 2 percent slopes; gravelly, sandy loams with a deep restrictive layer of more than 80 inches in depth. The average annual precipitation for the area is 41.66 inches and the average temperature is 55.8 degrees Fahrenheit (Gallaway 2019). A Mediterranean warm summer occurs in an oval-shaped area encompassing the Eel River from Island Mountain to Fort Seward and in a circular area containing Covelo and the lower portion of the Middle Fork Eel River. This climate zone is similar to that found over most of the Sacramento and San Joaquin valleys, but with a greater amount of winter precipitation (Gallaway Enterprises 2019).

4.4.2.2 Habitats

Barren

Barren habitat is typified by non-vegetated soil, rock, and gravel. The majority of the BSA contains barren habitat, as the general area for extraction activities is comprised entirely of an exposed gravel bar located within the Middle Fork Eel River. There is also a barren, unpaved access road that will be utilized by trucks

for Project activities. Some canopy of the surrounding mixed oak-foothill pine habitat overhangs the access road and could be utilized by nesting birds.

The barren habitat type typically provides low quality habitat to wildlife. Some ground-nesting birds, such as killdeer (*Charadrius vociferus*), will nest in gravelly, barren substrate. Killdeer were observed within the BSA during the habitat assessment.

Riverine

Riverine habitat is characterized by intermittent or continually running water. The Middle Fork Eel River provides riverine habitat within the BSA when water is present. The Middle Fork Eel River flows through the BSA during winter and early spring months when water levels are high. Later in the year, flows subside and the exposed gravel bar within the BSA does not contain aquatic features. The Middle Fork Eel River flows perennially adjacent to the BSA. No shaded riverine aquatic habitat is present as there are no trees or riparian vegetation within the BSA.

Riverine habitat provides food for waterfowl, herons (*Ardeidae* sp.), and many species of insectivorous birds, hawks, and their prey. This portion of the Middle Fork Eel River hosts myriad aquatic species and is within designated critical habitat for anadromous fish species.

Critical Habitat

The BSA is located on an exposed gravel bar adjacent to the Middle Fork Eel River. The Middle Fork Eel River is designated as critical habitat for Southern Oregon Northern California Coast Evolutionarily Significant Unit (ESU) Coho salmon (*Oncorhynchus kisutch*), California Coastal (CC) ESU Chinook salmon (*Oncorhynchus tshawytscha*), and Northern California (NC) Distinct Population Segment (DPS) steelhead (*Oncorhynchus mykiss*).

Essential Fish Habitat (EFH)

The Middle Fork Eel River supports populations of Chinook salmon that may spawn, breed, feed, and grow within its stream channel and associated tributaries. Therefore, the Middle Fork Eel River is considered EFH under the Magnuson-Stevens Fishery Conservation and Management Act. The Middle Fork Eel River is also designated as EFH for coho salmon species; however, coho salmon do not occur in the Middle Fork Eel River and it is therefore not EFH for coho salmon.

Sensitive Natural Communities

The BRA determined that there are no sensitive natural communities within the BSA.

4.4.2.3 Vegetation Communities

The BSA is approximately 5.3 acres and is comprised of a gravel bar on the Middle Fork Eel River and an existing access road. The access road is surrounded by mixed oak-foothill pine woodlands, interspersed with annual grassland and manzanita. The gravel bar contains no topsoil, overburden, trees, or vegetation. There is no proposed removal of vegetation outside of the extraction area.

4.4.2.4 Wildlife

The wildlife species that were observed in the barren Project Area include steelhead, Chinook salmon, foothill yellow-legged frog (*Rana boylii*), and western pond turtle (*Emys marmorata*). These species are discussed in Section 4.4.3. Suitable habitat was identified for several avian species protected under the Migratory Bird Treaty Act (MBTA) and for special-status aquatic species that may occur adjacent to the BSA.

4.4.2.5 Potential Waters of the U.S.

The Project Site is located within the Middle Fork Eel River. The Middle Fork Eel River watershed area, or basin, is located primarily in northeast Mendocino County, with smaller areas in southern Trinity and Glenn counties. The basin is 753 square miles (approximately 482,000 acres) in area, and the Middle Fork Eel River is approximately 69.8 miles long, entering the main fork of the Eel River near the town of Dos Rios, approximately 1.5 miles downstream of the Proposed Project. The gravel bar is located within the Middle Fork Eel River channel, but is generally dry and exposed during the summer months. The Middle Fork Eel River flows through the Project Area during winter and early spring months when water levels are high. Later in the year, flows subside and the exposed gravel bar within the Project Area becomes devoid of aquatic features. The Middle Fork Eel River flows perennially adjacent to the Project Area.

4.4.3 Evaluation of Potentially Occurring Special-Status Species

The purpose of the BRA was to assess the potential for occurrence of special-status plant and animal species or their habitats and sensitive habitats such as wetlands, riparian communities, and sensitive natural communities within the Study Area.

Special-status species that have potential to occur in the BSA are those that fall into one of the following categories:

- Listed as threatened or endangered, or are proposed or candidates for listing under the California Endangered Species Act (ESA; 14 CCR 670.5) or the federal ESA (50 CFR 17.12);
- Listed as a Species of Special Concern (SSC) by CDFW or protected under the California Fish and Game Code (i.e., Fully Protected Species);
- Ranked by the CNPS as 1A, 1B, or 2;
- Protected under the MBTA;
- Protected under the Bald and Golden Eagle Protection Act; or
- Species that are otherwise protected under policies or ordinances at the local or regional level as required by CEQA (§15380).

Only species that fall into one of the above-listed groups were considered for the biological assessment. While other species (e.g., special-status lichens, mosses and bryophytes, CNDDB-tracked species with no

special status) are sometimes found in database searches or within the literature, these species were not included within the BRA analysis as these species are not identified as special-status species.

A summary of special-status species and their potential to occur within 1 mile of the Study Area are described in Table 1 of the BRA. Potential for occurrence was determined by reviewing database queries from federal and state agencies and evaluating habitat characteristics. Species with some potential to occur on the Project Site, as determined by the BRA, are listed in Table 4.4-1. There are no plant species that have potential to occur on the Project Site. According to the BRA, one animal species has some potential to occur within the Project Site: western pond turtle. This species is discussed further below. Species that were considered to be absent from the Project Site due to lack of suitable habitat, or because the known distribution of the species does not include the Project Site vicinity, are not discussed further in this document.

A complete list of special-status species that have the potential to exist in the greater Project region and the results of the database queries are included in the BRA included as Attachment 4.4.

Table 4.4-1. Potentially Occurring Special-Status Species[1]

Common Name (Scientific Name)	Status (Fed/State/CNPS)	Associated Habitats	Potential for Occurrence
Reptiles			
Western pond turtle (*Emys marmorata*)	_/SSC/_	Perennial bodies of water with deep pools, locations for haul out, and locations for oviposition	**Moderate.** The BSA contains basking habitat and there is one CNBBD occurrence within 5 miles.
Fish			
Chinook salmon California Coastal ESU *(Oncorhynchus tshawytscha)*	FT/_/_	Accessible freshwater rivers, streams, and tributaries between Redwood Creek, Humboldt County and Russian River, Sonoma County.	**None.** There is no suitable habitat present within the BSA during the summer low-flow period when construction is proposed to occur. However, the BSA is within designated critical habitat for this species when water is present. Individuals may migrate in flowing water adjacent to the BSA.
Steelhead Northern California DPS *(Oncorhynchus mykiss)*	FT/_/_	California coastal river basins from Redwood Creek to and including the Gualala River. Wintering habitat includes streams with deep low-velocity pools while spawning habitat includes gravel substrates free of excessive silt.	**None.** There is no suitable habitat present within the BSA during the summer low-flow period when construction is proposed to occur. However, the BSA is within designated critical habitat for this species when water is present. Individuals may migrate in flowing water adjacent to the BSA.

Table 4.4-1. Potentially Occurring Special-Status Species[1]			
Common Name (Scientific Name)	**Status (Fed/State/CNPS)**	**Associated Habitats**	**Potential for Occurrence**
Amphibians			
Foothill yellow-legged frog (*Rana boylii)*	_/SC,SSC/_	Partly shaded, shallow streams and riffles with rocky substrates in a variety of habitats, commonly found in canyons and narrow streams. (sea level - 6,700 feet elevation)	**None.** The BSA does not contain suitable habitat elements during the summer low-flow periods when water is not present. However, there are nearby CNDDB occurrences that are hydrologically connected to the Middle Fork Eel River where the BSA is located

FE or FT = Federally listed as Endangered or Threatened	**CNPS California Rare Plant Rank (CRPR):**
FC = Federal Candidate Species	**CRPR 1B** = Rare or Endangered in California or elsewhere
SE or ST= State Listed as Endangered or Threatened	**CRPR 2** = Rare or Endangered in California, more common elsewhere
SC = State Candidate Species	**CRPR 3** = More information is needed
SSC = State Species of Special Concern	**CRPR 4** = Plants with limited distribution
FP = State Fully Protected Species	**0.1** = Seriously Threatened
SNC = CDFW Sensitive Natural Community	**0.2** = Fairly Threatened
	0.3 = Not very Threatened

Source: Gallaway Enterprises 2019

Notes: 1) This table only lists the special-status species found to potentially occur within the BSA. A complete list of special-status species known to have the potential to exist in the region and the results of the database queries are included in the BRA included as Attachment 4.4.

4.4.3.1 Western Pond Turtle

The western pond turtle is a SSC in California. Western pond turtles are drab, darkish-colored turtles with a yellowish to cream colored head. They range from the Washington Puget Sound to Baja California. Suitable aquatic habitats include slow moving to stagnant water, such as backwaters and ponded areas of rivers and creeks, semipermanent to permanent ponds, and irrigation ditches. Preferred habitats include features such as hydrophytic vegetation for foraging and cover, and basking areas to regulate body temperature. In early spring through early summer, female turtles begin to move over land in search of nesting sites. Eggs are laid on the banks of slow-moving streams. The female digs a hole approximately 4 inches deep and lays up to 11 eggs. Afterwards, the eggs are covered with sediment and are left to incubate under the warm soils. Eggs are typically laid between March and August. Current threats facing the western pond turtle include loss of suitable aquatic habitats due to rapid changes in water regimes and removal of hydrophytic vegetation.

There is one CNDDB occurrence of western pond turtle within 5 miles of the BSA. This occurrence was observed in 2004 and is located approximately 1.5 miles west-northwest of the BSA along the edge of the Eel River (Gallaway Enterprises 2019).

4.4.3.2 California Coastal Chinook Salmon

Chinook salmon are an anadromous species that originate in freshwater environments, such as major streams and tributaries, before migrating to oceanic environments to grow and mature, then returning to their natal freshwater environments to spawn and eventually die. Chinook salmon are the largest of the salmon species. They range in appearance throughout their developmental stages and aquatic environments.

The CC Chinook salmon are considered an ESU by NMFS and their listing status is threatened under the federal ESA. Most fall-run Chinook salmon return to their natal streams between September and October, and spawn soon after freshwater entry. Fall-run CC Chinook salmon adult migration can be later when compared to other fall-run Chinook salmon, because the rivers they inhabit open later in the season in response to large winter storms (November through January). The typical life cycle for CC Chinook salmon is to out migrate as smolts during the spring and summer after hatching, then spend 1 to 5 years in the ocean before returning to spawn. Key habitat for Chinook salmon includes moderately deep pools utilized for holding habitat over summer, small cobble or gravel substrate for spawning, and slow, off-channel water with debris or vegetation that juveniles utilize for rearing habitat and refuge. Shade and wood cover have been indicated as important for juvenile Chinook salmon holding habitat (Zajanc et al. 2012). Chinook salmon adults utilize deep pools for holding that usually have a large bubble curtain at the head, underwater rocky ledges, and shade cover throughout the day, or hold in smaller "pocket" water behind large rocks in fast water.

There are no occurrences of CC Chinook salmon within the 5-mile radius of the BSA; however, the Middle Fork Eel River is designated as critical habitat for CC Chinook salmon and CC Chinook salmon are known to occur in this river system (Gallaway Enterprises 2019).

4.4.3.3 Northern California Steelhead

The NC steelhead DPS is considered threatened under the federal ESA. They rely on streams, rivers, estuaries, and marine habitat during their lifecycle. Because young steelhead spend a significant portion of their lives in rivers and streams, they are particularly susceptible to human-induced changes to water quality and habitat threats. Winter-run steelhead enter the river from November through April and spawn during February through April. Summer-run steelhead enter the river from March through June and spawn the following spring. Steelhead spawn in streams and rivers and rear in freshwater for 1 to 4 years before migrating downstream through estuaries to the open ocean. Steelhead spend 1 to 5 years at sea before returning to natal streams or rivers. Steelhead do not always die after spawning, but will again migrate through estuaries to the ocean.

There are no occurrences of NC steelhead within the 5-mile radius of the BSA; however, the Middle Fork Eel River is designated as critical habitat for NC steelhead and NC steelhead are known to occur in this river system.

4.4.3.4 Foothill Yellow-Legged Frog

Foothill yellow-legged frog is currently a California SSC and a candidate species for consideration to be listed as threatened pursuant to the California ESA. Foothill yellow-legged frogs require shallow, flowing water in small to moderate sized streams with cobble substrate that is best suited for oviposition. The cobble substrate also provides significant refuge for early life stage. Eggs, tadpoles, and metamorphs are susceptible to aquatic predators such as bullfrogs (*Lithobates catesbeianus*), various species of fish, and garter snakes (*Thamnophis* spp.). Foothill yellow-legged frogs generally come out of hibernation around March and begin breeding and laying egg masses from mid-March through May, once local spring flooding conditions have subsided. Egg laying typically occurs at a particular site once water temperatures reach 12 to 15 degrees Celsius. Irregular water flows from large nonseasonal precipitation events or large water releases from upstream reservoirs can scour egg masses from oviposition locations.

There are two CNDDB occurrences of foothill yellow-legged frog within 5 miles of the BSA. The nearest occurrence is located approximately 1 mile northwest of the BSA (#2442). Several adults and juveniles were observed in Poonkinny Creek in late September and early November 2018. The other occurrence (#2193) is located approximately 3 miles south of BSA in the mainstem Eel River. Foothill yellow-legged frog tadpoles and one juvenile were observed during summer fish rearing surveys for Potter Valley hydroelectric project in the summer of 2017.

4.4.4 Biological Resources (IV) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	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 Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐

Less than significant impact with mitigation incorporated.

The Project proposes seasonal extraction activates on an instream gravel bar, the removal of material on an existing access road and reclamation activities. Such activates have the potential to impact anadromous fish species, western pond turtle, and foothill yellow-legged frog

Status of Western Pond Turtle Occurring Within the BSA

Western pond turtles are known to bask on banks and woody debris, such as logs, along the sides of perennial aquatic features like the Middle Fork Eel River. There is moderate potential for western pond turtle to occur within the BSA. As such, mitigation measures **BIO-1** and **BIO-6** have been included to reduce these impacts to a less than significant level.

Status of CC Chinook Salmon Occurring in the BSA and Adjacent Area

The lower 25 miles of the Middle Fork Eel River below the confluence of the Black Butte River has historically had elevated stream temperatures and limited presence of salmonids due to a Mediterranean climate that causes hot, dry summers in the area. CC Chinook salmon spawn in the upper reaches of the Middle Fork Eel River; however, due to high temperatures and lack of cover, woody debris, and riparian vegetation, Chinook salmon are unlikely to hold or spawn in the river adjacent to where the BSA is located. Chinook salmon individuals may migrate past the BSA during proposed the construction period, but will not occur within the BSA as construction will only occur when the BSA is dry. However, because of the potential for Chinook salmon to be within the adjacent river during construction and operation of the Project, mitigation is required. As such, mitigation measures **BIO-2** and **BIO-6** have been included to reduce these impacts to a less than significant level.

Status of NC Steelhead Occurring in the BSA and Adjacent Area

The lower 25 miles of the Middle Fork Eel River below the confluence of the Black Butte River has historically had elevated stream temperatures and limited presence of salmonids due to a Mediterranean climate that causes hot, dry summers in the area. Steelhead spawn in the upper reaches of the Middle Fork Eel River; however, due to high temperatures and lack of cover, woody debris, and riparian vegetation, steelhead are unlikely to hold or spawn in the river adjacent to where the BSA is located. Steelhead individuals may migrate past the BSA during the proposed construction period, but will not occur within the BSA as construction will only occur when the BSA is dry. However, because of the potential for steelhead to be within the adjacent river during construction and operation of the Project, mitigation is required. As such, mitigation measures **BIO-2** and **BIO-6** have been included to reduce these impacts to a less than significant level.

Status of Foothill Yellow-Legged Frog Occurring Within the BSA

Foothill yellow-legged frogs generally prefer low-gradient, partially shaded streams with 20- to 90-percent canopy cover. In larger channels like the Middle Fork Eel River, breeding sites are often at point bars or depositional environments near the tail-end of pools or near tributary confluences, as these sites have reduced chance of scour. As gravel extraction activities are proposed to occur during the summer low-flow period when the BSA is expected to be dry, there is no potential for foothill yellow-legged frogs to breed within the BSA when water is not present.

There is cobble and riffle habitat present adjacent to the BSA; however, there is a total absence of riparian vegetation and shade that appears to be an important component of foothill yellow-legged frog breeding habitat. Due to lack of canopy cover, lack of observations during the habitat assessment, and absence of water within the BSA, there is no potential for foothill yellow-legged frog to occur within the BSA during the proposed construction and operation period. However, occurrences of the foothill yellow-legged frog have been recorded nearby and as such, the potential for occurrences of the foothill yellow-legged frog is possible during operations. As such, in an abundance of caution, mitigation measures **BIO-3** and **BIO-6** have been included to reduce these impacts to a less than significant level.

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

Less than significant impact.

The proposed extraction site is located outside of an established riparian area. Riverine habitat is characterized by intermittent or continually running water. The Middle Fork Eel River provides riverine habitat within the BSA when water is present. The Middle Fork Eel River flows through the BSA during winter and early spring months when water levels are high. Later in the year, flows subside and the exposed gravel bar within the BSA does not contain aquatic features. The Middle Fork Eel River flows perennially adjacent to the BSA. No shaded riverine aquatic habitat is present as there are no trees or riparian vegetation within the BSA. Although the removal of material from the Middle Fork Eel River is being proposed, a Reclamation Plan (Attachment 2.0) has been developed to alleviate impacts associated with Project activates. Thus, this will result in a less than significant impact.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐

Less than significant impact with mitigation incorporated.

Project actives have the potential to occur within the ordinary high-water mark (OHWM) and/ or result in fill or discharge within the Eel River, which is identified as a Waters of the U.S. As such, mitigation measure **BIO-4** has been included to reduce this impact to a less than significant level.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐

Less than significant impact with mitigation incorporated.

Migratory Birds and Raptors

Nesting birds are protected under the MBTA (16 U.S. Code [USC] 703) and the California Fish and Game Code (§3503). The MBTA (16 USC §703) prohibits the killing of migratory birds or the destruction of their occupied nests and eggs except in accordance with regulations prescribed by the USFWS. The bird species covered by the MBTA includes nearly all of those that breed in North America, excluding introduced (i.e., exotic) species (50 CFR §10.13). Activities that involve the removal of vegetation including trees, shrubs, grasses, and forbs or ground disturbance has the potential to affect bird species protected by the MBTA. The California Fish and Game Code (§3503.5) states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes (hawks, eagles, and falcons) or Strigiformes (owls) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Take includes the disturbance of an active nest resulting in the abandonment or loss of young. The California Fish and Game Code (§3503) also states that "it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto."

The majority of migratory birds and raptors protected under the MBTA and California Fish and Game Code are not recorded on the CNDDB because they are abundant and widespread.

There is suitable nesting habitat for a ground-nesting avian species within and adjacent to the BSA, and there is suitable nesting habitat for tree- and shrub-nesting avian species immediately adjacent to the BSA.

The Project Site was assessed for its ability to function as a wildlife corridor. Activates occurring on the Project Site and access road have the potential to impact wildlife movement for migratory birds and fish species. Due to the potential adverse effects on the migratory corridors, mitigation measures **BIO-2**, **BIO-5** and **BIO-6** have been included for the Proposed Project. Implementation of these mitigation measures would result in a less than significant impact.

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

No impact.

The County General Plan (2009) Resource Management Element includes goals encouraging the protection of biological resources. Specifically, Goal RM-4 encourages the protection and enhancement of Mendocino County's natural ecosystem and Goal RM-8 strives for protection, restoration, and enhancement of the county's freshwater and marine environments. The Proposed Project does not conflict with these or any other applicable goals presented in the County's General Plan. As such, no impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

No Impact.

The Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. The Project is proposing seasonal extraction activates within the Eel River. Upon completion of such activates, reclamation actives will restore the area to its natural and pre-disturbed state. As such, no impact would occur.

4.4.5 Mitigation Measures

The following are the recommended minimization and mitigation measures to further reduce or eliminate Project-associated impacts to special-status wildlife species. These proposed measures may be amended or superseded by the Project-specific permits issued by the regulatory agencies.

BIO-1: **Western Pond Turtle.** The following are avoidance and minimization measures required in order to avoid and minimize potential impacts to western pond turtle:

- Immediately prior to the start of work, a qualified biologist shall conduct a survey to determine the presence or absence of western pond turtles. If western pond turtles are observed where they could be potentially impacted by Project activities, as determined by the onsite biologist, then work shall not be conducted within 100 feet of the sighting until

the turtle(s) have left the Project site or a qualified biologist has relocated the turtle(s) immediately outside of the Project site.

- If turtle eggs are uncovered during construction activities, then all work shall stop within a 25-foot radius of the nest and the qualified biologist should be notified immediately. The 25-foot buffer should be marked with identifiable markers that do not consist of fencing or materials that might block the migration of young turtles to the water or attract predators to the nest site. No work will be allowed within the 25-foot buffer until the turtle eggs have hatched or the nest fails.
- All portions of the Project site that could result in inadvertently trapping turtles, such as open pits, trenches, and dewatered areas, will be covered and/or exclusion fencing will be installed to prevent turtles from entering these areas.

Timing/Implementation: *During construction and operation*

Monitoring/Enforcement: *The Mendocino Planning and Building Services and Project proponent.*

BIO-2: **Anadromous Fish Species.** The operator/contractor shall avoid impacts to anadromous fishes (Chinook salmon and steelhead) and their habitat by avoiding in-water work. This will be done by commencing Project activities when there is no flowing or ponded water within the BSA and concluding Project activities within Middle Fork Eel River before flows increase again the following fall/winter. To avoid potential impacts to anadromous fish species and their critical habitat, the following are recommended avoidance and minimization measures:

- Extraction activities shall only occur during daylight hours to allow "noise refugia" and time for fish to migrate out of or past the area of Project noise occurrence.
- Channel disturbance shall be kept to a minimum during construction activities within the channel and only occur within designated areas. Silt fencing should be installed to delineate a 50-foot buffer between all construction activities and the active wetted channel at all times.
- Extraction shall maintain an undisturbed head buffer that shall begin at the upstream end of the primary extraction area and extend downstream for a distance equaling approximately 30 to 35 percent of the total length of the exposed bars to protect bar stability as recommended in National Oceanic and Atmospheric Administration Fisheries' sediment removal guidelines. All bare mineral soil exposed in conjunction with road construction that leads to the affected stream shall be treated for erosion prior to the onset of precipitation capable of generating runoff or the end of the yearly work period, whichever comes first. Restoration shall include using native slash or seeding and mulching of all bare mineral soil exposed in conjunction with encroachment work. No known invasive grass seed shall be used, such as annual or perennial ryegrass (*Festuca perennis*).

- The Project proponent shall provide site maintenance including, but not limited to, reapplying erosion control to minimize surface erosion and ensuring drainage structures, streambeds, and banks remain sufficiently armored and stable.
- Structures and associated materials not designed to withstand high seasonal flows shall be removed to areas above the OHWM before such flows occur or the end of the yearly work period, whichever comes first.
- Refueling of equipment and vehicles and storing, adding, or draining lubricants, coolants, or hydraulic fluids shall not take place within or adjacent to any stream. All such fluids and containers shall be disposed of properly. Heavy equipment parked within or adjacent to the stream shall use drip pans or other devices (e.g., absorbent blanks, sheet barriers, or other materials) as needed to prevent soil and water contamination.
- All activities performed in the field which involve the use of petroleum- or oil-based substances shall employ absorbent material designated for spill containment and cleanup activity on site for use in case of accidental spills. Cleanup of all spills shall begin immediately. The CDFW shall be notified by the Project proponent and consulted regarding cleanup procedures.
- No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete washings, oil or petroleum products, or other organic or earthen material from construction work, or associated activity of whatever nature shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into the stream. When operations are completed, any excess materials or debris shall be removed from the work area.
- All traffic and equipment staging should be limited to the existing access road and designated staging areas.
- The excavation site shall be recontoured following extraction activities each season to prevent the entrapment or entrainment of wildlife in open trenches or borrow pits.

Timing/Implementation: *During construction and operation*

Monitoring/Enforcement: *The Mendocino Planning and Building Services and Project proponent.*

BIO-3: **Foothill Yellow-Legged Frog.** Under state regulations, a candidate threatened species receives the same protections as listed species until the final determination is made on its status. Although there is no potential for foothill yellow-legged frog to occur within the BSA when it is dry, in an abundance of caution the contractor shall implement the following mitigations in an effort to avoid and minimize impacts to this species:

- Construction within Middle Fork Eel River shall commence when there is no flowing or ponded water within the BSA and shall conclude before the river begins to flow through the BSA again the following fall/winter.

- If flowing or ponded water is present within the BSA, qualified biologist shall conduct a preconstruction survey within 72 hours prior to the start of construction to determine the absence/presence of foothill yellow-legged frog . If at any point foothill yellow-legged frogs are found within the Project site, CDFW shall be consulted. Construction activities shall not commence until the contractor has received written verification from CDFW that the Project can continue.
- Only wildlife-friendly 100-percent biodegradable erosion control products that will not entrap or harm wildlife shall be used. Erosion control products shall not contain synthetic (e.g., plastic or nylon) netting. Photodegradable synthetic products are not considered biodegradable.

Timing/Implementation: *During construction and operation*

Monitoring/Enforcement: *The Mendocino Planning and Building Services and Project proponent.*

BIO 4: **Waters of the U.S.** If activities occur within the OHWM and/or result in fill or discharge to any Waters of the U.S which include but are not limited to intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, vernal pools, or natural ponds, then the following will need to be obtained:

- Prior to any discharge or fill material into Waters of the U.S, authorization under a Nationwide Permit or Individual Permit shall be obtained from the USACE. For fill requiring a USACE permit, a water quality certification from the RWQCB (Clean Water Act §401) shall also be obtained prior to discharge of dredged or fill material.
- Prior to any activities that would obstruct the flow of or alter the bed, channel, or bank of any perennial, intermittent, or ephemeral creeks, notification of streambed alteration shall be submitted to the CDFW, and, if required, a Lake and Streambed Alteration Agreement (§1602) shall be obtained.

Timing/Implementation: *During construction and operation*

Monitoring/Enforcement: *The Mendocino Planning and Building Services and Project proponent.*

BIO-5: **Migratory Birds and Raptors.** To avoid impacts to avian species protected under the MBTA and the California Fish and Game Code the following are required avoidance and minimization measures for migratory birds and raptors:

- Project activities including site grubbing and vegetation removal shall be initiated outside of the bird nesting season (February 1 – August 31).
- If Project activities cannot be initiated outside of the bird nesting season, then the following will occur:

- A qualified biologist will conduct a preconstruction survey within 250 feet of the BSA, where accessible, within 7 days prior to the start of Project activities.
- If an active nest (i.e. containing egg[s] or young) is observed within the BSA or in an area adjacent to the BSA where impacts could occur, then a species protection buffer will be established. The species protection buffer will be defined by the qualified biologist based on the species, nest type, and tolerance to disturbance. Construction activity shall be prohibited within the buffer zones until the young have fledged or the nest fails as determined by a qualified biologist. Nests shall be monitored by a qualified biologist once per week and a report submitted to the CEQA lead agency weekly.

Timing/Implementation: *During construction and operation*

Monitoring/Enforcement: *The Mendocino Planning and Building Services and Project proponent.*

BIO 6: **Environmental Awareness Training.** Contractual requirements shall include a requirement for tail-gate training by the Project's designated qualified biologist. All employees involved in Project activities and environmental specialists will attend a mandatory Environmental Awareness Training prior to any site disturbances. The program will address proper implementation of minimization and avoidance measures contained herein including, but not limited to:

- Avoiding inadvertent animal trapping.
- Site maintenance.
- Controlling invasive species.
- Handling leaks and spills.
- Fencing environmentally sensitive areas.
- Cultural resources training to inform construction personnel of the types of cultural resources they may encounter, the laws protecting those resources, and the standard protocols to be implemented.
- Hazardous materials response.

Timing/Implementation: *During construction and operation*

Monitoring/Enforcement: *The Mendocino Planning and Building Services and Project proponent.*

4.5 Cultural Resources

Tom Origer & Associates completed the Cultural Resources Study for the Project on July 1, 2020. A survey of the property was required to identify potentially eligible cultural resources (archaeological sites and

historic buildings, structures, and objects) that could be affected by the Project. On June 21, 2020, Tom Origer & Associates conducted an intensive field survey of the 3.7-acre direct Area of Potential Effects (APE). At that time, the ground surface of both sides of the gravel bar as well as the access road was examined for indications of surface or subsurface cultural resources. The general morphological characteristics of the ground surface were inspected for indications of subsurface deposits that may be manifested on the surface, such as circular depressions or ditches. The information provided below is an abridged version of this report and is provided here to afford a brief context of the potential cultural resources in the Project Area.

Sections 6253, 6254, and 6254.10 of the California Code authorize state agencies to exclude archaeological site information from public disclosure under the Public Records Act. In addition, the California Public Records Act (Government Code § 6250 et seq.) and California's open meeting laws (The Brown Act, Government Code § 54950 et seq.) protect the confidentiality of Native American cultural place information. Because the disclosure of information about the location of cultural resources is prohibited by the Archaeological Resources Protection Act of 1979 (16 USC 470HH) and Section 307103 of the National Historic Preservation Act (NHPA), it is exempted from disclosure under Exemption 3 of the federal Freedom of Information Act (5 USC 552)] Likewise, the Information Centers of the California Historical Resources Information System (CHRIS) maintained by the California Office of Historic Preservation (OHP) prohibit public dissemination of records search information. In compliance with these requirements, the results of this cultural resource investigation were prepared as a confidential document, which is not intended for public distribution in either paper or electronic format. As such, the Cultural Resources Inventory Report is not included in this Initial Study.

4.5.1 Cultural Resources Study

A records search was requested for the property at the Northwest Information Center (NWIC) of the CHRIS at California State University–Sonoma as a part of the Cultural Resources Study. The purpose of the records search was to determine the extent of previous surveys in and within a 0.5-mile radius of the direct and indirect APE, and whether previously documented pre-contact (prehistoric) or historic-period archaeological sites, architectural resources, cultural landscapes, or ethnic resources exist within this area.

In addition to the archival research at the NWIC, the study also examined the library and files of Tom Origer & Associates and conducted a field inspection of the APE. This research was meant to assess the potential to encounter archaeological sites and built environment within the study area. Research was also completed to determine the potential for buried archaeological deposits. A review (NWIC File No. 19-1992) was completed of the archaeological site base maps and records, survey reports, and other materials on file at the NWIC. Sources of information included but were not limited to the current listings of properties on the National Register of Historic Places, California Historical Landmarks, California Register of Historical Resources (CRHR), and California Points of Historical Interest as listed in the OHP's Historic Property Directory (2012) and the Built Environment Resources Directory (2019).

In addition to the records search, Tom Origer & Associates contacted the California Native American Heritage Commission (NAHC) on May 19, 2020, to request a search of the Sacred Lands File for the APE. This search determines whether or not Sacred Lands have been recorded by California Native American

tribes within the APE, because the Sacred Lands File is populated by members of the Native American community who have knowledge about the locations of tribal resources. The Sacred Land File contained no information about sacred sites within the township and range of the APE. Pursuant to AB 35, a list of additional contacts was provided, and letters were sent to 12 Native American tribes on May 22, 2020. As of the date of completion of the Cultural Resources Study (June 21, 2020) no tribes had responded to the inquiry letters.

4.5.2 Environmental Setting

The Project Site is in southern Mendocino County. The Project Area is located on level to moderately sloping land and is comprised of an existing dirt and gravel road and a gravel bar within the Middle Fork Eel River.

4.5.2.1 Prehistory

Although archaeological work began as early as the 1900s in the San Francisco Bay Area, no archaeological work was performed in northwestern California until 1955 when Clement Meighan excavated CA-MEN-500 near Willits. Archaeological research shows that native peoples have occupied the region for over 11,000 years, and during that time, shifts took place in their social, political, and ideological regimes.

The most recent summary of data related to the identification of patterns within the temporal periods. Patterns represent a set of traits that were adapted by a number of separate cultures over an appreciable period of time and within an appreciable space. While cultural patterns in the southern portion of Mendocino County resembled those of the North Bay, those to the north followed a different trajectory represented by the Post, Borax Lake, Mendocino, and Gunther patterns.

Early occupants appear to have had an economy based largely on hunting, with limited exchange, and social structures based on the extended family unit. Later, milling technology and an inferred acorn economy were introduced. This diversification of economy appears to be coeval with the development of sedentism and population growth and expansion. Sociopolitical complexity and status distinctions based on wealth are also observable in the archaeological record, as evidenced by an increased range and distribution of trade goods (e.g., shell beads, obsidian tool stone), which are possible indicators of both status and increasingly complex exchange systems.

Prehistoric archaeological site indicators expected to be found in the region include but are not limited to obsidian and chert flakes and chipped stone tools; grinding and mashing implements such as slabs and hand-stones, and mortars and pestles; and locally darkened midden soils containing some of the previously listed items plus fragments of bone, shellfish, and fire-affected stones.

4.5.2.2 History

The earliest settlement in the region was in 1854 when two parties settled in Round Valley located 5 miles northeast of the APE. The first party consisted of Pierce and Frank Asbill and Jim Nephus and the second party was led by Calvin, George E., and James White. George White built a cabin and left Charles Brown, a

member of White's party, to tend his property. After this point several others traveled to the valley to build cabins and settle. To the west is Long Valley and the community of Laytonville, which was first settled in 1857. The two primary industries conducted in and in the vicinity of Long Valley and Laytonville have related to agricultural and lumber pursuits. The APE is near the community of Dos Rios, which was a railroad stop on the Northwestern Pacific Railroad. Historic period site indicators generally include fragments of glass, ceramic, and metal objects; milled and split lumber; and structure and feature remains such as building foundations and discrete trash deposits (e.g., wells, privy pits, dumps).

4.5.3 Known Historic and Cultural Resources at the Project Site

Archival research found that the APE had not been subject to a cultural resource study. No cultural resources are recorded within or adjacent to the APE. There are no reported ethnographic sites within 1 mile of the APE.

4.5.4 Cultural Resources (V) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☒	☐	☐

Less than significant impact with mitigation incorporated.

The CEQA Guidelines Section 15064.5 requires the lead agency to consider the effects of a project on historical resources. A significant impact would occur if a proposed project would cause a substantial adverse change through physical demolition, destruction, relocation, or alteration of the resource. A historical resource is defined as any building, structure, site, or object listed in or determined to be eligible for listing in the CRHR or determined by a lead agency to be significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, or cultural annals of California. As discussed above, there are no known resources within the Project Site. An archival research found that the APE had not been subject to a cultural resource study and no cultural resources are recorded within or adjacent to the APE.

The record search determined that five previously recorded historic-period cultural resources are located within 0.5 mile of the Project Site. While no cultural resources were previously recorded within the property, ground disturbance associated with extraction and reclamation activates has the potential to impact previously unknown subsurface historic resources should any be present. Mitigation measure **CUL-1** is provided below to reduce potential impacts to a level that is considered less than significant

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐

Less than significant impact with mitigation incorporated.

As discussed above, there are no known archaeological resources within the Project Site. Treatment options under California PRC Section 21083.2 include activities that preserve such resources in place in an undisturbed state. Other acceptable methods of mitigation under Section 21083.2 include excavation and curation or study in place without excavation and curation (if the study finds that the artifacts would not meet one or more of the criteria for defining a unique archaeological resource). In addition, CEQA Guidelines Section 15064.5(e) requires that excavation activities be stopped whenever human remains are uncovered, and that the county coroner be called in to assess the remains. If the county coroner determines that the remains are those of Native Americans, the NAHC and/or tribe that would be the most probable descendent must be contacted within 24 hours. At that time, Mendocino County, as the lead agency, must consult with the appropriate Native Americans, if any, as timely identified by the NAHC. Section 15064.5 directs the lead agency (or applicant), under certain circumstances, to develop an agreement with the Native Americans for the treatment and disposition of the remains.

While the Project Site was surveyed for archaeological resources, there remains the possibility that unknown subsurface archaeological resources may be discovered during Project construction. Therefore, mitigation measure **CUL-1** is provided below to address the potential for the discovery of any unrecorded or previously unknown archaeological resources. With implementation of this mitigation, impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

Less than significant impact with mitigation incorporated.

There are no known formal or informal cemeteries within the Project Site. Regardless, there is a possibility of the unanticipated and accidental discovery of human remains during ground-disturbing, Project-related activities. Therefore, mitigation measure **CUL-1** is provided below to reduce potential impacts to a level that is considered less than significant.

4.5.5 Mitigation Measures

CUL-1: **Cultural or Archaeological Resource Discovery.** All extraction and reclamation plans shall include the following.

If buried materials are encountered, all soil disturbing work should be halted within 60 feet of any discovery. An archaeologist who meets the Secretary of the Interior's Standards for Archaeology must be contacted and the requirements under 36 CFR 800.13 followed. Work should not commence in the vicinity of the inadvertent discovery until a qualified archaeologist completes a significance evaluation of the find(s) pursuant to Section 106 of the NHPA (36 CFR 60.4).

The following actions are promulgated in the CEQA Guidelines Section 15064.5(d) and pertain to the discovery of human remains. If human remains are encountered, excavation or disturbance of the location must be halted in the vicinity of the find, and the county coroner contacted. If the coroner determines the remains are Native American, the coroner will contact the NAHC. The NAHC will identify the person or persons believed to be most likely descended from the deceased Native American. The most likely descendent makes recommendations regarding the treatment of the remains with appropriate dignity.

Timing/Implementation: *During construction and operation*

Monitoring/Enforcement: *The Mendocino Planning and Building Services and Project proponent.*

4.6 Energy

This section describes the environmental and regulatory setting for energy, including applicable plans, policies, regulations, and/or laws. This section also describes the potential for energy impacts that would result from the Proposed Project.

4.6.1 Environmental Setting

Energy relates directly to environmental quality. Energy use can adversely affect air quality and other natural resources. The vast majority of California's air pollution is caused by burning fossil fuels. Consumption of fossil fuels is linked to changes in global climate and depletion of stratospheric ozone. Transportation energy use is related to the fuel efficiency of cars, trucks, and public transportation; choice of different travel modes (auto, carpool, and public transit); vehicle speeds; and miles traveled by these modes. Construction and routine operation and maintenance of transportation infrastructure also consume energy. In addition, residential, commercial, and industrial land uses consume energy, typically through the usage of natural gas and electricity.

4.6.1.1 Energy Types and Sources

California relies on a regional power system comprised of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. Natural gas provides California with a majority of its electricity followed by renewables, large hydroelectric and nuclear (California Energy Commission [CEC] 2019). Pacific Gas and Electric (PG&E) provides electricity and natural gas to the Project Site. It generates or buys electricity from hydroelectric, nuclear, renewable, natural gas, and coal facilities. PG&E provides natural gas and electricity to most of the northern two-thirds of California, from Bakersfield and Barstow

to near the Oregon, Nevada, and Arizona state lines. It provides 5.2 million people with electricity and natural gas across 70,000 square miles. In 2017, PG&E announced that 80 percent of the company's delivered electricity comes from greenhouse gas emission-free sources including renewables, nuclear, and hydropower.

The California Public Utilities Commission (CPUC) regulates PG&E. The CPUC has developed energy efficiency programs such as smart meters, low-income programs, distribution generation programs, self-generation incentive programs, and a California solar initiative. Additionally, the CEC maintains a power plant database that describes all of the operating power plants in the state by county. Mendocino County contains six power plants generating electricity, of which four are solar-powered, and two are hydro-powered (CEC 2021).

4.6.1.2 Existing Transmission and Distribution Facilities

The components of transmission and distribution systems include the generating facility, switching yards and stations, primary substation, distribution substations, distribution transformers, various sized transmission lines, and the customers. The U.S. contains over a quarter million miles of transmission lines, most of them capable of handling voltages between 115 kilovolts (kv) and 345 kv, and a handful of systems of up to 500 kv and 765 kv capacity. Transmission lines are rated according to the amount of power they can carry, the product of the current (rate of flow), and the voltage (electrical pressure). Generally, transmission is more efficient at higher voltages. Generating facilities, hydro-electric dams, and power plants usually produce electrical energy at fairly low voltages, which is increased by transformers in substations. From there, the energy proceeds through switching facilities to the transmission lines. At various points in the system, the energy is "stepped down" to lower voltages for distribution to customers. Power lines are either high voltage (115, 230, 500, and 765 kv) transmission lines or low voltage (12, 24, and 60 kv) distribution lines. Overhead transmission lines consist of the wires carrying the electrical energy (conductors), insulators, support towers, and grounded wires to protect the lines from lightening (called shield wires). Towers must meet the structural requirements of the system in several ways. They must be able to support both the electrical wires, the conductors, and the shield wires under varying weather conditions, including wind and ice loading, as well as a possible unbalanced pull caused by one or two wires breaking on one side of a tower. Every mile or so, a "dead-end" tower must be able to take the strain resulting if all the wires on one side of a tower break. Every change in direction requires a special tower design. In addition, the number of towers required per mile varies depending on the electrical standards, weather conditions, and the terrain. All towers must have appropriate foundations and be available at a fairly regular spacing along a continuous route accessible for both construction and maintenance. A right-of-way is a fundamental requirement for all transmission lines. A right-of-way must be kept clear of vegetation that could obstruct the lines or towers by falling limbs or interfering with the sag or wind sway of the overhead lines. If necessary, land acquisition and maintenance requirements can be substantial. The dimensions of a right-of-way depends on the voltage and number of circuits carried and the tower design. Typically, transmission line rights-of-way range from 100 to 300 feet in width. The electric power supply grid within Mendocino County is part of a larger supply network operated and maintained by PG&E that encompasses a large portion of the Northern and Central California regions. This system ties into yet a larger grid known as the California Power Pool that connects with the San

Diego Gas and Electric and Southern California Edison companies. These companies coordinate the development and operation, as well as purchase, sale, and exchange of power throughout the State of California. Within Mendocino County, PG&E owns most of the transmission and distribution facilities. Six 60 kv transmission lines pass through the county and one major 115 kv line, connecting Mendocino County to the national power grid, allowing the wheeling of power to locations where power is in demand (CEC 2021).

The California Independent System Operator (CAISO) manages the flow of electricity across the high-voltage, long-distance power lines (high-voltage transmissions system) that make up 80 percent of California's and a small part of Nevada's grid. This nonprofit public benefit corporation keeps power moving to and throughout California by operating a competitive wholesale electricity market, designed to promote a broad range of resources at lower prices, and managing the reliability of the electrical transmission grid. In managing the grid, CAISO centrally dispatches generation and coordinates the movement of wholesale electricity in California. As the only independent grid operator in the western U.S., CAISO grants equal access to 26,000 circuit miles of transmission lines and coordinates competing and diverse energy resources into the grid where it is distributed to consumers. Every 5 minutes, CAISO forecasts electrical demand and dispatches the lowest cost generator to meet demand while ensuring enough transmission capacity for delivery of power.

CAISO conducts an annual transmission planning process that uses engineering tools to identify any grid expansions necessary to maintain reliability, lower costs, or meet future infrastructure needs based on public policies. CAISO engineers design, run and analyze complex formulas and models that simulate grid use under wide-ranging scenarios, such as high-demand days coupled with wildfires. This process includes evaluating power plant proposals submitted for study into the interconnection queue to determine viability and impact to the grid. The long-term comprehensive transmission plan, completed every 15 months, maps future growth in electricity demand and the need to meet state energy and environmental goals that require the CAISO grid to connect to renewable-rich, but remote areas of the Western landscape. CAISO promotes energy efficiency through resource sharing. CAISO electricity distribution management strategy designed so that an area with surplus electricity can benefit by sharing megawatts with another region via the open market. This allows the dispatch of electricity as efficiently as possible. By maximizing megawatts as the demand for electricity increases, CAISO helps keep electricity flowing during peak periods.

4.6.1.3 Fuel Consumption

Vehicle fuel use is typically measured in gallons (e.g., of gasoline or diesel fuel). Automotive fuel consumption in Mendocino County from 2016 to 2020 is shown in Table 4.6-3. Fuel consumption has increased between 2016 and 2020 for all vehicles.

Table 4.6-1. Automotive Fuel Consumption in Mendocino County 2016-2020	
Year	**Total Fuel Consumption (gallons)**
2020	4,721,960,105
2019	4,620,124,381
2018	4,503,342,361
2017	3,811,700,289
2016	3,690,418,881

Source: CARB 2021

4.6.2 Energy (VI) Environmental Checklist and Discussion

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

Less than significant impact.

As previously mentioned, the Project is proposing gravel extraction and reclamation operations on the Stewart Gravel Bar and the hauling of material to an existing facility. It would therefore have no construction phase beyond minor improvements to the existing access road used in the extraction and reclamation activities proposed.

The impact analysis focuses on the source of energy that is relevant to the Proposed Project: the equipment fuel necessary to implement the gravel extraction and reclamation activities. Addressing energy impacts requires an agency to make a determination as to what constitutes a significant impact. There are no established thresholds of significance, statewide or locally, for what constitutes a wasteful, inefficient, and unnecessary consumption of energy for a proposed land use project. For the purpose of this analysis, the amount of fuel necessary to implement Project operations is calculated and compared to that consumed by off-road equipment in Mendocino County.

The amount of operational automotive fuel use was estimated using the CARB's EMFAC2021 computer program, which provides projections for typical daily fuel usage in Mendocino County, coupled with estimated trip lengths derived from the CalEEMod model (see Attachment 4.3). The amount of total construction-related fuel use was estimated using ratios provided in the Climate Registry's General Reporting Protocol for the Voluntary Reporting Program, Version 2.1. Energy consumption associated with the Proposed Project is summarized in Table 4.6-2.

Table 4.6-2. Proposed Project Energy and Fuel Consumption		
Energy Type	**Annual Energy Consumption**	**Percentage Increase Countywide**
Equipment and Automotive Fuel Consumption During Project Implementation		
Project Extraction/Reclamation Activity	14,975 gallons[1]	0.0003 percent

Source: [1]Climate Registry 2016; Greenhouse Gas (GHG) Assessment (Attachment 4.3)
Notes: The Project increases in construction and operation fuel consumption are compared with the countywide on- and off-road equipment fuel consumption in 2020 as shown in Table 4.6-1, the most recent full year of data.

In September 2018 Governor Jerry Brown Signed Executive Order (EO) B-55-18, which established a new statewide goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." Carbon neutrality refers to achieving a net zero CO_2 emissions. This can be achieved by reducing or eliminating carbon emissions, balancing carbon emissions with carbon removal, or a combination of the two. This goal is in addition to existing statewide targets for GHG emission reduction. Governor's EO B-55-18 requires CARB to "work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal."

Fuel necessary for Project extraction and reclamation activities would be required for the operation and maintenance of off-road equipment and the transportation of materials to and from the Project Site. The fuel expenditure necessary to implement the gravel extraction and reclamation activities would be temporary, lasting only as long as the extraction and reclamation activities themselves. As further indicated in Table 4.6-2, the Project's gasoline fuel consumption during a single year of operations is estimated to be 14,975 gallons of fuel. This would increase the annual countywide gasoline fuel use in the county by 0.0003 percent. As such, Project activities would have a nominal effect on local and regional energy supplies. No unusual Project characteristics would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in the region or the state. The mining operators would purchase their own gasoline and diesel fuel from local suppliers and would judiciously use fuel supplies to minimize costs due to waste and subsequently maximize profits. For these reasons, it is expected that construction fuel consumption associated with the Project would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature.

For these reasons discussed above, this impact would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

Less than significant impact.

The Proposed Project includes the extraction and reclamation of resources within Stewart Gravel Bar and does not include any activities or operations beyond the extraction and reclamation activities. The Project

is subject to all local, state, and federal standards set in place to promote the use of renewable energy or energy efficiency. Conformance with these standards ensures that the Project would not obstruct any renewable energy or energy efficiency plans.

For these reasons, this impact would be less than significant.

4.6.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.7 Geology and Soils

4.7.1 Geomorphic Setting

Mendocino County lies entirely within the Coast Range Geomorphic Province of California with a western limit marked by the Pacific Ocean (Mendocino County 2008). The province is characterized by a series of northwest-trending mountain ranges and intervening canyons or valleys. Summit elevations are typically within the range of 2,000 to 4,000 feet, with the highest peaks along the northeastern margin of the County (Mendocino County 2008).

Mendocino County is made up of four major geologic units: the Gualala Formation, the Franciscan, the Franciscan Complex, and the South Fork Mountain Schist. The Project Area falls within the Franciscan Complex, a large area of Jurassic and Cretaceous sedimentary, metamorphic, and igneous rocks (Mendocino County 2008).

4.7.2 Regional Seismicity and Fault Zones

In California, special definitions for active faults were devised to implement the Alquist-Priolo Earthquake Fault Zoning Act of 1972, which regulates development and construction in order to avoid the hazard of surface fault rupture. The State Mining and Geology Board established policies and criteria in accordance with the act. The board defined an active fault as one that has had surface displacement within Holocene time (about the last 11,000 years). A potentially active fault was considered to be any fault that showed evidence of surface displacement during Quaternary time (last 1.6 million years). Because of the large number of potentially active faults in California, the State Geologist adopted additional definitions and criteria in an effort to limit zoning to only those faults with a relatively high potential for surface rupture. Thus, the term "sufficiently active" was defined as a fault for which there was evidence of Holocene surface displacement. This term was used in conjunction with the term "well-defined," which relates to the ability to locate a Holocene fault as a surface or near-surface feature (California Geological Survey [CGS] 2011).

According to the CGS, the Project Site is not located within the immediate vicinity of an Alquist-Priolo Earthquake Fault Zone (CGS 2021). The closest fault zones to the Project Area are the Round Valley Fault Zone located approximately 6 miles east of the Project Area and the Maacama Fault Zone located approximately 9 miles southwest of the Project Area.

4.7.3 Soils

According to the U.S. Department of Agriculture (USDA) Soil Survey Report, the Project Site is located in the Xerofluvents-Riverwash soil complex (USDA 2019). The complex is comprised of 50 percent of the Xerofluvents soil and 35 percent Riverwash. The remainder of the soil consists of minor constituents. Slopes in the Project region range from 0 to 2 percent, and the landscape is characterized as "Flood Plains" for the Xerofluvents and "Channel" for the Riverwash (USDA 2019). Both soil types originate from a parent material consisting of alluvium.

4.7.4 Paleontological Resources

A paleontological database search of the paleontology locality and specimen collection records for Mendocino County from the University of California Museum of Paleontology (UCMP) identified 182 paleontological resources in the County (Mendocino County 2008). The majority of these resources are invertebrates found in the Coastal Zone (Mendocino County 2008).

4.7.5 Geology and Soils (VII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☒	☐
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☒	☐

i) No impact.

The Proposed Project Site is not located within an Alquist-Priolo Earthquake Zone (CGS 2011, 2021). The site is not within a currently established State of California Earthquake Fault Zone for surface fault rupture hazards. No active or potentially active faults are known to pass directly beneath the site. By CGS definition, an active fault is one with surface displacement within the last 11,000 years. A potentially active fault has demonstrated evidence of surface displacement with the past 1.6 million years. Faults that have not moved in the last 1.6 million years are typically considered inactive. No impact would occur.

ii) Less than significant impact.

According to the Development Element of the County General Plan, Mendocino County is an active earthquake area (Mendocino County 2009). Seismic ground shaking is influenced by the proximity of the site to an earthquake fault, the intensity of the seismic event, and the underlying soil composition. The nearest fault to the Project Site is the Maacama Fault Zone located approximately 9 miles southwest. However, the Proposed Project does not contain habitable structures and no such structures are proposed, and as such, no structures would be affected by seismic ground shaking that would result in a risk of loss, injury, or death. Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

iii) No impact.

Liquefaction is a condition that occurs during an earthquake when some soils behave more like a liquid than a solid, often with catastrophic results for buildings built on these soils.

There are several alluvial basins in Mendocino County where the subsurface conditions are locally conducive to liquefaction. However, according to Figure 4.6-3 in the Mendocino County General Plan Draft EIR (2008), the Project Site is not located in an area with known liquefiable soils. No impact would occur.

iv) Less than significant impact.

Landslides in Mendocino County have been a major part of the natural erosion process for tens of thousands of years (Mendocino County 2009). In general, most rock formations in Mendocino County are associated with the Franciscan Formation, which is known to have poor slope stability characteristics (Mendocino County 2009). According to the Mendocino County General Plan Draft Environmental Impact Report Figure 4.6-2 (2008), the Project Area is located in an area labeled as a highly unstable geologic formation. However, as the Proposed Project consists of gravel extraction and reclamation activities that would occur on a relatively flat, instream gravel bar, impacts associated with landslides would be less than significant with no mitigation required.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐

Less than significant impact.

Excavation of sand and gravel at the Project Site would require land disturbing activities that could increase the susceptibility of soils to erosion by wind and/or water, and subsequently result in soil loss or erosion. As noted in the Proposed Reclamation Plan, a number of sediment and erosion control measures will be put in place to ensure soil erosion impacts are minimal or negligible. The proposed Best Management Practices (BMPs) are as follows (see Section 2.6.1 of the Proposed Reclamation Plan):

- Mining will occur only on the dry gravel bar surface during the summer low-flow season (June 1 to October 30), and mining will not take place within the wetted channel. Seasonal extraction activities are subject to a prescriptive time schedule administered by CDFW, USACE, NMFS, and the North Coast RWQCB.
- Extraction will be limited to the aggraded portion of the bar, utilizing horizontal and vertical offsets for buffers from the low-flow channel. No extraction would occur from the upper 30 to 35 percent of the primary bar in order to protect bar stability. If a temporary wet crossing (culvert) is utilized, the temporary culvert will be removed to provide an unobstructed channel for winter flows. The culvert area is backfilled with clean sandy gravel from the gravel bar, so a clean channel is left after the culvert is removed. There will be no sediment that could enter the watercourse from this area.
- Seasonal maintenance of the access road would be performed following the extraction season to assure no adverse impacts to water quality. The contractor would implement BMPs including using water-bars and straw-mulching to stabilize the road surface. These would ensure storm water runoff would be diverted at each water-bar to sheet flow down the slope below the access road in a manner that does not create erosion or sediment transport. In addition, all equipment and debris would be removed from the Project Area at the end of each extraction season.

Additionally, the annual gravel extraction design is reviewed and approved by overseeing agencies, including CDFW, USACE, NMFS, North Coast RWQCB, and Mendocino County based on site-specific characteristics of the gravel bar resulting from replenishment during winter flows. Seasonal extraction and reclamation activities are subject to compliance with water quality protection measures in the 1600 Streambed Alteration Agreement, 404 Dredge/Fill Permit, and 401 Water Quality Certification.

The implementation of the above BMPs as well as mitigation measures **HYD-1** and **HYD-3** (see Section 4.10) would ensure impacts associated with loss of topsoil and erosion would be less than significant.

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

No impact.

As addressed in question a)iv) above, the Project Site is located in an area that could be susceptible to landslides. However, the Proposed Project does not include construction of habitable structures or permanent facilities; therefore, implementation would not expose people or structures to substantial risks due to unstable soil. No impact would occur.

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

No impact.

The Proposed Project does not include construction of habitable structures or permanent facilities; therefore, implementation would not expose people or structures to substantial risks due to expansive soils. No impacts are identified or anticipated, and no mitigation measures are required.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

No impact.

The Proposed Project consists of gravel extraction and reclamation activities. The Project Site does not utilize septic tanks, nor does it connect to an offsite sewer system. The Project Site would be serviced by portable toilets obtained from a private vendor. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

Less than significant impact with mitigation incorporated.

A search of the UCMP collections database identified 182 paleontological resources in Mendocino County. The majority of the resources are invertebrates found in the Coastal Zone (Mendocino County 2008). The site does not include known unique geologic features. No surface evidence of paleontological resources was observed during Tom Origer & Associates' field study (Tom Origer & Associates 2020). However, because the Project consists of mining extraction activities, the potential to discover subsurface paleontological resources could occur. Any such potential significant impacts would be reduced to a less than significant level by implementing Mitigation Measure **GEO-1**, Paleontological Resources, to ensure

evaluation and appropriate handling, study, and curation of unanticipated subsurface paleontological discoveries.

4.7.6 Mitigation Measures

GEO-1: **Paleontological Resources.** If paleontological resources are encountered during Project activities and no paleontological monitor is present, all ground disturbing activities within 50 feet of the find shall be redirected to other areas until a qualified paleontologist (as determined by the Project's qualified cultural resource professional) can be contacted to evaluate the find and make recommendations. If determined significant pursuant to CEQA and Project activities cannot avoid the paleontological resources, a paleontological evaluation and monitoring plan shall be implemented.

Adverse impacts to significant paleontological resources shall be mitigated, which may include monitoring, data recovery and analysis, a final report, and the curation of all fossil material to a paleontological repository, museum, or academic institution, as appropriate. Upon completion of Project ground-disturbing activities, a report documenting methods, findings, and recommendations shall be prepared and submitted to the paleontological repository.

Timing/Implementation: *During construction and operation*

Monitoring/Enforcement: *The Mendocino Planning and Building Services and Project proponent.*

4.8 Greenhouse Gas Emissions

4.8.1 Environmental Setting

GHG emissions are released as byproducts of fossil fuel combustion, waste disposal, energy use, land use changes, and other human activities. This release of gases, such as CO_2, CH_4, N_2O) and chlorofluorocarbons, creates a blanket around the earth that allows light to pass through but traps heat at the surface, preventing its escape into space. While this is a naturally occurring process known as the greenhouse effect, human activities have accelerated the generation of GHGs beyond natural levels. The overabundance of GHGs in the atmosphere has led to an unexpected warming of the earth and has the potential to severely impact the earth's climate system.

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. CH_4 traps more than 25 times more heat per molecule than CO_2, and N_2O absorbs 298 times more heat per molecule than CO_2. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO_2e). Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

According to the County General Plan, because Mendocino County is primarily rural, the amount of greenhouse gases generated by human activities (primarily the burning of fossil fuels for vehicles, heating,

and other uses) is small in total compared to other, more urban counties (although higher per capita due to the distances involved in traveling around the county) and miniscule in statewide or global terms. However, like all other areas worldwide that contribute to global warming, Mendocino County will be affected by climate change and shares a responsibility to address this issue. Long-term efforts will focus on reductions in the sources of greenhouse gases in the county through a comprehensive greenhouse reduction plan for both County operations and the broader area governed by Mendocino County. In the near term, the General Plan identifies energy-reducing policies that will also lower overall CO_2 emissions.

The local air quality agency regulating the Mendocino County portion of the NCAB is the MCAQMD. The MCAQMD's (2010) *Adopted Air Quality CEQA Thresholds of Significance* does not identify GHG thresholds for construction-related activities. However, the MCAQMD has adopted operational-related significance thresholds for GHG emissions. The Proposed Project is compared to the MCAQMD adopted significance threshold of 1,100 metric tons of CO_2e annually.

4.8.2 Greenhouse Gas Emissions (VIII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐

Less than significant impact.

Illingworth & Rodkin, Inc. conducted a GHG Assessment for the Proposed Project (Illingworth & Rodkin 2019a). The purpose of the assessment was to estimate Project-generated GHG levels and determine the level of impact the Project would have on the environment. The following information was excerpted from the GHG Assessment. The Assessment is included as Attachment 4.8 of this Initial Study and provides information for the following sections.

A source of GHG emissions associated with the Proposed Project would be the combustion of fossil fuels during gravel extraction and reclamation activities. The extraction and reclamation activities associated with the Proposed Project would be temporary but would result in GHG emissions from the use of heavy construction equipment and related vehicle trips.

The CalEEMod Version 2016.3.2 was used to predict GHG emissions from these activities. CalEEMod is a statewide land use emissions computer model designed to quantify potential GHG emissions associated with both construction and operations from a variety of land use projects. Inputs into the model to represent on-site activities included the use of a Cat D6R tracked dozer estimated at 187 horsepower (hp), a Cat 330 excavator estimated at 275 hp, and Heavy-Heavy Duty Truck (HHDT) that represents a water truck traversing the Site for 20 miles each day. Offsite activities included export by truck hauling (HHDT type) of 30,000 tons total of material and 6 daily worker trips. This activity was expected to occur over 9 hours each day for 45 days per year. The model was set to default conditions for Mendocino County – Rural North and included rural travel lengths for worker trips and truck hauling.

The MCAQMD's CEQA Guidelines include guidance on assessing greenhouse gas and climate change impacts as required under CEQA Section 15183.5(b) and establish thresholds of significance for impacts related to GHG emissions. These guidelines are based on substantial evidence to attribute an appropriate share of GHG emissions reductions necessary to reach California GHG reduction goals for new land use development projects in the air district's jurisdiction that are evaluated pursuant to CEQA. The Project is assessed against the MCAQMD numeric threshold of significance of 1,100 metric tons of CO_2e per year. This threshold was developed to ensure at least 90 percent of new GHG emissions would be reviewed and assessed for mitigation, thereby contributing to the Statewide GHG emissions reduction goals. Thus, both cumulatively and individually, projects that generate less than 1,100 metric tons CO_2e per year have a negligible contribution to overall emissions.

CalEEMod predicted Project activities, along with worker and haul truck trips (dump truck), are predicted to result in 152 metric tons of GHG emissions annually. As previously mentioned, the Mendocino County Air Quality Management District has adopted thresholds based on emissions of GHG from projects that can be used by lead agencies to judge their significance. The District does not have construction-related emission thresholds but considers operational emissions to be significant if they exceed 1,100 metric tons annually. Given that the proposed Reclamation Plan could occur annually, these emissions are compared to the District's operational thresholds and found to be less than significant.

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

Less than significant impact.

According to the County General Plan Resources Element, specifically Action Items RM-50.2 and RM 50.3, the County aims to not only create a GHG reduction plan for the unincorporated areas of the County, but also to reduce the County's GHG emissions by adopting measures that reduce the consumption of fossil fuel energy resources. The County has yet to adopt any GHG reduction plans, however the County Board of Supervisors passed a resolution in October of 2021 that will invest 2 million dollars in carbon emission reduction projects such as electrifying the County's vehicle fleet (County of Mendocino 2021).

As identified above, the Proposed Project would emit a negligible amount of GHG during the course of the gravel extraction and reclamation operations. The Project would be subject to all local, MCAQMD, state, and federal regulations pertaining to the Project's proposed activities. For example, the contractor would be required to comply with California Code of Regulations, Title 13, Section 2485: *Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling,* which reduces the amount of idling time for diesel-powered equipment, thus reducing GHG emissions. Additionally, the Project is subject to compliance with various state laws seeking to reduce statewide GHG emissions. As discussed previously, the proposed Project-generated GHG emissions would not surpass the MCAQMD adopted GHG significance thresholds, which were prepared with the purpose of complying with the requirements

set forth in various statewide GHG-reduction goals. Because the Proposed Project is required to comply with all local, state, and federal regulations enacted for the purpose of reducing the emissions of GHGs, and the Project-generated emissions are estimated to be minute compared to similar construction-type projects in the region, the Project would not conflict with any applicable plans, policies of regulations adopted for the purpose of reducing GHG emissions. Therefore, this impact is found to be less than significant.

4.8.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.9 Hazards and Hazardous Materials

4.9.1 Environmental Setting

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency or if it has characteristics defined as hazardous by such an agency. A hazardous material is defined by the California Health and Safety Code, § 25501 as follows:

> "Hazardous material" means any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

A hazardous material is defined in Title 22, Section 662601.10, of the CCR as follows:

> A substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed.

The release of hazardous materials into the environment could potentially contaminate soils, surface water, and groundwater supplies.

Mendocino County has adopted a Hazardous Waste Management Plan to guide future decisions by the County and the incorporated cities about hazardous waste management. Policies in the General Plan emphasize source reduction and recycling of hazardous wastes and express a preference for onsite hazardous waste treatment over offsite treatment (Mendocino County 2009).

Under Government Code § 65962.5, both the California Department of Toxic Substances Control (DTSC) and the State Water Resources Control Board (SWRCB) are required to maintain lists of sites known to have hazardous substances present in the environment. Both agencies maintain up-to-date lists on their

websites. A search of the DTSC (2021) and the SWRCB (2021) identified no open cases of hazardous waste violation on the Project Site. A search of the SWRCB list identified one open case of hazardous waste violations within 0.5 mile of the Project Site: North Coast Rail, located approximately 1,222 feet northeast from the center of the Stewart Gravel Bar. This site is classified as completed and closed as of January 22, 1996. Potential contaminants of concern included motor oil and lubricants (SWRCB 2021).

4.9.2 Hazards and Hazardous Materials (IX) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐

Less than significant with mitigation incorporated.

No hazardous materials will be used onsite with the exception of fuels and oils for and in construction and mobile equipment. No fueling or maintenance of equipment will occur within the stream channel. The Proposed gravel extraction would not produce any hazardous waste. The Project involves only the short-term use of extraction equipment which could result in unanticipated oil or related fluid leaks leading to a potentially significant adverse impact on water quality. For this reason, the mitigation measure **HAZ-1** has been included to reduce this potential to a less than significant level.

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

Less than significant with mitigation incorporated.

See discussion and mitigation measures under question a) above.

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

No impact.

No schools exist within 0.25mile of the Project Site and no hazardous materials, substances, or waste will be generated during the course of Project operations or left behind at the conclusion of operations. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒

No impact.

The Project Site is not located on any list of hazardous materials sites and will not increase the risk of exposure to hazardous materials. No impact would occur.

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

No impact.

The nearest airport is the Round Valley Airport located in Covelo, California, approximately 6.5 miles northeast of the Project Area. Substantial safety risks would not occur to people residing or working in the Project Area due to the use of the airport. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒

No impact.

Extracted gravel will be loaded onto haul trucks and transported west via SR 162 to a processing facility near Longvale, California. An estimated maximum of 30 truck trips will occur per day during the extraction period (June 1 to October 30). Activities associated with the Proposed Project would not impede existing emergency response plans for the Project Site and/or other land uses in the Project vicinity. All vehicles and stationary equipment would be staged off public roads and would not block emergency access routes. Implementation of operational activities would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. No impact would occur.

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

Less than significant with mitigation incorporated.

The Project Site is located with a High Fire Hazard Severity Zone and is within a State Responsibility Area (SRA; California Department of Forestry and Fire Protection [CAL FIRE] 2021). Extraction would occur on a barren gravel bar, away from vegetation, however the entire Project Site is surrounded by rural land with thick vegetation. Due to the surrounding rural setting, there is risk of the ignition and spread of a wildland fire if appropriate measures are not taken during construction activities. Construction equipment could create sparks and ignite a fire. Other potential fire hazards could include worker behavior such as smoking and disposal of cigarettes as well as parking or driving vehicles and equipment on dry vegetation. Ignition of a wildfire as a result of the Project would be a significant impact. Mitigation Measure **HAZ-2**, which requires implementation of several fire prevention procedures, would be implemented to reduce the potential risk of ignition of a fire during Project construction and would reduce impacts to less than significant.

4.9.3 Mitigation Measures

HAZ-1: **Spill Prevention Plan.** Prior to site disturbance, prepare a spill response plan to address the appropriate methods for containing accidental spills of toxic materials (e.g., engine oils). This plan shall be submitted to the County for approval prior to any Project operations.

Timing/Implementation: *Prior to Project operations.*

Monitoring/Enforcement: *The Mendocino Planning and Building Services and Project proponent.*

HAZ-2: **Fire Safety Procedures.** The operator/contractor shall implement the following fire prevention procedures to reduce the potential risk of fire ignitions during construction:

- No work shall occur on red flag days declared by the weather service for Mendocino County.
- Earthmoving and portable equipment with internal combustion engines shall be equipped with a spark arrestor to reduce the potential for igniting a wildland fire.
- Appropriate fire suppression equipment shall be maintained and available at the Project Site.
- Flammable materials shall be removed to a distance of 10 feet from any equipment that is either operating, a significant heat source, or which could produce a spark, fire, or flame.
- The access road shall be maintained in a state such that it is free of vegetation during times of activity.
- Construction personnel shall be trained in fire safe work practices (e.g., smoking in enclosed spaces or parking in designated parking locations), use of fire suppression equipment, and procedures to follow in the event of a fire, including use of emergency radios provided by the County.

Timing/Implementation: *During construction and operation.*

Monitoring/Enforcement: *The Mendocino Planning and Building Services and Project proponent.*

4.10 Hydrology and Water Quality

4.10.1 Environmental Setting

4.10.1.1 Regional Hydrology

The Middle Fork Eel River watershed area, or basin, is located primarily in northeast Mendocino County, with smaller areas in southern Trinity and Glenn counties. The basin is 753 square miles (approximately 482,000 acres) in area, and the Middle Fork Eel River is approximately 69.8 miles long, entering the main fork of the Eel River near the town of Dos Rios, approximately 1.5 miles downstream of the Proposed Project. The state hydrologic area is 111.70 (Middle Fork Eel), which is composed of:

- Eden Valley Hydrologic Study Area (HSA);
- Round Valley HSA, which approximates the U.S. Forest Service (USFS) Elk Creek, Williams/Thatcher and Round Valley subareas;

- Black Butte River HSA; and
- Wilderness HAS, which is the same as the USFS Upper Middle Fork area.

In 1992 USEPA listed the entire Eel River Watershed, including the Middle Fork, on the Section 303(d) List for impairment or threat of impairment to water quality associated with sediment and temperature. USEPA identified sediment and temperature as factors in the decline of salmon and steelhead populations in the river and in December 2003 set Technical Total Maximum Daily Load (TMDL) limits for the Middle Fork and its tributaries, which sets the "allowable" temperature and amount of sediment for the watershed. The State of California is responsible for implementing the TMDL on the portions of the watershed that is under state jurisdiction, which include all but small areas in the Round Valley that are under the jurisdiction of the Round Valley Indian Tribes. (USEPA 2003).

The segment of the Middle Fork Eel River upstream of the Project Area includes the Yolla Bolly-Middle Eel Wilderness, which accounts for about 75,000 acres, or about 16 percent of the Middle Fork Eel watershed. Ownership of the watershed is approximately 51 percent federally managed (Mendocino National Forest and Bureau of Land Management), 4 percent Round Valley Tribes, and 45 percent private. Large ranches, smaller private lands and some industrial timber company lands in the Black Butte River watershed form the mosaic of private landownership.

The area's geology is underlain by the Franciscan terrane that dominates most of California's North Coast. Naturally unstable, this type of geology is sensitive to human disturbance. The Middle Fork Eel River watershed is relatively dry and warm, away from the influence of coastal fog. Land use activities in the watershed include grazing and other agriculture, timber harvest, recreation and residences. Severe overgrazing in the past, particularly during the late 1800s and early 1900s, led to permanent soil loss and vegetation changes. The grazing pressure at present is fairly light. The Round Valley area has been used for agriculture and grazing, although intensive, high-value row crops are also a relatively small proportion of the landscape. Small-scale logging began around 1862 near Covelo, continuing until after World War II, when private lands were extensively cut and burned. The harvest of public lands of Mendocino National Forest began in 1958. An estimated 46 percent of the timbered land in the basin (23 percent of the overall land) was logged by either clear cut or partial cut from 1950 to 1981 (USEPA 2003).

Gravel mining operations associated with the Proposed Project are not expected to have temperature effects in the Middle Fork Eel River but do have potential for exacerbating existing sediment effects on fish populations in the 1.5-mile reach of the Middle Fork Eel River below the Project Area and in the main stem of the Eel (see Section 4.4, Biological Resources, for further details). Many factors contributed to the excess sedimentation in the Middle Fork Eel River, though the primary cause of today's higher sedimentation rates appears to be a 100-year flood event that occurred in late December 1964 in Northern California when a warm storm stretching 500 miles from Hawaii to Northern California dumped more than 25 inches of rain on top of record snowfall in November to create a massive flood that destroyed several towns in the region and wreaked havoc on the geomorphology of the basin. The flood filled areas used by summer steelhead in the Upper Middle Fork/Wilderness area with rock, gravel, and sand to a depth of 3 to 12 meters (10 to 40 feet). Pools previously used for summer holding areas for

summer steelhead were almost entirely obliterated. The Middle Fork Eel River has recovered substantially since the flood, though sediment rates remain higher than desirable (USEPA 2003).

A sediment source analysis of the Middle Fork Eel River conducted by USFS, with additional information provided by North Coast RWQCB staff, concluded that the majority of sediment in the river and its tributaries is naturally caused, and most of the sediment is from landslides. The results suggest that, overall, the Middle Fork Eel River is less disturbed by human-caused sediment than most other watersheds studied in the North Coast. This is probably because current management activity in the basin is limited. Some of the subwatersheds appear to be in better condition than others. Sediment production from human disturbance in the basin appears to be associated primarily with road conditions in some of the subwatershed areas (USEPA 2003).

The beneficial uses and water quality objectives for the Middle Fork Eel River are contained in the Water Quality Control Plan for the North Coast Region (Basin Plan), as amended (North Coast RWQCB 2018). The Basin Plan identifies many beneficial uses for the Middle Fork Eel River, specifically: Municipal and Domestic Supply; Agricultural Supply; Industrial Process Supply; Groundwater Recharge; Water Contact Recreation; Non-contact Water Recreation; Commercial and Sport Fishing; Cold Freshwater Habitat; Rare, Threatened, or Endangered Species; Migration of Aquatic Organisms; and Spawning, Reproduction and/or Early Development. The water quality objectives pertinent to the Middle Fork Eel River sediment TMDLs are listed in Table 4.10-1.

Table 4.10-1. Water Quality Objectives for the Middle Fork Eel River

Parameter	Water Quality Objectives
Suspended Material	Waters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses.
Settleable Material	Waters shall not contain substances in concentrations that result in deposition of material that causes nuisance or adversely affect beneficial uses.
Sediment	The suspended sediment load and suspended sediment discharge rate of surface water shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.
Turbidity	Turbidity shall not be increased more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits or waiver thereof.

Source: USEPA 2002

In addition to water quality objectives, the Basin Plan includes two prohibitions specifically applicable to logging, construction, and other associated sediment producing nonpoint source activities such as gravel mining:

- The discharge of soil, silt, bark, sawdust, or other organic and earthen material from any logging, construction, or associated activity of whatever nature into any stream or watercourse in the basin in quantities deleterious to fish, wildlife, or other beneficial uses is prohibited.

- The placing or disposal of soil, silt, bark, slash, sawdust, or other organic and earthen material from any logging, construction, or associated activity of whatever nature at locations where such material could pass into any stream or watercourse in the basin in quantities that could be deleterious to fish, wildlife, or other beneficial uses is prohibited.

No single indicator for monitoring adequately describes sediment-related water quality in the Middle Fork Eel River. Therefore, a suite of instream and watershed indicators is prescribed in the Basin Plan and/or USEPA TMDL document. Because of the inherent variability associated with stream channel conditions, and because no single indicator applies at all points in the stream system, attainment of the targets is intended to be evaluated using a weight-of-evidence approach. That is, when considered together, the indicators are expected to provide good evidence of the condition of the stream and attainment of water quality standards. Table 4.10-2 summarizes the indicators, targets, descriptions, and purposes relevant to the Proposed Project.

Table 4.10-2. Sediment Indicators and Targets

Indicator	Target	Description	Purpose
Instream			
Spawning Gravel Quality	<14% < 0.85 mm <30% < 6.4 mm;	Bulk samples during low-flow period, at riffle heads in potential spawning reaches. Discussion of indicators and targets by Kondolf (2000), Chapman (1988).	Indirect measure of fine sediment content relative to incubation and fry emergence from the red Indirect measure of ability of salmonids to construct redds
Turbidity and Suspended Sediment	Turbidity < 20% above naturally occurring background	Measured upstream and downstream of sediment discharging activity or between "paired" watersheds or reference streams.	Indirect measure of fish feeding/growth ability related to sediment, and impacts from management activities
Riffle Embeddedness	<25% or improving (decreasing) trend toward 25%	Estimated visually at riffle heads where spawning is likely, during low-flow period (Flosi et al. 1998)	Indirect measure of spawning support; improved quality & size distribution of spawning gravel
Pool volume	<0.21	Residual pool volume. Measure during low-flow period. (Lisle and Hilton 1992)	Estimate of sediment filling of pools from disturbance
Macroinvertebrate community composition	Improving trends	EPT, Richness & % Dominant Taxa indices. Methods should follow CDFW-WPCL (1996) or refined methods currently under development.	Estimate of salmonid food availability, indirect estimate of sediment quality.
Thalweg profile	Increasing variation from the mean	Measured in deposition reaches during low-flow period.	Estimate of improving habitat complexity & availability
Pool/riffle distribution & depth of pools	increasing trend toward >40% in primary pools	Trend or greater than % (by length), measured low-flow period.	Estimates improving habitat availability

Source: USEPA 2002

4.10.1.2 Site Hydrology and On-Site Drainage

The geology of the Project site consists of a riverine environment with gravel beds surrounded by steep terrain. The Proposed Project would involve seasonal gravel extraction and reclamation activities on a generally flat instream gravel bar known as the Stewart Bar located on the Middle Fork Eel River approximately 1.5 mile upstream of the confluence of the Middle Fork Eel River with the main stem of the Eel River, near the unincorporated community of Dos Rios. The Stewart Bar is approximately 750 feet long by 250 feet wide on average, for a total area of approximately 3.5 acres. According to a geotechnical memorandum prepared in support of gravel extraction from the nearby McKenzie Gravel Bar, the river at this location is known to have adequate bedloads to support the requested gravel extraction and allow more than 50 percent of the bedload to transfer further downstream, as recommended by NMFS (Knott 1971).

The gravel bar is located within the Middle Fork Eel River channel, but is generally dry and exposed during the summer months. The Middle Fork Eel River flows through the Project Area during winter and early spring months when water levels are high. Later in the year, flows subside and the exposed gravel bar within the Project Area becomes devoid of aquatic features. The Middle Fork Eel River flows perennially adjacent to the Project Area.

The U.S. Geological Survey (USGS) in cooperation with the California Department of Water Resources conducted intense studies of the watershed above Dos Rios on the Middle Fork Eel River, including at the Project Site, when a large reservoir was proposed in the Round Valley area in the 1960s and early 1970s. The bedload and suspended load were sampled 1956 and 1968 to predict the amount of sediment that would become trapped in the reservoir over a 100-year period. Researchers determined that the sediment load in the Middle Fork Eel River near the Project Area consisted of approximately 43 percent clay and 34 percent silt, which remained suspended because of the natural turbulence flume caused by the narrow canyon upstream of Dos Rios; the remaining 23 percent of the total load moved along as bedload consisting of sand, gravel, and cobbles, which is why the deposited bed load at Stewart Bar contains minimal amounts of silt and clay particles. Approximately half of the total sediment load arrived at the confluence of Black Butte Creek and the Middle Fork Eel River, about 23 miles upstream, and then traveled down to Dos Rios. This long transport distance accounts for the downstream reduction in particle size by attrition, disintegration by atmospheric weathering, and decomposition by chemical reaction, producing the durable sand and gravel materials found in the lower reaches of the Middle Fork Eel River. The study also found that a long-term average of 1,980,000 tons of suspended load plus bedload arrived at Dos Rios annually from the 745 square miles of watershed area above it (Knott 1971)

The developer proposes to limit annual extraction to 20,000 cubic yards of sand and gravel during the summer low-flow season (June 1 through October 30) using conventional construction equipment and an existing access road, and rely on migration of sand and gravel down the river to replenish sand and gravel deposits on the bar each year. A total maximum of 400,000 cubic yards may be removed from the bar based on a 20-year permit period. Mining would occur only on the dry gravel bar surface during the summer low-flow season (June 1 to October 30), and would not take place within the wetted channel. Extraction would consist of creating a shallow excavation that protects the upper one third of the bar from any disturbance, is irregular in shape, and conforms to the low-flow channel geometry of the adjacent

Middle Fork Eel River. The extraction area would maintain an undisturbed head-of-bar buffer beginning at the upstream end of the bar and extending downstream for a distance equaling approximately 30 to 35 percent of the total length of the exposed bar to protect bar stability. A lateral buffer would also be maintained between the outer edge of the bar and the low-flow channel, providing an offset from the water's edge for equipment wheels or tracks.

Annual post-extraction reclamation activities would include removal of any remaining temporary gravel stockpiles, finish grading of the gravel bar to fill in low areas and depressions, recontouring of the gravel bar to meet agency-approved post-extraction slopes and gravel bar configuration, removal of temporary culverts (if necessary), installation of storm water control measures, and removal of all work materials and debris. The seasonal gravel extraction and reclamation activities are subject to review and oversight by the USACE, NMFS, CDFW, North Coast RWQCB, and the County Planning and Building Services.

The annual extraction design (including mining depth) would be dictated by replenishment of the gravel bar during high winter flows. The anticipated maximum mining depth would be approximately 20 feet depending on seasonal gravel accumulation on the bar. The existing and final topography for seasonal extraction activities would be determined on an annual basis based on survey results and consultation with the regulatory agencies.

Gravel extraction at the site would be consistent with the NMFS- and CDFW-approved skimming methodology, which involves removal of gravel from selected areas of the bar in a sloped configuration that avoids creating holes or channels, and is done by using excavators, loaders, and haul trucks. Extraction would be limited to the aggraded portion of the bars, utilizing horizontal and vertical offsets for buffers from the low-flow channel.

4.10.2 Hydrology and Water Quality (X) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☒	☐	☐

Less than significant with mitigation incorporated.

The proposed excavation would result in a lowering of the Project Site up to 20 feet for gravel extraction. Extraction would occur only during the summer low-flow season (June 1 to October 30), and would not occur within the wetted portion of the Middle Fork Eel River channel. The gravel and sand mixture that underlies the Project Site is well drained and has low water erosion hazard. Stormwater runoff will not increase as a result of implementation of the Proposed Project.

The Porter-Cologne Water Quality Control Act (Act) established the provisions of water quality control within California. Additionally, the Act authorizes the National Pollutant Discharge Elimination System (NPDES), which established effluent limitations and water quality requirements for discharges to Waters of the State. The North Coast RWQCB is the regulatory agency charged with administering the NPDES

program for Mendocino County. These activities include administering permits, performing water quality planning, and providing local enforcement for water quality violations.

Construction activities are regulated under the NPDES General Permit (General Construction Permit) for Discharges of Storm Water Runoff, provided that the total amount of ground disturbance during construction occurs on 1 acre or more. These requirements would apply to the Proposed Project because it would involve ground disturbance on approximately 3.7 acres. Coverage under a General Construction Permit requires the preparation of a stormwater pollution prevention plan (SWPPP) and Notice of Intent (NOI) to request coverage under the General Permit. The NOI includes site-specific information and the certification of compliance with the terms of the General Construction Permit. The SWPPP includes pollution prevention measures (erosion and sediment control measures and measures to control non-stormwater discharges and hazardous spills), demonstration of compliance with all applicable local and regional erosion and sediment control standards, identification of responsible parties, a detailed construction timeline, and BMPs monitoring and maintenance schedule to determine quantities of pollutants leaving the site. The SWPPP does not have to be submitted to the North Coast RWQCB but must be available at each construction project site. The SWPPP BMPs are recognized as effective methods to prevent or minimize the potential releases of pollutants into drainages, surface waters or groundwater. Strict SWPPP compliance coupled with using the appropriate BMPs would reduce potential water quality impacts during the proposed mining and reclamation activities.

The Middle Fork Eel River is 303d listed for sediment and temperature. The sediment TMDL for the North Coast Region was established by USEPA in 2003. Mining operations are subject to NPDES requirements. Implementation of mitigation measure **HYD-1, HYD-2, HYD-3** and **BIO-1** will ensure that skimming and reclamation activities would not violate water quality standards or waste discharge requirements. Therefore, the potential impact of the Project on water quality standards, waste discharge requirements, or water quality is considered to be less than significant with mitigation incorporated.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐

Less than Significant Impact.

No extraction of ground water is proposed. Gravel mining activities are not expected to change groundwater recharge characteristics of the Project Site. Therefore, impacts to groundwater supplies or groundwater recharge capability will be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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 that 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?	☐	☐	☒	☐

i) Less than significant with mitigation incorporated.

Extraction of aggregate from gravel bars may result in alteration of the course of the river at high flows as water runs over the post-extraction surface. High flows have potential to erode a portion of the extraction bar surface and result in deposition of some sand and silt downstream. However, extraction surfaces are net sediment deposition areas and will result in less sediment being deposited downstream than is entering upstream.

Gravel extraction may also result in the channel thalweg shifting position during high winter flows. However, thalweg could also shift from one side of a channel to the other in the absence of extraction activities. The potential for extraction-induced thalweg shifts may be reduced by the incorporation of mitigation measures such as head-of-bar and edge-of-water buffers.

Over-extraction has the potential to result in channel degradation downstream of the Project Area. Mining will occur only on approximately 3.7 acres of the dry gravel bar surface during the summer low-flow season (June 1 to October 30), and will not take place within the wetted channel. A maximum of 20,000 cubic yards of material will be removed annually, with actual quantities determined based on channel morphology and gravel replenishment, and subject to review and approval by CDFW and NMFS.

Gravel extraction at the site will be consistent with the NMFS- and CDFW-approved skimming methodology, which involves removal of gravel from selected areas of the bar in a sloped configuration that avoids creating holes or channels, and is done by using excavators, loaders, and haul trucks.

Extraction will be limited to the aggraded portion of the bar, utilizing horizontal and vertical offsets for buffers from the low-flow channel.

Post-extraction reclamation activities will include removal of any remaining temporary gravel stockpiles, finished grading of the gravel bar to fill in low areas and depressions, recontouring of the gravel bar to meet agency-approved post-extraction slopes and gravel bar configuration, removal of temporary culverts (if necessary), installation of storm water control measures for the Project Site and access road, and removal of all work materials and debris.

Seasonal maintenance of the access road is performed following the extraction season to assure no adverse impacts to water quality. The access road is regraded and BMPs including water-bars and straw-mulching are used to stabilize the road surface. Storm water runoff is diverted at each water-bar to sheet flow down the slope below the access road in a manner that will not create erosion or sediment transport.

Implementation of mitigation measure **BIO-1** will reduce the potential impact to the channel to a less than significant level. This mitigation includes leaving at least the upper one third of the bar intact and employs a 50-foot edge of water buffer. This measure will reduce the potential for extraction-induced thalweg shifts and allow all bedload to move around the extraction bar until flows are high enough to overtop the head of bar buffer and result in a portion of the sediment depositing on the extraction surface.

ii) No impact

Gravel mining and reclamation activities would not cause flooding. The Proposed Project will not result in an increase in the area of impervious surfaces. It would not increase the rate or amount of surface runoff and would not contribute to an increased flooding hazard onsite or in the surrounding area. Therefore, no potential impacts are anticipated.

iii) No impact

The Project would not contribute to additional runoff since because it would not result in an increase in impervious surfaces; it would not affect stormwater drainage systems (none are present) or create additional sources of polluted runoff. Therefore, no potential impacts are expected.

iv) Less than significant impact

Implementation of the Proposed Project will not change flood patterns in the Middle Fork Eel River. Excavation activities could result in minor changes to the floor of the river during high flow periods, but changes in flow direction or velocity would be minor and temporary, as sediment and bedload movement would rapidly fill in excavated areas during high flow periods. Therefore, impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒

No Impact.

The Project Site is not located in an area subject to seiche or tsunami. There is no potential for a tsunami to reach the Project Area since it is located far upriver from the coast and is at a minimum elevation of 900 feet. The Project Site is located in a 100-year flood zone, and a 100-year flood event occurred in 1964. However, mining and reclamation activities will not include use or handling of hazardous materials within the river channel. Therefore, no potential impacts are anticipated.

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

Less than Significant Impact.

The Project does not involve other changes in the environment that could result in substantially degrading water quality. All mining activities will be conducted in compliance with a CWA 401 certification. No processing will occur on the mining site. Per Mitigation Measure **BIO-1**, fueling and maintenance of equipment will be conducted outside the channel. Therefore, the potential to substantially degrade water quality is determined to be less than significant and will not conflict with implementation of a water quality control plan or sustainable groundwater management plan.

4.10.3 Mitigation Measures

HYD-1: This project is subject to the NPDES requirements, and coverage under the State General Industrial Permit, as adopted by the SWRCB. A copy of the NOI filed with the SWRCB, as well as the Waste Discharge Identification Number issued by that agency, must be submitted to the County Planning and Building Services.

Timing/Implementation: *During construction and operation*

Monitoring/Enforcement: *The Mendocino Planning and Building Services and Project proponent.*

HYD-2 During operation activities, all vehicles and equipment utilized onsite will be regularly inspected and maintained per manufacturers' recommendations to minimize the potential for leaks.

Timing/Implementation: *During construction and operation*

Monitoring/Enforcement: *The Mendocino Planning and Building Services and Project proponent.*

HYD-3 Prior to mining or reclamation activities as authorized by this approval, the Project proponent shall submit to the respective agency, the necessary application(s) for any approvals and/or permits from the: (a) SWRCB, and (b) North Coast RWQCB. Upon issuance of the requisite approvals or permits, copies shall be furnished to the County Planning and Building Services for incorporation into the approved surface mining and reclamation plan in accordance with the provisions of the Surface Mining and Reclamation Act of 1975. Should no approvals and/or permits be required from the referenced agencies, written evidence documenting this first fact shall be furnished to the County Planning and Building Services.

Timing/Implementation: *During construction and operation*

Monitoring/Enforcement: *The Mendocino Planning and Building Services and Project proponent.*

HYD-4 Prior to commencement of mining activities as authorized by this approval, the Project proponent shall prepare and obtain approval of a Spill Prevention Control and Countermeasures Response Plan from the County Public Health Services Department/Environmental Health Division and the California Department of Water Resources, for review and approval by those agencies.

Timing/Implementation: *During construction and operation*

Monitoring/Enforcement: *The Mendocino Planning and Building Services and Project proponent.*

4.11 Land Use and Planning

4.11.1 Environmental Setting

The Project is located in rural Mendocino County on three parcels (APNs 035-030-49, 035-030-17, and 035-030-65) although the Project Site is only on a portion of each parcel. The 2009 County General Plan designates the Project Site as Rangeland (R-L) and Remote Residential (RMR). The County Zoning Map zones the Project Site as Rangeland (RL) and Upland Residential (UR). Existing land uses in the vicinity include open space and residential uses. SR 162 and scattered rural residences exist north of the Project Site.

4.11.2 Land Use and Planning (XI) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒

No impact.

The physical division of an established community is typically associated with construction of a linear feature, such as a major highway or railroad tracks, or removal of a means of access, such as a local road or bridge, which would impair mobility in an existing community or between a community and an outlying area. The Proposed Project would take place on an instream gravel bar and an access road located in rural, unincorporated Mendocino County, California. The Project would consist of excavating and hauling sand and gravel and post mining reclamation activities. No permanent construction is proposed as a part of this Project. No road closures are proposed as a part of this Project. No impact would occur.

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

No impact.

The County Code of Ordinances governs zoning and land uses within the County. As discussed above, the Project Site is zoned as Upland Residential and Rangeland. Mining and processing activities are allowed in both the Upland Residential and Rangeland zoning districts with approval of a Major Use Permit. Additionally, Section 22.16.060 of the County Code requires Planning Commission approval of a use permit and reclamation plan for all surface mining operations within the County. No changes or amendments to land use, land use categories, or zoning are proposed; only the proposed seasonal mining and reclamation activities would take place. The Proposed Project will not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. No impact would occur, and no mitigation measures are required.

4.11.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.12 Mineral Resources

4.12.1 Environmental Setting

The state-mandated Surface Mining and Reclamation Act of 1975 requires the identification and classification of mineral resources in areas within the State subject to urban development or other irreversible land uses that could otherwise prevent the extraction of mineral resources. These designations categorize land as Mineral Resource Zones (MRZs; MRZ-1 through MRZ-4).

A variety of minerals resources are known to exist in Mendocino County. The most predominant minerals found in the County are aggregate resources, primarily sand and gravel. Three sources of aggregate materials are present in Mendocino County: quarries, instream gravel, and terrace gravel deposits.

Neither the County, Mineral Resources Data System, nor the California DOC Division of Mine Reclamation (DMR) identify the Project Site as a mineral resource zone (Mendocino County 2009; DMR 2021; USGS 2021).

4.12.2 Mineral Resources (XII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒

No Impact.

The mineral resources available on the Project Site are not unique to the area and are subject to annual replenishment. The Proposed Project would supply sand and gravel resources to the region. Thus, implementation of the Proposed Project would result in a beneficial effect regarding availability of mineral resource that is of value to the region and the residents of the state. No significant adverse impacts are identified or anticipated, and no mitigation measures are required.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

No Impact.

The Project Site is not identified as a mineral resource recovery site by the County or DMR. There would be no impact in this area.

4.12.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.13 Noise

Illingworth & Rodkin, Inc. conducted a Noise and Vibration Assessment (NVA) for the Proposed Project (Illingworth & Rodkin 2019b). The purpose of the assessment was to estimate Project-generated noise levels and determine the level of impact the Project would have on the environment. The following information was excerpted from the NVA. The NVA is included as Attachment 4.13 of this Initial Study and provides information for the following sections.

4.13.1 Environmental Setting

4.13.1.1 Noise Fundamentals

Noise may be defined as unwanted sound. Noise is usually objectionable because it is disturbing or annoying. The objectionable nature of sound could be caused by its pitch or its loudness. Pitch is the height or depth of a tone or sound, depending on the relative rapidity (frequency) of the vibrations by which it is produced. Higher pitched signals sound louder to humans than sounds with a lower pitch. Loudness is intensity of sound waves combined with the reception characteristics of the ear. Intensity may be compared with the height of an ocean wave in that it is a measure of the amplitude of the sound wave.

In addition to the concepts of pitch and loudness, there are several noise measurement scales which are used to describe noise in a particular location. A decibel (dB) is a unit of measurement which indicates the relative amplitude of a sound. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Sound levels in decibels are calculated on a logarithmic basis. An increase of 10 decibels represents a ten-fold increase in acoustic energy, while 20 decibels is 100 times more intense, 30 decibels is 1,000 times more intense, etc. There is a relationship between the subjective noisiness or loudness of a sound and its intensity. Each 10 decibel increase in sound level is perceived as approximately a doubling of loudness over a fairly wide range of intensities. Technical terms are defined in Table 1 of Attachment 4.13.

There are several methods of characterizing sound. The most common in California is the A-weighted sound level (dBA). This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Representative outdoor and indoor noise levels in units of dBA are shown in Table 2 of Attachment 4.13. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events. This energy-equivalent sound/noise descriptor is called L_{eq}. The most common averaging period is hourly, but L_{eq} can describe any series of noise events of arbitrary duration.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about plus or minus 1 dBA. Various computer

models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends upon the distance the receptor is from the noise source. Close to the noise source, the models are accurate to within about plus or minus 1 to 2 dBA.

Since the sensitivity to noise increases during the evening and at night—because excessive noise interferes with the ability to sleep—24-hour descriptors have been developed that incorporate artificial noise penalties added to quiet-time noise events. The Community Noise Equivalent Level (CNEL) is a measure of the cumulative noise exposure in a community, with a 5 dB penalty added to evening (7:00 p.m. to 10:00 p.m.) and a 10 dB addition to nocturnal (10:00 p.m. to 7:00 a.m.) noise levels. The Day/Night Average Sound Level (L_{dn}) is essentially the same as CNEL, with the exception that the evening time period is dropped and all occurrences during this 3-hour period are grouped into the daytime period.

4.13.1.2 Human Response to Noise

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day or night or over a 24-hour period. Environmental noise levels are generally considered low when the CNEL is below 60 dBA, moderate in the 60- to 70-dBA range, and high, above 70 dBA. Examples of low daytime levels are isolated, natural settings with noise levels as low as 20 dBA and quiet, suburban, residential streets with noise levels around 40 dBA. Noise levels above 45 dBA at night can disrupt sleep. Examples of moderate-level noise environments are urban residential or semi-commercial areas (typically 55 to 60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher levels associated with noisier urban residential or residential-commercial areas (60 to 75 dBA) or dense urban or industrial areas (65 to 80 dBA). Regarding increases in dBA, the following relationships should be noted in understanding this analysis:

- Except in carefully controlled laboratory experiments, a change of 1.0 dBA cannot be perceived by humans.
- Outside of the laboratory, a 3.0-dBA change is considered a just-perceivable difference.
- A change in level of at least 5.0 dBA is required before any noticeable change in community response would be expected. An increase of 5.0 dBA is typically considered substantial.
- A 10.0-dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

4.13.1.3 Noise Sensitive Land Uses

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as hospitals, historic sites, cemeteries, and certain recreation areas are considered sensitive to increases in exterior noise levels. Schools, churches, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses.

The nearest existing noise-sensitive land uses to the Project Site are the residence across SR 162 to the northeast, and the residence across SR 162 to the northwest (see Figure 2 of Attachment 4.13).

4.13.1.4 Vibration Fundamentals

Ground vibration can be measured several ways to quantify the amplitude of vibration produced. This can be through peak particle velocity or root mean square velocity. These velocity measurements measure maximum particle at one point or the average of the squared amplitude of the signal, respectively.

Vibration impacts on people can be described as the level of annoyance and can vary depending on an individual's sensitivity. Generally, low-level vibrations may cause window rattling but do not pose any threats to the integrity of buildings or structures. Additional information regarding the fundamentals of vibration and their impacts can be found in Attachment 4.13.

4.13.1.5 Existing Noise Environment

Stewart Bar is located in northern Mendocino County approximately 1.5 miles east of Dos Rios, California. The Project Site includes 3.5 acres of the western half of the exposed bar with an access road that connects the gravel bar to SR 162. Excavated gravel would be hauled to an existing facility 14 miles south on SR 162. The nearest offsite residences are located approximately 900 to 1,100 feet north of the proposed mining and reclamation activities.

Noise measurements were conducted to assess ambient noise levels at residential receptors located in the Site vicinity on May 17, 2019, as shown on Figure 1 in Attachment 4.13. The principal noise source in the area is related to vehicular traffic along SR 162 and natural noises from the Middle Fork Eel River.

Short-term noise measurement site ST-1 was conducted approximately 70 feet northwest of the residence at Stewart Bar. This site was chosen to represent the ambient noise levels near the intersection of SR 162 and the access road to Stewart Bar. Maximum instantaneous noise levels from vehicle traffic reached 62 dBA L_{max} and the average noise level was 49 dBA L_{eq}. The L_{max} noise metric is defined as the maximum A-weighted noise level during the measurement period. L_{eq} is the average acoustic energy content of noise for a stated period of time.

Short-term noise measurement site ST-2 was conducted south of the existing residence, approximately 205 feet from the centerline of SR 162, and 510 feet from the center of the proposed extraction Site at

Stewart Bar. This site was chosen to measure the ambient noise levels near the existing residence within a direct line-of-sight of Stewart Bar. Maximum instantaneous noise levels from vehicle traffic reached 58 dBA L_{max} and the average noise level was 55 dBA L_{eq}. Ambient noise levels at this site were higher than ST-1 and ST-3 since this site was in direct line-of-sight to Stewart Bar and the Middle Fork Eel River. Heavy rain occurred in the two days prior to measurements and the river was much louder than typical for this time of year. As the summer progresses, river flow will decrease, and ambient levels are projected to decrease to levels more consistent with ST-1 and ST-3.

Short-term noise measurement ST-3 was made to the east of the existing residence, approximately 70 feet from the SR 162 centerline. This site was chosen to measure ambient noise levels along SR 162 at the approximate setback of the residence to the northeast, and to calculate ambient noise levels at the setback of the residence to the northwest. The ambient noise environment at this location was predominantly the result of intermittent local traffic on SR 162. Maximum instantaneous noise levels from vehicle traffic reached 58 dBA L_{max} and the average noise level was 45 dBA L_{eq} during the mid-day measurement period. These measurements were likely impacted by altered traffic patterns because of temporary highway construction approximately 1,000 feet west on SR 162. A temporary traffic light was in place and alternated between direction of traffic approximately every five minutes. Therefore, vehicle traffic wasn't as frequent as under normal conditions, and vehicles passing by were traveling slower than they would be without the traffic light in place. As a result, ambient noise levels at this location are likely lower than they would be without the traffic light.

Short-term noise measurement ST-4 was made near mile marker 12.57, approximately 40 feet from the SR 162 centerline. This site was chosen to measure ambient noise levels along SR 162 in between Stewart Bar and the gravel processing site further down SR 162, without the influence of the temporary traffic light. Two consecutive 10-minute noise measurements were made during the middle of the day. Maximum instantaneous noise levels from vehicle traffic reached 75 dBA L_{max} and the average noise level for both measurements was 60 dBA L_{eq}.

The residence across SR 162 to the northeast would be shielded from gravel extraction and reclamation by the steep hill just north of the gravel bar, (see Figure 2 of Attachment 4.13). The residence across SR 162 to the northwest would be in direct line-of-sight to operations at the gravel bar.

4.13.2 Noise (XIII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) 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 impact.

Significance Criteria

The following criteria were used to evaluate the significance of environmental noise and vibration resulting from the project:

1. Temporary or Permanent Noise Increases in Excess of Established Standards. A significant impact would be identified if Project operations would result in a substantial temporary or permanent increase in ambient noise levels at sensitive receivers in excess of the local noise standards, as follows:

   - Operational Noise in Excess of Standards. Surface Mining and Reclamation Zoning Ordinance Noise Limits are used as significance criteria for Project operations. Noise levels created by the operation as measured at the nearest residence other than that of the mine owner or operator shall not exceed the following:

     (1) Sixty-five dB(A) for a cumulative period more than thirty (30) minutes in any hour;

     (2) Seventy dB(A) for a cumulative period more than twelve (12) minutes in any hour;

     (3) Seventy-five dB(A) for a cumulative period more than three (3) minutes in any hour;

     (4) Eighty dB(A) for a cumulative period more than one (1) minute in any hour;

     (5) Eighty-five dB(A) at any moment.

     (6) More stringent noise standards may be required as permit conditions when particular local circumstances warrant additional protection of potentially affected residences.

   - Traffic Noise Increase. A significant impact would be identified if traffic noise generated by the Project would substantially increase noise levels at sensitive receivers in the vicinity. A substantial increase would occur if: a) the noise level increase is 5 dBA L_{dn} or greater, with a future noise level of less than 60 dBA L_{dn}, or b) the noise level increase is 3 dBA L_{dn} or greater, with a future noise level of 60 dBA L_{dn} or greater. (L_{dn} is a 24-hour average L_{eq} with a 10 dBA "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the nighttime.)

2. Generation of Excessive Groundborne Vibration. A significant impact would be identified if the Project would generate excessive vibration levels. Groundborne vibration levels exceeding 0.3 inch per second (in/sec) peak particle velocity (PPV) would be considered excessive as such levels would have the potential to result in cosmetic damage to buildings.

Permanent Noise Increases from On-Site Operation Noise

Noise generated by gravel extraction and reclamation activities would be a function of the noise levels generated by individual pieces of construction equipment, the type and amount of equipment operating at any given time, the timing and duration of activities, the proximity of nearby sensitive land uses, and the presence or lack of shielding at these sensitive land uses. Gravel extraction and reclamation noise would primarily result from the operation of construction equipment and the arrival and departure of haul trucks. The Federal Highway Administration's (FHWA's) Roadway Construction Noise Model (RCNM) was used to calculate noise levels of road repair, gravel extraction, and reclamation using the construction equipment data provided by the project applicant.

Construction-equipment generated noise levels drop off at a rate of about 6 dBA per doubling of distance between the source and receptor; therefore, noise levels calculated at 100 feet would be about 6 dBA less and 12 dBA less at 200 feet. Shielding provided by terrain would result in even lower construction noise levels at receptors to the northeast. For the purpose of following the County's designation of L_{50} as the regulatory acoustical descriptor, L_{eq} levels calculated by FHWA's RCNM were conservatively assumed to equal the L_{50}, given that the noise sources are fairly continuous during the operation of heavy equipment. The L_{eq} noise level is always equal to or greater than the L_{50} noise level.

Repair on the access road to Stewart Bar would take up to 3 days prior to gravel extraction in the first year, and 1 day prior to gravel extraction in subsequent years. A dozer and excavator are anticipated for this type of construction. The operation of this equipment is calculated to generate hourly noise levels of 80 dBA L_{50} at a distance of 50 feet. Maximum instantaneous noise levels would reach 82 dBA L_{max} at 50 feet. Predicted noise levels associated with access road repair are summarized in Table 4.13-1.

Gravel extraction would include skimming gravel from Stewart Bar using a dozer (Cat D6R), an excavator (Cat 330), haul trucks, and a water truck for dust suppression. Reclamation would include one day of final grading of the shallow alcove after extraction takes place using a small dozer and excavator. The operation of this equipment is calculated to generate hourly average noise levels up to 81 dBA L_{50} at 50 feet. Maximum instantaneous noise levels would reach 82 dBA L_{max} at 50 feet. Predicted noise levels associated with gravel extraction and reclamation are summarized in Table 4.13-2.

Table 4.13-1. Summary of Noise Levels from Access Road Repair

Receptor	Noise Level, dBA			
	Distance from Source (ft)	Predicted L_{max}	Predicted L_{50}	Predicted L_{dn}*
Northeast Residence	450 – 900	52 -60	50 - 58	46 - 54
Northwest Residence	410 – 1,100	56 – 64	54 – 62	50 - 58
Source: Illingworth & Rodkin 2019b				

Table 4.13-2. Summary of Noise Levels from Gravel Extraction and Reclamation				
Receptor	**Noise Level, dBA**			
	Distance from Source (ft)	**Predicted L_{max}**	**Predicted L_{50}**	**Predicted L_{dn}***
Northeast Residence	900	52	50	46
Northwest Residence	1,100	56	54	50

Source: Illingworth & Rodkin 2019b

Notes: * L_{dn} was calculated assuming a 10-hour workday from 7:00 a.m. to 5:00 p.m.

Noise levels from access road repair activity may reach levels up to 62 dBA L_{50} for several hours at segments where the access road is nearest to neighboring residences. However, the majority of access road repair activity will occur at further distances and would produce noise levels between 50 and 62 dBA L_{50}. Because gravel extraction and reclamation operations would occur at a distance of 900 to 1,100 feet from the neighboring residents, noise levels would not be anticipated to exceed the 65 dBA L_{50} and 85 dBA L_{max} thresholds established by the County at neighboring property lines. Therefore, the temporary increase in ambient noise levels resulting from road repair, gravel extraction, and reclamation activities would have a less than significant impact and would not require mitigation.

Permanent Noise Increases from Project Traffic

Traffic noise levels between Stewart Bar and the processing facility near Longvale, California were calculated with FHWA's Traffic Noise Model (TNM v.2.5). The roadway and receptor locations were input into the traffic noise model in a three-dimensional reference coordinate system. The geometrical input was based on a linear stretch of SR 162 with receptors located at a setback of 50 feet from the centerline. Roadway traffic volumes, including the vehicle mix ratio, estimated number of haul trucks per hour, and traffic speeds were also input into the model. This model was calibrated based on short-term measurement ST-4 and associated traffic counts taken near mile marker 12.57.

There would be an estimated number of 30 haul trucks transporting gravel between Stewart Bar and the processing facility near Longvale, California while gravel extraction is taking place. This would be limited to approximately 45 days of operation during the summer months. Based on the FHWA's TNM 2.5 output and site measurements taken along SR 162, traffic noise is anticipated to increase by 1 to 2 dBA L_{eq} over the course of the 45-day span. Generally, a difference of 3 dBA is just detectable to the human ear and would be considered significant. The additional truck traffic resulting from the Project would not substantially increase existing traffic noise levels along SR 162, and the temporary increase in noise levels associated with haul trucks along SR 162 would have a less than significant impact on traffic noise levels in the area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Result in generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐

Less than significant impact.

Construction-Generated Vibration

The County does not specify a vibration limit that should not be exceeded at sensitive receptors. For structural damage, Caltrans recommends a vibration limit of 0.5 in/sec PPV for buildings structurally sound and designed to modern engineering standards and 0.3 in/sec PPV for buildings that are found to be structurally sound but where structural damage is a major concern, and a conservative limit of 0.25 in/sec PPV for historic and some old buildings (see Table 3 of Attachment 4.13). Heavy equipment would have the potential to produce vibration levels of up to 0.27 in/sec PPV within 20 feet of the heavy equipment while in operation. During repair of the access road, heavy equipment will be at a distance greater than 300 feet from the nearest off-site structure. At this distance, vibration levels would be 0.01 in/sec PPV or less and would have a less than significant impact on existing structures or persons in the Project vicinity.

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

No Impact.

The Project Site is located approximately 6 miles southwest of the Round Valley Airport, located in Covelo California. The Project Site is located outside the noise contour lines as depicted on Figure 3E of the Mendocino County Airport Comprehensive Land Use Plan (Mendocino County 1996). Implementation of the Proposed Project would not affect airport operations nor result in increased exposure of noise-sensitive receptors to aircraft noise. No impact would occur.

4.13.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.14 Population and Housing

4.14.1 Environmental Setting

According to the California Department of Finance (DOF) Mendocino County has a population of approximately of 86,669 persons (DOF 2021). No residences currently exist on the Project Site.

The Proposed Project would not produce any significant growth inducing impacts. Growth inducing impacts are generally caused by projects that have a direct or indirect effect on economic growth, population growth, or when the project requires community services facilities to be upgraded beyond the existing capacity. No services or utilities are being required to be extended to the site. The Project Site will be staffed by three employees per shift (one shift per day).

4.14.2 Population and Housing (XIV) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒

No impact.

The Project does not include the construction of housing units nor changes to public road or utility systems that would induce any population growth. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

No impact.

There is no housing on or population inhabiting the Project Site and no proposed housing construction as part of the Project. No impact would occur.

4.14.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.15 Public Services

4.15.1 Environmental Setting

Public services include fire protection, police protection, parks and recreation, and schools. Generally, impacts in these areas are related to an increase in population from a residential development. Levels of service are generally based on a service-to-population ratio, except for fire protection, which is usually based on a response time.

4.15.1.1 Police Services

The County Sheriff's Office is responsible for providing law enforcement services to the unincorporated areas of the county (Mendocino County 2009). The main sheriff's station, including dispatch and detention facilities, is located at the County Administration Center complex in the city of Ukiah. The California Highway Patrol is responsible for traffic enforcement services on state highways and county roads.

4.15.1.2 Fire Services

Fire protection services in Mendocino County are provided by local districts, the cities of Ukiah and Fort Bragg, CAL FIRE, and the USFS. As the Project Area is located in a SRA, CAL FIRE would provide fire protection services to the Project Area. The County Office of Emergency Services coordinates emergency response in Mendocino County through the Fire and Rescue Mutual Aid Coordinator. The Fire and Rescue Mutual Aid Coordinator functions within the California Fire Service and Rescue Emergency Mutual Aid System.

4.15.1.3 Schools

Thirteen school districts and two community college districts serve Mendocino County. Each school district comprises various numbers of traditional public schools, charter schools, preschools, adult education, and special training opportunities. The Project Site is within the boundaries of the Round Valley Unified School District (Mendocino County 2009) The closest schools to the Project Site are approximately 8 miles northeast in the town of Covelo and 8 miles west in the town of Laytonville.

4.15.1.4 Parks

The Mendocino National Forest occupies approximately 81,000 acres of Mendocino County and offers an array of recreation opportunities including fishing, camping, picnicking, boating, hiking, horseback riding, wildlife viewing, hang-gliding, off-road vehicle riding, winter snow play, hunting, wilderness experiences, and mountain biking.

4.15.1.5 Other Public Facilities

No notable public facilities exist within the vicinity of the Project.

4.15.2 Public Services (XV) Environmental Checklist and Discussion

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

i) Fire Protection. No impact

The Project Site is located within a State Responsibility Area (SRA). CAL FIRE is responsible for providing fire protections in SRAs. The Proposed Project consists of short-term (45 days per year) gravel mining and reclamation activities. Implementation of the Project would not require additional fire facilities or services.

ii) Police Protection. No impact.

The County Sheriff's Department is headquartered in the city of Ukiah and is comprised of multiple divisions, providing law enforcement services to unincorporated communities in Mendocino County. The County Sheriff's Department operates two substations, one in Willits and one in Fort Bragg. Implementation of the Proposed Project would not require additional police facilities or services. No impacts are identified or anticipated, and no mitigation measures are required.

iii) Schools. No impact.

The Proposed Project would not create a direct demand for public school services as it does not include any type of residential use or other land use, or an increase in employment that may induce population growth. As such, the Project would not generate any new school-aged children requiring public education. No impacts are identified or anticipated, and no mitigation measures are required.

iv) Parks and v) Other Public Facilities. No impact.

The Proposed Project consists of gravel mining and reclamation activities. No additional housing is proposed for construction as part of the Proposed Project. No parks, libraries, or other public facilities

would be required to be constructed, nor are any proposed as part of this Proposed Project. There would be no impact pertaining to parks or other public services.

4.15.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.16 Recreation

4.16.1 Environmental Setting

The Project Site is located on the Middle Fork Eel River and the Mendocino National Forest is approximately 14 miles to the east. The Mendocino National Forest, which occupies approximately 81,000 acres in Mendocino County, offers an array of recreation opportunities including fishing, camping, picnicking, boating, hiking, horseback riding, wildlife viewing, hang-gliding, off-road vehicle riding, winter snow play, hunting, wilderness experiences, and mountain biking. The closest park to the Project Site is the Admiral William Standley State Recreation Area located approximately 15 miles west.

The Middle Fork Eel River is a popular recreation area for fishing, kayaking, hiking. Recreational users (fishermen, canoes, kayaks) will continue to be able to float down the Eel River during and after gravel mining and reclamation activities are completed. Because gravel extraction will occur entirely during the low flow season, recreational nonmotorized boats are not expected to be inconvenienced during gravel extraction activities.

4.16.2 Recreation (XVI) Materials Checklist

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒

No impact.

The Proposed Project consists of gravel mining and reclamation activities and does not include recreational components. The Proposed Project's operation would not increase the use of neighborhood parks or other recreational facilities. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) 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 Proposed Project consists of gravel mining and reclamation activities and does not include recreational components. The Proposed Project does not include the construction or expansion of recreational facilities nor the removal of recreational facilities. No impacts are identified or anticipated, and no mitigation measures are required.

4.16.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.17 Transportation

4.17.1 Environmental Setting

The Project Site would be accessed by an existing dirt road approximately 0.2 mile long that connects via an existing encroachment to SR 162 located north of the Project Site. The access road will remain post-reclamation to facilitate the landowner's access to the river. During operations, barriers such as berms and k-rails would be used for safety purposes and to meet Mine Safety and Health Administration and Occupation Health and Safety Administration requirements along the access road. No new temporary access routes are anticipated to be needed for mining or reclamation.

The Applicant has consulted with Caltrans on the Proposed Project, which included a site visit with the Caltrans South Region Permit Inspector. Per Caltrans' direction, prior to annual extraction activities the Applicant will obtain a traffic control Encroachment Permit to place appropriate warning devices (e.g., construction signs, message boards) at or near the driveway on SR 162 during Project activities.

During Project operation, an estimated 30 haul trucks would transport gravel between Stewart Bar and the processing facility near Longvale, California while gravel extraction is taking place. This would be limited to approximately 45 days of operation during the summer months.

4.17.2 Transportation (XVII) Environmental Checklist and Discussion

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

No impact.

The Project Site is located in a remote area of inland Mendocino County. As described above, during Project operation, an estimated 30 haul trucks would transport gravel daily on SR 162 to a processing facility near Longvale, California. SR 162 is designated as a designated truck route (Caltrans 2021). These truck trips would be limited to approximately 45 days of operation during the summer months (June 1 to October 30, annually). There are no planned bicycle and pedestrian facilities for the area of the Project Site.

Minimal truck traffic produced as a result of the Proposed Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐

Less than significant impact.

The Proposed Project is anticipated to produce approximately 30 off-site truck trips/day (between June 1 to October 30 annually) based on maximum production. Pursuant to the Mendocino Council of Government's Senate Bill 743 Vehicle Miles Traveled Regional Baseline Study (2020), additional traffic analysis is not necessary as the Project is anticipated to generate fewer than 640 vehicle miles traveled per day. Additionally, traffic is minimal is this remote area of Mendocino County. Therefore, in accordance with CEQA Guidelines section 15064.3, subdivision (b), implementation of the Proposed Project would produce a minimal number of vehicles miles traveled. Less than significant impacts are identified or are anticipated, and no mitigation measures are required.

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

No impact.

The Project does not propose, nor would it require new roadways or changes in existing roadways that would result in an increase hazard due to a design feature. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Result in inadequate emergency access?	☐	☐	☐	☒

No impact.

No road closures are anticipated as a part of the Proposed Project. The Project will not interfere with emergency access routes. No impact would occur.

4.17.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.18 Tribal Cultural Resources

4.18.1 Environmental Setting

The Project Site is located in a rural setting in inland Mendocino County, with vacant land to the south, east, and west, and residential neighborhoods to the north. The Site is bound by SR 162 to the north and the Middle Fork Eel River to the south, east and west. On June 21, 2020, Tom Origer & Associates conducted a field investigation of the Project Site and found no evidence of tribal cultural resources. The Cultural Resources Inventory Report provides information for the following sections.

4.18.2 Ethnography

Linguists and ethnographers tracing the evolution of languages have found that most of the indigenous languages of the California region belong to one of five widespread North American language groups (the Hokan and Penutian phyla, and the Uto-Aztecan, Algic, and Athabaskan language families; Tom Origer & Associates 2020). The distribution and internal diversity of four of these groups suggest that their original centers of dispersal were outside, or peripheral to, the core territory of California, that is, the Central Valley, the Sierra Nevada, the Coast Range from Cape Mendocino to Point Conception, and the Southern California coast and islands. Only languages of the Hokan phylum can plausibly be traced back

to populations inhabiting parts of this core region during the Archaic period, and there are hints of connections between certain branches of Hokan, such as that between Salinan and Seri, that suggest that at least some of the Hokan Mendocino languages could have been brought into California by later immigrants, primarily from the Southwest and northwestern Mexico (Tom Origer & Associates 2020).

At the time of Euroamerican settlement, people inhabiting the vicinity of the Project Area were the Yuki (Tom Origer & Associates 2020). The Yuki's aboriginal territory falls within present-day Mendocino County and largely encompasses land through which the Middle Fork Eel River flows. Primary village sites of the Yuki were occupied continually, while temporary sites were visited to procure resources that were especially abundant or available only during certain seasons. Sites often were situated near freshwater sources and in ecotones where plant life and animal life were diverse and abundant (Tom Origer & Associates 2020).

4.18.3 Tribal Consultation

AB 52 requires that prior to the release of a CEQA document for a project, an agency begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the Proposed Project if: (1) the California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe and (2) the California Native American tribe responds, in writing, within 30 days of receipt of the formal notification, and requests the consultation. Tom Origer & Associates sent consultation requests to those tribes that requested consultation pursuant to AB 52. Those tribes are listed in Section 2.3.

On May 19, 2020, as part of outreach for the Project pursuant to AB 52, Tom Origer & Associates sent a certified letter to the NAHC informing them of the Project and offering an opportunity to consult about the potential for Tribal Cultural Resources to exist in the Project Site. Tribal Cultural Resources may be synonymous with cultural resources. On May 19, 2020, the NAHC responded stating that there were no known Tribal Cultural Resources within the Project Site. A list of additional contacts was provided, and letters were sent to those groups.

On May 22, 2020, Tom Origer & Associates sent notification of the Project to the tribes listed in Section 2.3. As of July 1, 2020, Tom Origer & Associates had received no responses from any of the tribes listed in Section 2.3.

4.18.4 Tribal Cultural Resources (XVIII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) 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.	☐	☐	☒	☐

Less than significant impact.

As conveyed in the Cultural Resources Study conducted by Tom Origer & Associates, no known tribal cultural resources were identified at the Project Site or within a 0.5-mile radius during the records search and literature review performed. On June 21, 2020, Tom Origer & Associates performed a field investigation of the Project Site and APE, which concluded that no cultural resources were observed onsite. Additionally, on May 18, 2020 the NAHC responded to Tom Origer & Associates stating that through a record search of the NAHC Sacred Lands File was completed for the Proposed Project revealing a negative search result for sacred lands within the Project Site.

No known tribal cultural resources have been identified within the Project Site. The Site has not been identified as either a site, feature, place, cultural landscape, sacred place, or object with cultural value to a California Native American tribe. No additional responses from tribes contacted in Section 2.3 have been received.

If any previously unrecorded tribal cultural materials are identified during ground-disturbing extraction activities and are found to qualify as a tribal cultural resource pursuant to PRC Section 21074(a)(1) (determined to be eligible for listing in the CRHR or in a local register of historical resources), any impacts

to the resource resulting from the proposed Project could be potentially significant. Any such potential significant impacts would be reduced to a less-than-significant level by implementing mitigation measure **CUL-1**, Cultural or Archaeological Resource Discovery (refer to Section 4.5.4, Cultural Resources for the text of the mitigation measures). This mitigation measures would ensure worker training and that work halt in the vicinity of a find until a qualified archaeologist can make an assessment and provide additional recommendations if necessary, including contacting Native American tribes.

4.18.5 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.19 Utilities and Service Systems

4.19.1 Environmental Setting

The Project Site is located in unincorporated Mendocino County on the Stewart Gravel Bar, located within the Middle Fork Eel River, approximately 7 miles southwest of Covelo and approximately 1 mile southeast of the unincorporated community of Dos Rios (Figures 1-1 and 1-2). The Project Site is accessed by a dirt road that connects via an existing encroachment to SR 162 located north of the site.

No known utility facilities are located in the vicinity of the Project Site. Given the remote nature of the site, and seasonal nature of the extraction activities, bottled water and portable toilets will be provided for the onsite employees. The portable toilet will be located on flat ground outside of the stream channel, will be properly maintained and cleaned, and will be removed at the end of each extraction season. In addition, the portable toilet will be placed in containment such as an impermeable plastic liner to contain any potential spills.

4.19.2 Utilities and Service Systems (XIX) Environmental Checklist and Discussion

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

No impact.

The Proposed Project consists of seasonal gravel extraction reclamation activities that will take place on an instream gravel bar. The Project will not require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of that could cause significant environmental effects. No impact would occur.

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

No impact.

As discussed above, the Proposed Project is located in a remote area without access to water supplies. The gravel extraction process will not require water supplies. Employees working at the Project Site will be provided bottle water for drinking. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒

No impact.

As discussed above, due to the size, nature and location of the Project, the Project will not require water treatment and will not generate wastewater. Employees would be provided portable toilets located on flat ground outside of the stream channel. No new water treatment or wastewater facilities or the expansion of such facilities are proposed or needed for the Project. No impact would occur.

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

No impact.

The Proposed Project would not result in a significant volume of solid waste generation as the proposed mining and processing activities are not typically associated with the production of refuse. Minimal refuse produced by employees onsite shall be disposed into approved trash bins and removed by the operator or a commercial vendor as necessary. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

No impact.

The Proposed Project would not result in a significant volume of solid waste generation as the proposed mining and processing activities are not typically associated with the production of refuse. Minimal refuse produced by employees onsite shall be disposed into approved trash bins and removed by the operator or a commercial vendor as necessary. No impact would occur.

4.19.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.20 Wildfire

4.20.1 Environmental Setting

The risk of wildfire is related to a variety of parameters, including fuel loading (vegetation), fire weather (e.g., winds, temperatures, humidity levels, and fuel moisture contents), and topography (degree of slope). Steep slopes contribute to fire hazard by intensifying the effects of wind and making fire suppression difficult. Fuels such as grass are highly flammable because they have a high surface area-to-mass ratio and require less heat to reach the ignition point, while fuels such as trees have a lower surface area-to-mass ratio and require more heat to reach the ignition point.

The overall topography of the gravel bar where gravel extraction will take place is relatively flat; the access road from SR 162 to the Middle Fork Eel River is located on hilly terrain with a steep drop in elevation to river access. The access road from SR 162 is at approximately 1,033 feet in elevation, and the Project Area within the Middle Fork Eel River where extraction will occur is located at approximately 909 feet in elevation. The access road is surrounded by mixed oak-foothill pine woodlands, interspersed with annual grassland and manzanita. The gravel bar itself is barren, with little to no vegetation present. Fire Hazard Severity Zone mapping is performed by CAL FIRE and is based on factors such as fuels, terrain, and weather. According to the CAL FIRE Fire Hazard Severity Zone mapping, the Project Site is located in a High Fire Hazard Severity Zone and is within a SRA (CAL FIRE 2021).

4.20.2 Wildfire (XX) Environmental Checklist and Discussion

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒

No impact.

The Proposed Project consists of the excavation and extraction of sand and gravel from the Stewart Gravel Bar on the Middle Fork Eel River. No extraction activities would occur within the roadway. Extracted material would be transported via haul trucks on SR 162 near Longvale, California. However, these truck trips would be minimal (maximum 30 per day during seasonal extraction) and would not impair roadway access. Activities associated with the Proposed Project would not impede existing emergency response plans for the Project Site and/or other land uses in the project vicinity. No impact would occur.

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐

Less than significant impact.

The Project Site is located within a High Fire Hazard Severity Zone. However, the Proposed Project does not include construction of habitable structures or permanent facilities. As no residential buildings would be constructed as part of the Proposed Project, there would be no occupants subjected to the hazards associated with increased fire risk such the possibility of pollutant concentrations from wildfire or the uncontrollable spread of wildfire. Risks associated with exposing Project employees to pollutant concentrations from wildfire or the uncontrolled spread of a wildfire due to slope, prevailing winds, and other factors, exacerbate wildfire risks would be less than significant.

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒

No impact.

The Proposed Project will not require the construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities. Therefore, the Proposed Project is not anticipated to require the installation or maintenance of associated infrastructure that may exacerbate fire risk or that may result in temporary ongoing impacts to the environment. No impacts would occur.

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

No impact.

The Proposed Project would not include development that would expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire instability, or drainage changes. No impact would occur.

4.20.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.21 Mandatory Findings of Significance

4.21.1 Mandatory Findings of Significance (XXI) Environmental Checklist and Discussion

Does the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) 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?	☐	☒	☐	☐

Less than Significant with Mitigation Incorporated.

The results of the Initial Study show that there are potentially significant impacts to Biological and Cultural resources. These impacts will be reduced to less than significant levels after incorporation of mitigation measures and compliance with existing rules and regulations. Therefore, the Proposed Project will not substantially degrade the quality of the environment and impacts to habitat, wildlife populations, plant and animal communities, rare and endangered species, or important examples of the major periods of California history or prehistory; no additional mitigation is warranted. Local Native American tribal representatives were contacted and no information regarding Tribal Cultural Resources was provided. No impacts are identified or anticipated, and no additional mitigation measures are required.

Does the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐

Less than Significant Impact.

Cumulative impacts are defined as two or more individual affects that, when considered together, are considerable or that compound or increase other environmental impacts. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the development when added to the impacts of other closely related past, present, and reasonably foreseeable or probable future developments. Cumulative impacts can result from individually minor, but collectively significant, developments taking place over a period. The CEQA Guidelines, Section 15130 (a) and (b), states:

a. Cumulative impacts shall be discussed when the project's incremental effect is cumulatively considerable.

b. The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided of the effects attributable to the project. The discussion should be guided by the standards of practicality and reasonableness.

The Project Site is in unincorporated Mendocino County and consists of an existing access road and a gravel bar on the Middle Fork Eel River. No changes or amendments to land use, land use categories, or zoning are proposed; only the extraction and reclamation activities discussed throughout this Initial Study. The Proposed Project is consistent with the Countywide Policy Plan with the issuance of a Reclamation Plan.

As evaluated herein, impacts associated with the Proposed Project would not be considered individually adverse or unfavorable with mitigation. Therefore, with obtainment of a Reclamation Plan and implementation of existing rules and regulations and the mitigation measures included in this document, no cumulative considerable impacts are identified or anticipated.

Does the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Less than significant impact.

Direct and indirect impacts to human beings would be less than significant with the implementation of mitigation measures listed in this Initial Study. The Project Site is located in a rural, vacant, undeveloped area in the eastern Mendocino County. All potential impacts have been thoroughly evaluated and have been deemed to be neither individually significant nor cumulatively considerable with mitigation in terms of any adverse effects upon the region, the local community, or its inhabitants. The Proposed Project will be required to meet the conditions of approval, rules and regulations, and mitigation measures for the Project to be implemented. It is anticipated that all such conditions of approval, rules and regulations, and mitigation measures will further ensure that no potential for significant adverse impacts will be introduced by ongoing and planned mining and reclamation activities as allowed by the project approval. Less than significant adverse impacts are identified or anticipated, and no mitigation measures are required.

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